P. A. C. No. 521

PUBLIC ACCOUNTS COMMITTEE (1976-77)

(FIFTH LOK SABHA)

TWO HUNDRED AND TWENTY-FOURTH REPORT

RAILWAY OPERATIONS AND EXPENDITURE

MINISTRY OF RAILWAYS

(RAILWAY BOARD)

[Paragraphs relating to Railway Operations and Expenditure included in the Report of C&AG of India for the year 1972-73, Union Govt. (Railways)]

LOK SABHA SECRETARIAT
NEW DELHI

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(1976-77)

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INTRODUCTION

I, the Chairman of the Public Accounts Committee as authorised by the Committee do present on their behalf this Two Hundred and Twenty Fourth Report of the Public Accounts Committee (Fifth Lok Sabha) on paragraphs relating to Railway Operations and Expenditure included in the Report of the Comptroller and Auditor General of India for the year 1972-73—Union Government (Railways).

2. The Report of the Comptroller and Auditor General of India for the year 1972-73—Union Government (Railways) was laid on the Table on the 15th March, 1974. The Committee (1974-75) examined the paragraphs relating to Railway Operations and Expenditure included in the Report of the Comptroller and Auditor General of India for the year 1972-73 on the 19th and 20th September, 1974. Written information in regard to these paragraphs was also obtained from the Ministry of Railways (Railway Board).

3. The Committee (1976-77) considered and finalised this Report at their sitting held on the 2nd August, 1976. Minutes* of the sittings of the Committee form Part II of the Report.

4. A statement showing the main conclusions/recommendations of the Committee is appended to the Report (Appendix). For facility of reference these have been printed in thick type in the body of the Report.

5. The Committee place on record their appreciation of the commendable work done by the Chairman and Members of the P.A.C. of 1974-75 in taking evidence and obtaining information for the Report.

6. The Committee place on record their appreciation of the assistance rendered to them in the examination of the various paragraphs by the Comptroller and Auditor General of India.

7. The Committee would like to express their thanks to the Chairman and officers of the Railway Board for the cooperation extended by them in giving information to the Committee.

NEW DELHI;
August 2, 1976
Sravana 11, 1898 (*S*)

H. N. MUKERJEE,
Chairman,
Public Accounts Committee.

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CHAPTER I

ELECTRIC LOCOMOTIVES

A. C. Electric Locomotives

Audit Paragraph

1.1. Initially, electrification in the Indian Railways was based on D. C. traction. Following the advanced countries and on cost consideration, our Railways later on switched on to A. C. traction. The Ministry of Railways (Railway Board) decided in June, 1959, on the recommendations of a foreign consortium (called Group), to adopt its design of A. C. freight type broad gauge electric locomotives and entered into a collaboration agreement with Group in November 1962 providing for grant of manufacturing rights and technical assistance for indigenous production of such locomotives for a period of eight years. Production, established in Chittaranjan Locomotive Works, started from December, 1963. The collaborators were pioneers in the world in A.C. traction.

1.2. Between December 1963 and October 1967 Chittaranjan Locomotive Works delivered to South Eastern Railway 82 locomotives and 16 sets of bogies with traction motors. Shortly after commissioning, all these locomotives (each cost about Rs. 24 lakhs) started developing a number of defects from October 1964 onwards and had to be withdrawn from service. These defects were attributed partly to use of indigenous materials, poor workmanship and inadequate inspection in different stages of manufacture at Chittaranjan and partly to design inadequacy for the purpose of the heavy gradients in South Eastern Railway. Major repairs and modifications to these locomotives had to be carried out at Chittaranjan Locomotive Works, South Eastern Railway and Eastern Railway workshops; the total expenditure was Rs. 141.22 lakhs upto November 1972 forming about 10 per cent of cost of manufacture. Progressive modifications to other locomotives of this design, turned out by Chittaranjan Locomotive Works after October 1967 and which had not been put to strenuous use, had also to be carried out at a cost of Rs. 16.66 lakhs upto 31st March 1972 in two Railways. The Ministry of Railways (Railway Board) stated (December 1972) that expenditure incurred on repairs to these locomotives was in the nature of intermediate overhauls which are ordinarily carried out in any new series of locomotives for adopting modifications and overcoming difficulties, and shortcomings noticed in service performance and therefore should not be considered heavy. From December 1969 onwards there was again a spate of failures of traction motors of such locomotives due to breakages of shaft and pinion,

which had not been indigenised. Out of 624 such traction motors with Central, Eastern, Northern and South Eastern Railways, 65 motors failed on this account upto the end of March, 1973. After investigation, Research, Designs and Standards Organisation suggested certain improvements in design and material specifications which were agreed to by the collaborators. Chittaranjan Locomotive Works has sought replacements under normal warranty obligations for the imported supplies and separately efforts are also being made to obtain these components from indigenous sources according to the revised design and specifications.

1.3. In September 1967 the Railway Board decided to stop production of A.C. freight type locomotives beyond the 268 already ordered on Chittaranjan Locomotive Works and instead start manufacture of A.C. broad gauge mixed type (MT) electric locomotives to a design developed by Research, Designs and Standards Organisation. Mixed type locomotives are capable of higher speeds, and, therefore, can be used for passenger as well as goods traffic. The reasons for this change were non-materialisation of anticipated freight traffic, sufficient availability of freight type locomotives and the technical superiority and easier maintenance of the newly designed mixed type locomotives. One important difference between the freight type and the mixed type is that whereas in the former there is one motor for two axles, in the latter there is an independent motor for each axle. The traction motors for the mixed type locomotives are different from those for the freight type and for manufacture of these new motors three choices of designs were available from—

(a) Research, Designs and Standards Organisation of the Railways,

(b) Heavy Electricals India Limited, and

(c) the firm (belonging to Group) which had designed the traction motor for freight type locomotives and was assisting in its manufacture.

1.4. Because the motor of Railways' own design might become available for series production, after initial development and service trials, only by the end of 1970 as against the planned production of these locomotives from the end of 1969, that design was discarded. The second choice of traction motor of Heavy Electricals India Limited design, though technically feasible for mixed type, was passed over because of its weight, another reason being that this motor had more copper and steel content and its cost of production would be more as compared to the motor of the third choice further, Heavy Electricals India Limited was also committed heavily to manufacture and supply traction motors for diesel locomotives, D.C. electric locomotives etc., and it was also apprehended that

Heavy Electricals India Limited would not permit manufacture of similar traction motors elsewhere nor part with necessary technical knowhow. Ultimately in October 1967 the traction motor offered by the firm belonging to Group was adopted for manufacture at Chittaranjan Locomotive Works because of other advantages also like utilisation of balance of about D.M. 2.0 (Rs. 2.17) lakhs out of D.M. 7.5 (Rs. 8.15) lakhs already paid in advance to the Group as on-account royalty for the earlier locomotives and continued usage of facilities already created and skill developed at Chittaranjan Locomotive Works for manufacture of traction motors.

1.5. In February 1968 the old collaboration agreement was extended, on slightly more favourable terms, upto 2nd November, 1975 to cover production of motors of the new design. Import of 200 traction motors from that firm was also arranged in February 1968, at a foreign exchange cost of Rs. 151 lakhs, to cover the expected time lag of about six months between commencement of mixed type locomotive production and establishment of bulk manufacture of traction motors for them. Between September 1968 to January 1972 further import orders were placed on that firm for 336 armatures, costing about Rs. 128 lakhs in foreign exchange, to be used as components for traction motors to be made at Chittaranjan Locomotive Works.

1.6. The traction motors of the selected design were not in use in any other country. The Railway Board's representative in Europe had seen that, through tests in the foreign country, the motors satisfied the standards prescribed by the International Electro-Technical Committee. However, before purchase and adoption for bulk manufacture they were not subjected to field trials in India.

1.7. Production of mixed type locomotives commence from February 1971, instead of from 1969 originally planned. These are the most powerful locomotives our Railways have, each costing about Rs. 28 lakhs. Upto March 1973 eighty-seven such locomotives were produced. Most of them were allotted to South Eastern Railway and a few to Eastern Railway. After September, 1971, *i.e.*, within a short time of these locomotives being brought to use in South Eastern Railway, a large number of their traction motors developed defects, some even immediately on receipt in India. (There were no failures in Eastern Railway). There were also heavy rejections/failures of field coils at the stage of testing and assembly by Chittaranjan Locomotive Works. Investigations jointly by the firm's representatives and Railway engineers during May to September 1972 disclosed that motor failures were due to failures of both imported and locally built armatures due to bad workmanship in various stages of manufacture of the armatures and the large number of special overspeed tests

undertaken to prove their soundness. Out of a total supply of 297 armatures by the firm, one hundred and three were reported defective upto September 1972, the corresponding figures being 72 and 48 respectively for armatures built by Chittaranjan Locomotive Works. The percentages of failures were thus 35 in imported motors and 67 in locally assembled motors. This resulted in immobilisation of a large number of A.C. mixed type electric locomotives and their production was also seriously affected. The firm investigated in detail these failures and its representative visited India for studying the problem and the remedial measures to be adopted for overcoming the failures. During discussions with the Railway Board the firm agreed to the following solution in September 1972:—

(i) A new design of the armature coils would be developed by the firm.

(ii) All the 297 armatures supplied by it till September 1972 would be taken back, rehabilitated according to the new design and returned. All expenditure thereon would be borne by the firm. (Later in February 1973, it was decided to rewind 20 of these armatures in Chittaranjan Locomotive Works for training staff in production of the new design. To compensate for labour and facilities for this purpose provided by Chittaranjan Locomotive Works, the firm agreed to provide sets of material for nine more armatures).

(iii) All future armatures to be supplied against pending order would be of the new design.

(iv) The firm will also render assistance to Chittaranjan Locomotive Works in establishing quick manufacture of armatures of the new design by supplying copper conductors to the new design for 10 armatures, and by placing armature winding experts at the disposal of Chittaranjan Locomotive Works from December 1972 onwards for attending to qualify production of armatures of the new design.

(v) All the rehabilitated armatures would be covered by a fresh warranty of 24 months from the date of commissioning in India or 32 months from the date of shipment from abroad whichever is earlier.

1.8. Accordingly, the Board has drawn up a plan for sending the 297 armatures abroad in a phased manner. Till June 1973 ninety-eight armatures were sent. Meanwhile, the locomotives are being kept in service to the extent possible by limiting the maximum current.

Chittaranjan Locomotive Works had built 120 armatures of the old design all of which will have to be rehabilitated at an estimated cost of Rs. 24 lakhs.

1.9. The failures of the traction motors led to immobilisation of a large number of the mixed type locomotives in South Eastern Railway. Out of 52 such locomotives supplied to South Eastern Railway till the end of March 1973, twelve were not in use till March, 1973 for various periods since January 1972 as their traction motors were used for replacing the defective ones in the locomotives in service. Besides, thirty-seven such locomotives had to be stabled on that Railway in 1972 for periods ranging from 10 to 184 days because of traction motor defects. Also during 1972-73 Chittaranjan Locomotive Works turned out 41 such locomotives, of which only 22 fitted with traction motors could be despatched to the allottee Railways and, lacking traction motors, the other nineteen remained stabled. But for the stabling of these locomotives additional goods traffic could have been moved under electric traction and to that extent haulage under costlier steam traction could have been reduced.

[Paragraph 10 of the Report of C. & A. G. of India for 1972-73 on Railways]

1.10. Explaining the circumstances leading to the finalisation of the collaboration agreement with the Group for the production of A.C. Freight Type electric locomotives in Chittaranjan Locomotive Works, the Chairman, Railway Board stated during evidence:—

> "The decision to come over to A.C. traction was taken in 1959. At that time, we were not manufacturing electric locomotives. We had not developed the idea of manufacturing electric locomotives at that stage. The question was one of providing overhead structures for A.C. traction. This A.C. traction had pioneers in France. Prior to that, there was only D.C. traction all over the world. The French railways and this group of people were the first to develop A.C. traction which is far more economical than D.C. traction. In June, 1959, we said that future electrification will be in A.C. and we would obtain the know-how for this from France. In the beginning, all the A.C. locomotives required for our electrification programme were imported. It is only later on that we decided that instead of putting up a new factory for the manufacture of electric locomotives, we will gradually convert the Chittaranjan factory for the manufacture of electric locomotives. As these people had pioneered the designs for A.C. locomotives, we quite naturally collaborated with them for

the manufacture of locomotives, for which agreement was made in 1962."

1.11. The Committee desired to know the reasons for deciding on the production of freight type locomotives with the collaboration of Group, when all the electric locomotives then in use were of mixed type *i.e.*, fit for both passenger & freight operations. In a note, the Railway Board have stated:

"The decision to manufacture the freight type of electric locomotive in June, 1959 was based on following considerations:—

(a) Limited availability of electric locomotives the use of electric locomotives was initially to be confined on goods trains.

(b) Goods trains represented a substantially high percentage of total traffic.

(c) Freight type of electric locomotives were capable of hauling higher loads and were expected to be comparatively less expensive.

(d) There would not be immediate need for more mixed type locomotives beyond the first 112 procured earlier."

1.12. The Chittaranjan Locomotive Works delivered to South Eastern Railway 82 freight type locomotives and 16 sets of bogies with traction motors between December 1963 and October 1967. However, shortly after commissioning, all these locomotives developed a number of defects and had to be withdrawn from service. Asked about the reasons for failure of all the locomotives produced and delivered to South Eastern Railway by October 1967, the Railway Board have in a note stated:

"Detailed investigations revealed that the failures were mainly on account of following defects:

(a) Alternative indigenous materials were used in place of alloy steel specified due to non-availability of alloy steel and with a view to conserve foreign exchange. The production would also have been delayed for want of proper materials. (Components affected are Jacquemin drive parts—crank—pin, Mn. Steel, pins and bushes).

(b) The actual site conditions on South Eastern Railway having grades severe than 1 in 100 compensated (originally specified) required the locomotive to exert higher tractive effort than originally specified in the design for these locos.

(c) Indigenisation of purchased materials was attempted at a much higher pace than the industry in the country could support with the result that purchased items gave unreliable service;

(d) The design selected was a comrlex transmission system requiring a very high level of skill and working to very fine tolerances which took considerable time for Chittaranjan Locomotive Works to achieve; and

(e) Failures due to over-stressing and fatigue of the components due to the combined effect of the above reasons."

1.13. During evidence before the Committee, the Member Mechanical deposed:—

"I would submit that we are talking about a period pertaining to 10 years ago when India was just emerging as an industrial nation, and we did not have the sophisticated industrial base which we see today. In that context, we started production of an equipment which was highly sophisticated also. The issue before us was whether we are going to import the components or the complete locomotives or try indigenously. We took the latter decision that we should indigenise as fast and as best as we can. We found that the industrial base at that time could not produce the special steel and other material required for the production of these locomotives; we tried to improvise and we tried to develop. What we tried to put in, what was available was not the best. was not even the right thing and still we made an effort. That was the reason why these engines developed trouble soon after. But I must say that because of that effort in those times, we find that sophisticated equipment is being produced in the country now."

1.14. According to the Audit Paragraph the defects in the locomotives were attributable partly to design inadequacy for the purpose of the heavy gradients in South Eastern Railway. The Committee asked why this particular factor was not taken into consideration before drawing up the design. The Chairman, Railway Board stated in evidence:

"I will not say that they were not taken into consideration."

In the same context the Member Mechanical stated:

"It is not the defect in design. Specification was made to give 30 ton tractive effort and this engine gave 30 ton tractive

effort in the trials that we conducted. From further experience we find that in the South-eastern Railway the conditions are very severe; it is heavily graded section and it has long stretches of sharp gradients."

1.15. In reply to a question whether the design inadequacy of the AC locomotives to work in the heavy gradients of S.E. Railway was brought to the notice of "Group" and was any compensation sought for the inconvenience/loss suffered by the Railways, the Railway Board have stated:—

"The locomotives supplied were as per specification and there was no design indequacy. In actual operation it was, however, found that the actual gradients on the South Eastern Railway were severer than those specified. There were other local factors also which required greater effort on the part of the locomotives."

1.16. According to the explanation given by the Railway Board to Audit, the heavy expenditure incurred on repairs to these locomotives, was in the nature of intermediate overhauls. In reply to a question as to how could the heavy expenditure on repairs in the first few years, which formed 10 per cent of the cost on an average could be considered as expenditure on intermediate overhaul, the Railway Board have in a note stated:

"The expenditure incurred during the repairs was after the bogies had been in service for a period of about 3 years. At this time bogies are also due for a general intermediate overhaul and, therefore, this work of overhaul was also done at the same time by Chittaranjan Locomotive Works.

The type of heavy repairs, rehabilitation and modifications necessitated on the original ACFT fabricated type of bogies are not required on cast steel Co-Co bogies utilized under diesel locomotives. Thus there is an intrinsic design difference and no comparison on this score is possible."

1.17. The Audit Paragraph brings out that from December, 1969, onwards there was again a spate of failures traction motors of freight type locomotives due to breakages of shaft and pinion, which had not been indegenised. The Committee asked whether the Group accepted responsibility for deficiency in design and material specifications leading to failure of traction motors. The Member Mechanical stated during evidence that "for the traction motors they accepted responsibility and

they were prepared to bear the rectification cost." He added: "....they had to suffer an expenditure of over a crore of rupees for repairing the traction motors."

1.18. Asked whether all the failed traction motors of freight type locomotives have since been repaired and put back to service, the Railway Board in a note, stated:

> "Yes, 65 motors on which the shafts had broken upto that time—1970-71, have all been reshafted and put back into service."

1.19. The Committee desired to now what was the recent average annual repair/overhaul expenditure on A.C. freight type locomotives and whether it had come down after 1971. In a note, the Railway Board have stated:

> "The latest computed overhaul costs of these electric locomotives as compared to those for the past years are:—

Year	Cost per POH of electric locos
	Rs.
1969-70	80,000
1970-71	94,500
1971-72	92,500
1972-73	1,14,300
1973-74	1,20,300

The increases over the years are due to the general increases in the costs of materials and wages of the labour.

A.C. freight type locomotives are now performing satisfactorily on the South Eastern Railway. The gross tonne kilo-metres of traffic hauled per day per loco on line has also recorded consistent increases as would be seen from the following figures—

Year	GTKM hauled per day per loco on line
1970-71	262,991
1971-72	271,052
1972-73	280,764."

1.20. In September, 1967, the Railway Board decided to stop production of A.C. freight type locomotives beyond the 268 already ordered on the Chittaranjan Locomotive Works and instead started manufacture of A.C. broad gauge mixed type electric locomotives to a design developed by RDSO. Explaining the reasons for the switchover to production of mixed type locomotives, the Railway Board have in a note, stated:

> "The Railway Board decided in June, 1959, that freight type locos should be manufactured at Chittaranjan Locomotive Works. Due to limited availability of electric locomotives at that time, the intention was to use he electric locos only on goods trains. Electric locos were not permitted to be used on passenger trains during the early periods of electrification except for the push-pull service on the Calcutta suburban sections for which mixed type (WAM-2) locos were already procured.
>
> As the electric loco manufacture had stabilised to some extent at Chittaranjan Locomotive Works and as the anticipated freight traffic also did not materialise during the last years of the Third Plan, the Board revised their original decision about not utilising electric locos for passenger services, particularly as greater economy could be achieved on electrified sections if as many trains as possible were worked with electric locos with the fleet available. In the Fourth Plan the intention was that the passenger trains to the maximum extent possible should be worked with electric locos on electrified sections.
>
> The freight type locomotive of mono-motor design had certain limitation with respect to its utility due to heavy axle load and consequent limitations of maximum speed upto 75 kmph. Freight type locomotive was, therefore, more suitable for freight services only. Apart from the above, certain difficulties in maintenance of these locos particularly with respect to Jacquemin drives, intermediate gear roller bearings, hollow shafts, traction motor blowers, etc., were also experienced. As the electric locos were also required for working the passenger trains the change-over to a mixed traffic type locomotive was considered more versatile as such a locomotive was capable of carrying heavier loads (greater HP 3640 as against 3160 of WAG4 type) and had a greater speed and could work both passenger and goods trains depending upon exigencies."

1.21. Asked whether the switchover to production of mixed type locomotives was because of basic inadequacies of the freight type locomotive being produced in collaboration with Group, the Railway Board, in a note, stated: "The inadequacies of collaboration were not the factors which led to the abandonment of production of freight type locomotives."

1.22. During evidence before the Committee the Chairman, Railway Board stated that mixed type locomotives were preferred to freight type locomotives in 1967 "because these locomotives were of a larger horse power with mono-motor and incorporating radical changes."

The Member Mechanical stated: "We found that mixed type locomotives would be more suitable for hauling passenger trains as they could not be moved by freight type locomotives because of speed restrictions."

1.23. In reply to a question as to why the comparative advantages of the two types of locomotives were not looked into earlier, the Chairman, Railway Board stated: "It is a stage of development. It is a technological improvement."

1.24. To a question whether this was not an error of judgement, the witness replied: "Certainly, it is not an error of judgement. The freight type could haul only 28 box wagons whereas the mixed type could haul 35 box wagons."

The Chairman, Railway Board further added:

> "I think a wrong interpretation is being put on this, if I may say so respectfully. The thing is that we had sufficient freight locomotives and new changes were all the time being tested out on the drawing board and obviously, if you want a mixed locomotive which has a higher horse-power and better hauling capacity plus a higher speed, then the obvious choice is to go for this. It gives you far more flexibility in the usage of locomotives."

1.25. During the course of evidence the Committee pointed out that one of the reasons for the changeover as mentioned in the Audit paragraph was the non-materialisation of anticipated freight traffic. Asked to clarify how the non-materialisation of freight traffic was instrumental in the switchover to mixed type of locomotives, the Member Mechanical stated:

> "That statement is correct that in the earlier years of the Third Plan, the materialisation did not take place and the freight locomotives that we had were adequate to meet all the demands of

traffic and then, to ensure that we had full utilisation of the electrified section, a policy decision was taken."

1.26. In reply to a question, the Chairman, Railway Board stated:

"In any case the fact was that the steel traffic was not going on in the South-Eastern Railway. It was a known factor. On the electrified sections, you should have more and more of electric locomotive operating there. With the freight traffic that you are moving to the steel plants on the electrified route, for instance, they were taking only 28 box wagons. Even if you get heavier locomotives, still the question arises whether we can have heavier locomotives to take 35 box wagons. In the course of the study that was not studied earlier it became clear that we should have the mixed type locomotives with better speed taking 35 box wagons. The freight type locomotives that we are manufacturing today are even better than the mixed type locomotives. Their capability of hauling on every section is about 42 box wagons."

1.27. The Committee enquired whether besides the three reasons for the switchover mentioned in the Audit paragraph, there were some other factors which necessitated this change. The Chairman, Railway Board stated:

"It has not been put very well here. Nobody would prefer a mixed type locomotive to a tailored locomotive at high speeds. That depends again on the levels of the speed you are aiming. If you go above 100 k.m. an hour. then the picture changes completely. Upto 100 k.m. an hour there won't be any change. When we go above 140 k.m. to 160 k.m. an hour or even if you cross the 120 k.m. range, then the picture changes completely. It is very difficult to have a dual type of locomotive which will give you speed of 160 k.m. an hour. At the same time, with a heavy freight load, it is very difficult to design such a locomotive."

1.28. With the decision to switchover to production of mixed type locomotives, another decision in regard to the design for the traction motors to be used in those locomotives had to be taken. After considering several alternatives, the traction-motor offered by a firm of the Group was adopted for manufacture at the Chittaranjan Locomotive Works. In February, 1968, the old collaboration agreement was extended upto 2nd November, 1975 to cover production of motors of the new design. The traction motors

of the selected design were not in use in any other country and before purchase and adoption for bulk manufacture they were not subjected to field trials in India. As to the reasons why the traction motors for mixed type locomotives procured from the firm belonging to the Group were not subjected to field trials especially in South Eastern Railway in the light of failures of freight type locomotives, the Railway Board have, in a note, stated:

> "The selected design of traction motors was based on Indian Railways specifications. The manufacturer had offered this design as similar other designs of traction motors produced by the GROUP had been working satisfactorily elsewhere. The initial lot of these traction motors after manufacture were subjected to detailed prtotype tests in accordance with the' international specifications with particular reference to the conditions in India with regard to higher ambient, speeds and loads. In view of the above, further field trials were not considered necessary."

1.29 During evidence before the Committee the Additional Member Electrical stated:

> "The defects in these armatures were of a very minor nature which resulted in these armatures failing. It is not possible to find that type of defect in a field trial. It is only after the armatures have run for some time that these defects were noticed. They were running and pulling the locomotives till now."

1.30. In reply to a question as to how the Railway Board representative in Europe was satisfied that the traction motors were upto certain standards and whether it was not considered necessary to have a field trial, the Chairman, Railway Board stated:

> "It is not obligatory or essential. The traction motors are manufactured in many countries. They do not have field trials for traction motors alone. If it were a complete unit, you could have a prototype trial for a stipulated period. That is why, in the case of a lot of indigenous material that we have been using in our production there have been no field trials as such."

1.31 The Committee pointed out that in view of the past experience of the failure of traction motors on the South Eastern Railway, it should have been considered whether before entering into a transaction of bulk

nature field trials were necessary. To this the Chairman, Railway Board replied:

> "That is covered by warranty. That is why they are taking back and putting them right."

He added:

> "As I said, for individual components, there is not necessary a field trial. It also applies to various other auxiliaries that we use in our production and also to indigenous Indian components that we use."

1.32. The Committee enquired during evidence why, in view of the unsatisfactory performance of the Group in the matter of production of freight type locomotives, the collaboration agreement with them was further renewed in 1968. The Member Mechanical explained:

> "At that time, in 1967, we had a collaboration with this firm already and all our set up and development that had taken place was to the French design. Our staff had been trained in France also and the question was that we wanted to produce the traction motors in the country, and really speaking, if the design had been satisfactory at that time, then, there would have been no problems."

The Chairman, Railway Board further clarified:—

> "It was not a question of any design being defective, but the question is, whether we will be able to design with our indigenous material right from the word 'go'. The point is, here is a collaboration, where we insisting on using indigenous equipment although this equipment may not have lived up to its expectations. We are talking on that basis. When we change the design of the locomotive to suit our requirements, same set up of traction motor equipment and the same methods of manufacture will be applied."

1.33. One of the considerations for choosing a firm of the Group for collaboration in manufacture of traction motors for mixed type locomotives was the utilisation of the balance of about Rs. 2.17 lakhs out of the advance paid on account of royalty. The Committee enquired whether

the balance had been utilised fully and what were the total uptodate payments of royalty to the Group. In a note, the Railway Board have stated:

> "Not only the balance of about Rs. 2.17 lakhs (2 lakh DM) balance to be utilised in 1967 when the decision to manufacture the new design traction motor was taken has been fully utilised but further payment over and above the initial down payment have become due to the Group. The present position of payments due under the agreement and payment made are as under:—
>
> (*i*) Payments due to Group as royalty . . . . Rs. 15,43,667
>
> (*ii*) Payments made as initial down Payment . . . . Rs. 7,57,954
>
> (*iii*) Balance due to be paid . Rs. 7,85,713
> less Indian Income Tax for which Group have been advised to settle the tax liabilities and claim the balance from Chittaranjan Locomotive Works."

1.34 The Committee wanted to know whether the RDSO's design of traction motors was discarded because of time factor or for any other technical reason. The Member Mechanical stated in this connection that "the design was not ready at that time." He added: "In 1968, it was not known that it (the production of ACMT locomotive) would take so much time; that was not anticipated."

1.35. The Committee pointed out that even with the accepted design of the French firm of the Group the production of motors commenced only in 1971 instead of 1969. To this the Chairman, Railway Board replied:

> "We had slipped a little and produced it by 1971. About RDSO's design, we could not be so sure. Even today, our production of traction motors is not very much high. If they were to produce from 1971 onwards, the number of motors available to us of our own design would have been very much less. We would have to import a large number of motors. If we had taken up our own design, the development time and the manufacturing capacity of the total number of motors required would have taken more time."

1.36 The defects in the freight type locomotives as also in the traction motors for the mixed type locomotives had been attributed by the representatives of the Railway Board to their anxiety for indegenisation of pro-

duction. In this context, the Committee pointed out that the Railway Board's decision to go in for French firm's design of traction motors would indicate that there had been no consistency in their policy in regard to adoption of their own designs for encouraging indigenous production. The Chairman, Railway Board stated:

> "I think, the impression that you get is correct. The fact is, we had three choices before us, one was the RDSO's design, the other was the Heavy Electricals' design and the third was the design of the foreign firm. The Heavy Electricals' design was also not their own design—it was a collaborated design. Traction motor is one of the most vital parts and one of the most complicated parts to manufacture in electric locomotives. This has been the experience all over the world. Although the RDSO had made a design, I do not think we had full confidence in their ability to produce the various components that are required for traction motors in the country in time, even in 1971. When we went in for the other design, the scheme was that initially they will supply but, progressively, they will be manufactured in our shops. The production in our shops has taken much longer time than we had anticipated. There are complicated techniques involved. We had found, in the case of motors, the rejections were very high in the very beginning. Based on that experience, we were not quite confident and we thought, if we started *ab initio*, with a completely new design, we may get into serious difficulties.'

1.37 The Audit paragraph brings out that within a short time of the mixed type locomotives being brought to use in S.E. Railway, a large number of the traction motors, some even immediately on receipt in India, developed defects. In this connection the Member Mechanical stated:

> "These traction motors were supplied for a particular type of locomotive. The design was ours and we asked them to manufacture for us and they did. There were 277 such traction motors. When they became defective, they accepted the fault and they agreed to bear the entire cost of changing them."

1.38 It was understood that import of 400 traction motors for mixed type locomotives had been ordered in November 1973. The Committee enquired whether this was correct and if so, what were the reasons for import? In a note, the Railway Board have stated:

> "It is correct that import of 400 traction motors for mixed type of locomotives has been ordered in November 1973. The main

reasons for the import are:—

(a) to make up shortfall in the availability of traction motors due to set-back in production and supplies from GROUP on account of the need to redesign the motors, and

(b) to ensure that adequate traction motors are available for programmed production of electric locomotives.

The programmed repair of 297 armatures was tied up with the actual number of these armatures released from locomotives in service. Those of the armatures which had not failed were kept in service to take maximum advantage of their availability and to ensure that additional locomotives are not stabled on this account. All the 277 defective armatures out of 297 which were to be repaired by Alsthom have been released from service for despatch in September 1974 and have since been despatched to France."

1.39 The Committee desired to know the progress made in the repair of armatures of the traction motors used in mixed type locomotives by the firm which supplied them. In a note dated 13th September, 1974 the Railway Board have stated:

"277. Alsthom Armatures supplied to old design and to be returned to France for rewinding to the new design have all been shipped barring a few which are in Calcutta Docks awaiting shipment by the next available ship. The firm have shipped back 124 Armatures out of which 109 have already been received. Most of these have also entered service. Balance 153 are expected back in regular monthly shipments."

The Railway Board in a further note dated 12th July, 1976 informed the Committee that all the 277 Alsthom armatures have since been received back from France after repairs, last consignment was shipped in January, 1976.

1.40. The Committee asked whether the order for import of 400 traction motors from Japan was for a different design and whether this indicated that the Railway Board were not satisfied with the traction motors for the mixed type locomotives produced by CLW as per the design of the 'Group' firm. The Railway Board have, in a note, stated:

"The recent order for 400 traction motors against global tender was for improved design of motors taking into account the following

aspects:—

(a) Rating was lightly increased for taking full advantage of larger capacity transformer that could be fitted on these types of locomotives at a future date.

(b) These are suitable for adoption of the latest technology in using thyristor control as against the conventional tap-changer control.

(c) The change in specification had not been dictated by the performance of the traction motors produced by CLW to revised design. In fact, these Group design motors after the change of design have given a satisfactory service so far, on all electrified Railways including the South Eastern Railway."

1.41. Explaining the circumstances leading to calling of global tenders for the import of traction motors, the Member Mechanical stated during evidence:

"In the motor, there was some defect in their design—it was the French firm who gave us this—and till they replace and re-wound all these motors, all these armatures, we found that our production naturally would stop or come down in any change in design. We thought that we would be short of motors and therefore we took the decision that we should buy motors. For buying these motors, we floated global tenders to find out the best. We decided, in the light of this experience, to have a better specification, to ask for a better motor and to be able to fit that motor in the existing bogies which we had. So, we had a global tender. In this, we got the Japanese design which was the cheapest and the best."

1.42. In this context the Chairman, Railway Board stated:

"Why did we go to Hitachi? Now, we are going to have a completely new set of armatures which would be based on different method of manufacture to what was required. Here, we had a method of manufacture of a type of motor, which is based basically on a French design. If you want to change that, you again get into very serious problems of restructuring the whole workshop, to be able to have a changed design. When you have decided to expand your traction motors production and you are going to set up a completely new factory, then it was open for you to get it from whatever source you can."

The Member Mechanical further stated:

> "The Hitachi agreement is based on a traction motor of a new design, and as the Chairman, Railway Board has said, we are setting up a factory for production of traction motors, for heavier locomotives, traction motors with a greater horse power. When we are setting up an entirely new unit, we tried to find out, which is the best and the cheapest, and this was given by Hitachi. So, we have gone to Hitachi."

The Chairman, Railway Board further deposed:

> "In the long run, it is our intention to rely on our own indigenous capability, entirely. This is our long term objective. For the electric locomotives, we are now left with the traction motors the design for which is done largely on our own resources. This is the position today. This was not the position in 1967."

1.43. Asked what was the present state of efficiency of the electric locomotive fleet in South Eastern Railway, the Railway Board, in a note dated 13th September, 1974 stated:

> "The present fleet of electric locomotives on the South Eastern Railway is performing satisfactorily. 155 ACFT type locomotives are performing to their rated capacity of maximum tractive efforts and speeds.
>
> The ACFT type locomotives fitted with the modified design armatures rewound in France as well as being built by Chittaranjan Locomotive Works to the new design are giving satisfactory service and these locomotives are also working to their present tractive efforts and speeds."

1.44. The Committee wanted to know to what extent mixed type locomotives were being used for haulage of goods traffic. In a note, the Railway Board have stated:

> "The figures for holding of mixed type and freight type locomotive and utilisation of locomotives on goods, passengers and other services for the year 1968-69 up to 1972-73 are indicated as under:

Year	Holding			Locos in use				Locos in-effective		
	AC MT	AC FT	Total	Goods	Pass	Other Services	Total	in W/ shop POH plus Spl. repair	Scheduled & unscheduled repairs	Total
1968-69	135	229	364	225	63	8	296	23	45	68
1969-70	135	271	406	261	68	10	339	16	51	67
1970-71	141	312	453	278	69	7	354	20	79	99
1971-72	165	323	488	317	72	7	396	21	71	92
1972-73	185	343	528	348	64	12	424	24	80	104

From the above it would be seen that all the mixed traffic type locomotives are not utilised for the passenger services but quite a few number are also used on goods traffic mainly because of preference to electrify all goods traffic first. The electrification of all passenger services on all electrified Railways has not been possible due to shortage in the overall availability of electric locomotives."

Further, in a note dated 12th July, 1976 furnished by the Railway Board the following figures regarding holdings of freight type and mixed type locomotives and their utilisation during the years 1973-74 to 1975-76 have been given:

Year	Holding			Locos in use				Locos ineffective		
	AC MT	AC FT	Total	Goods	pass	Other services	Total	in work shop POH *Spl. repairs	Scheduled and Unscheduled repuirs	Total
1973-74	192	343	535	360	63	10	433	20	82	102
1974-75	218	343	561	370	70	9	449	21	91	112
1975-76	286	343	629	390	102	19	511	20	112	118

1.45. The Committee note that the Ministry of Railways decided in 1959 to go in for production of AC freight type (ACFT) broad gauge electric locomotives and entered into a collaboration agreement with a foreign consortium (called Group) in November, 1962, providing for grant of manufacturing rights and technical assistance by the 'Group' for indigenous production of such locomotives for a period of eight years. Production in the Chittaranjan Locomotive Works started from December, 1963. The Committee are concerned to note that 82 ACFT locomotives, costing each about Rs. 24 lakhs, which were delivered by the Chittaranjan Locomotive Works to the South-Eastern Railway between December, 1963 and October, 1967 started developing a number of defects within a few months of their commissioning (from October, 1964 onwards) and had to be withdrawn from service. Apart from loss on account of stabling of the locomotives, an expenditure of Rs. 1.4 crores (about 10 per cent of the cost of manufacture) was incurred on major repairs and modifications of these locomotives.

1.46. The Committee have been given to understand that one of the principal reasons for the failure of AC freight-type locomotives was the severe gradients on the South-Eastern Railway which "required the locomotive to exert higher tractive effort than originally specified in the design for these locos." The representative of the Ministry of Railways has pleaded that there was no inadequacy of design on the part of the collaborators, as the locomotives were made as per specifications laid down by the Railway Board. This raises the basic question as to how the Railway Board settled the specifications of the freight-type locomotive for indigenous manufacture without making sure that it had the tractive capability of hauling the loads on the South Eastern Railway where such locomotives were primarily to be used. Surely, the Railway Board cannot plead ignorance of the existence of higher gradients on the South Eastern Railway or the tractive effort required therefor, as they had experience of years of running heavy goods trains on that Railway. If there were any grounds for doubt, prudence required that the Railways should have imported ACFT locomotives according to the specifications worked out by them, tried them out on the sections where these were likely to be used, come to a considered conclusion and thereafter, taken a firm decision about its indigenous manufacture within the country. The Committee should not be understood to imply that there should be needless dragging of feet in the matter of undertaking an imaginative and well-planned programme of manufacture within the country, in the interest of attaining self-reliance in crucial sectors; but obviously, these high-sounding principles cannot serve as an alibi for not acting with prudence and care, so as to make sure that what was sought to be manufactured within the country was actually suited to the requirements. In fact, the net result of this hasty experimentation was the

heavy loss sustained when a large number of these ACFT locomotives became ineffective and had to be withdrawn for effecting substantial modifications and repairs at a heavy cost of Rs. 1.4 crores.

1.47 The failure of the imported traction motors fitted on these locomotives from December, 1969 onwards due to breakage of shafts and pinions is indicative of the fact that the design and capability of the traction motor had not been selected with the requisite care and prudence. While the Committee note that these traction motors have since been replaced by the collaborators at their own expense at a cost of over Rs. 1 crore, the fact remains that a very large number of ACFT locomotives were rendered inoperative thereby denying the Railways the use of these costly locomotives for hauling goods traffic on electric traction at competitive costs. The Committee would like the Ministry of Railways to constitute a high level inquiry into both the matters referred to above, namely, inadequacy of the design for the ACFT locomotives and large scale failure of shafts and pinions of the traction motors which rendered the locomotives inoperative for long periods. They would like to be informed of the action taken against the defaulting officers as well as the lessons which have been learnt from these costly lapses so that these are at least avoided in the future.

1.48 The Committee note that two of the other reasons given for the unsatisfactory performance of the indigenously manufactured ACFT locomotives were use of indigenous materials as well as inadequacy of inspection and poor workmanship. The Committee feel that it should have been possible for the Railways to overcome the first deficiency by adopting strict standards, from the very inception, in the matter of indigenisation of materials and by exercising strict quality control by thorough inspection at all stages of manufacture. As regards poor workmanship, attributed to the time required for development of skills the Committee feel that it should have been possible to overcome this deficiency by initiating the training programme on priority basis as soon as the collaboration agreement was entered into. The training facilities available under the collaboration agreement should have been made full use of and meaningful help of the collaborators taken to train our workers in the Chittaranjan Locomotive Works so that these deficiencies of workmanship were not allowed to come in the way of satisfactory manufacture of locomotives.

1.49 The Committee are even more disturbed by the wholesale failure of traction motors and armatures of AC electric mixed type (ACMT) BG locomotives whose manufacture was taken up in 1967. The Committee are unable to appreciate how there could be such wholesale failure of armatures which resulted in rendering inoperative a large number of these locomotives particularly on the South Eastern Railway for periods ranging from 10 to 184 days, besides the stabling of 19 locomotives for want of

traction motors. While the Committee can understand the Railway Board's inclination to procure the traction motors and armatures from one of the Group firms as they had an "on going" collaboration agreement with that firm of the Group for manufacture of electric traction motors for ACFT electric freight locomotives, it was the bounden duty of the Railway Board to ensure that the specifications were properly laid down and the armature motors were put to realistic field tests to determine their suitability for the ACMT electric locomotives for Indian conditions. If the Railway Board had any doubt in the matter, it would have obviously been better either to import the equipment on trial basis, test its capability and suitability by field trials in India and then gone in for imports and indigenous manufacture or else to have floated a global tender in order to get the quotations for traction motors from all over the world, evaluated their suitability and capability for Indian conditions and then taken a decision on the large scale imports and indigenous manufacturing programme.

1.50 It is a moot point whether in evaluating the performance of traction motors/armatures for import/manufacturing programme, the Research, Designs and Standards Organisation (who had already designed a traction motor on their own) and Bharat Heavy Electricals (a public sector undertaking, who were already manufacturing traction motors for DC electric locomotives) should have been closely associated. Had there been a meaningful dialogue between these agencies in the public sector and critical evaluation of the traction motors and armatures which were available in the world market it should have been possible to lay down more suitable specifications and undertake the import/manufacture of the most suitable armature motors for the ACMT locomotive programme from the very inception.

1.51 In this context it is pertinent to recall that when the Railway Board were faced with the spectre of wholesale failure of electric traction motors on the ACMT locomotives in 1973, they floated a global tender and imported as many as 400 traction motors from Hitachi, a Japanese firm. Had the Railway Board either selected in 1967 the traction motor of the Group design after proper tests and trials especially when the motors of this design were not in use in any country, or purchased traction motors of proved design against open tender as they did in 1973, the ACMT locomotives would not have been rendered inoperative for such long periods.

1.52 The Committee have already in paragraph 1.47 asked for an inquiry to be made to fix responsibility for the inadequacy of design of ACFT locomotives. They would like this inquiry to cover also the manufacturing programme for ACMT mixed type electric locomotives with special reference to the specifications for traction motors/armatures, their import and indigenous manufacture within the country. The Committee

would like to be informed of the result of the investigation and the action taken against the officers found responsible for failure to discharge their responsibility. Lessons should be learnt from these costly lapses in order to ensure that these do not recur.

1.53 The Committee are concerned over the heavy percentage (about 20 per cent in 1972-73) of ineffective locos as compared to total holding of both ACFT and ACMT locos, due to repairs etc. The number of ineffective locos increased progressively from 68 (18 per cent) in 1968-69 to 104 (20 per cent) in 1972-73 against total holdings of 364 and 528 locos respectively. The position improved slightly, since according to information received from the Railway Board on 12th July, 1976 the number of inoperative ACFT/ACMT locos out of a total holding of 629 locos was 118 (18.7 per cent). Even so, it is a pity that such a large fleet of powerful locomotives built at great cost for hauling the heavy goods traffic should have remained inoperative for long periods. The Committee would like the Ministry of Railways to examine the matter in depth in consultation with the Railway authorities concerned and take concerted measures to see that the number of electric locomotives kept under repairs is reduced to the minimum and that as many of them as possible are put to effective service to haul goods and other traffic efficiently and at most economic costs.

Chittaranjan Locomotive Works—Purchase of Special Grade Silicon Insulating Varnishes

Audit Paragraph

1.54 Chittaranjan Locomotive Works entered into a collaboration agreement with a foreign Group in 1962 providing for grant of manufacturing rights and giving technical assistance for indigenous production of electric locomotives. In Feb., 1968 a supplementary agreement was entered into for technical assistance in manufacture of traction motors for mixed type A.C. electric locomotives. The agreement of 1962 provided that Government of India reserved the right to procure items, not manufactured by the Group, either by import directly from suppliers or through the Group acting as purchasing agents and that Government shall pay to the firm (belonging to the Group) handling charges, of 5 per cent on the f.o.b. European port price of the imported materials purchased and supplied through the agency of the Group, to cover inspection, overhead, handling, coordination and arrangements necessary to synchronise supplies with the indigenous manufacturing production programme. Special grade insulating varnish and other materials and components required for production of traction motors were ordered on the Group in September 1968 to cover the production requirement of traction motors. The Chittaranjan Locomotive Works Administration was aware that these varnishes were not produced by the Group which procured them from a manufacturing company the

initials of the name of which were shown on the containers of the varnishes received. Production of the first batch of 50 traction motors with armatures built in Chittaranjan was completed in July 1970. Since the varnishes are delicate sophisticated materials with very critical properties, it was considered that they should be procured only through the Group so as to take full advantage of their technical expertise, inspection facilities, guarantee etc. Accordingly, further orders for the varnishes were placed on the Group in June 1970, November 1970 and again in November 1971. The total c.i.f. value of varnishes imported through the Group (during April 1970 to March 1973) was Rs. 26.41 lakhs The supplies were air-freighted to India.

1.55 The Group had assured in 1966 that the prices charged by it for such outside items would not exceed the supplier's prices by more than five per cent and, therefore, reasonablenss of the prices charged by the Group was assumed by the Chittaranjan Locomotive Works which did not attempt to find out how did the prices charged by the Group compare with the market prices of the manufacturer. As a result of enquiry made in September 1971, the agent in India for the manufacturer offered in October 1971 to supply these varnishes. The quotations received from the agent in March 1972, which were accepted by Chittaranjan Locomotive Works in May 1972, were about 20—25 per cent only of those charged by the Group. The additional expenditure incurred due to the higher prices charged by the Group was Rs. 18.90 lakhs (excluding customs duty) out of which Rs. 15.56 lakhs were in foreign exchange.

1.56. These varnishes have limited shelf life which, according to the manufacturer's catalogue and the warranty clause, is 6 months from the date of despatch. However, the experience of Chittaranjan Locomotive Works has been that in practice certain of these varnishes have been found usable even 12—15 months after the date of manufacture. In spite of the provision in the warranty clause in most of the purchase contracts with the Group that the date of manufacture and the date of expiry of the life of insulating materials would be indicated on each container, no such indication was given on the containers of the varnishes supplied by the Group. So far 620 kgs. of one variety of varnish valued at Rs. 1.67 lakhs (excluding customs duty) have become useless. The Indian agent has given warranty of only a shelf life of 6 months, provided the materials on arrival at Chittaranjan are kept in storage below 20 degress centigrade. The Chittaranjan Locomotive Works Administration procured in all 11.574 kgs. of the varnishes from the Group. According to the scales of consumption recommended by the Group, this should have proved adequate for 526 traction motors targeted for production till the middle of 1972-73. The actual production was, however, 239 motors upto June 1973 due to technical difficulties. Because of this, there has been accumu-

lation of stock of these varnishes. The usable stock on 31st May 1973 was 5097 kgs., all of which had been in stock for more than the shelf life period of six months. At the present rate of production of traction motors, it may take about another six months for that stock to be consumed.

[Paragraph 19 of the Report of C. & A. G. of India for the year 1972-73 on Railways]

1.57. The details of various purchase orders for the different varieties of varnishes placed on the Group are given below :

Sl. No.	No. of purchase order and date	Variety	Qty. Kgs.	FOB Value in French Francs	
1	CLW/MCO/145/1004 dt. 16-9-1968	SI.40C	1215	153,490·95	
		SI·40F	625	61,331·25	
		SI·996	125	8,268·75	
2	CLW/MCO/145/ 1032/178 dt. 18-6-1970	SI.40C	450	63,000·00	
3	CLW/MCO/145/ 1033/172 dt. 26-6-1970	do.	640	89,600·00	
4	CLW/MCO/145/ 1037/187 dt. 2-11-1970	do.	2300	3,58,800·00	
		SI·996	550	45,485·00	
5	CLW/MCO/145 199(A)/ 1058 dt. 22-11-1971	SI·40C	2954	4,72,640·00	
		SI·996	865	73,525·00	
		SI·40F	1850	2,34,950·00	
	Total FOB Value		11,574	15,61,090·95 (FF) or 15·61 lakhs (FF)	Rs.21,07,472·78 or Rs. 21·07 lakhs
	Insurance and freight			Rs. 5·34 lakhs	
	Total CIF Value			Rs. 26·41 lakhs	

1.58. According to the Audit paragraph the Group had assured in 1966 that the prices charged by it would not exceed the supplier's prices by more than 5 per cent. Asked whether the C.L.W. tried to check at any stage that the Group carried out its assurance given in 1966, the Railway Board, in a note, stated :

"No. The comparison at the time of each purchase had been made between the last purchase price and the price under consideration for acceptance. Also, in cases where complete sets of motor materials were being purchased, the cost of material

per Motor, at quoted prices, was cross checked with the last purchase prices of complete motors."

1.59. During evidence the Committee enquired whether the prices charged by the Group were ever verified with reference to the market prices. The Member Mechanical stated: "We had no means to verify at that time the prices of varnish."

He added :

"This particular type of item is a proprietory item which does not have a world market, and it is not possible to find out generally, what the world price is. This particular firm did not have arrangements for international contracts and there were no agents in India at that time. After it changed hands, then, agents in India came. It was a little difficult for us to find out the price of this material. The only check that was done was, that the total of individual items combined into an armature will not cost more than what we paid."

1.60. The Committee desired to know the procedure followed in C.L.W. in regard to ordering of supplies of this nature. The Financial Commissioner for Railways stated in evidence :

"All purchases of this nature are made through a tender committee which goes into the reasonableness of prices before the orders are placed. A regular procedure is followed. It appears that the tender committee did not go into reasonableness of individual items; they seemed to have taken a global view of all items offered at that time."

1.61. On being pointed out that there ought to be some competent authority to certify the reasonableness of the prices offered, the Financial Commissioner for Railways stated :

"That was the function of the tender committee; they have certified that this was a reasonable price."

He added: "The procedure seems to have failed somewhere or the other."

1.62. The Committee asked whether any action had been taken by CLW to correspond with the Group for a reduction in the price. The Member Mechanical stated: "We have. But they have not accepted our stand. We have gone in for arbitration."

In this connection the Financial Commissioner for Railways stated :

> "We had a long discussion with them on the subject. The company has taken the view that when they tendered for these prices, in some cases they got extra prices and in others they lost heavily. On the whole their claim is that they have not made any extra money out of it. In support of their contention they have produced a chartered accountants' certificate, not an employee of the company, but an outsider and when the case goes in for arbitration they say they would produce this as an argument in equity in their favour. On our part we have hauled them up; all the members of the board of directors came and we made it clear to them what we thought of this transaction."

1.63. During evidence the Committee enquired whether CLW were aware of the fact that the varnishes for which orders were placed on the Group were not manufactured by them but were being procured by them from some other company. The Member Mechanical stated: "We are aware of it." Asked whether it was obligatory for CLW to engage the Group as intermediary for the procurement of essential supplies, the witness stated: "In a way, it was necessary because the traction motors that were being manufactured were to their design and the material required for them, had to be procured by them from the source."

1.64. To a question as to what care was taken to ensure that the introduction of an intermediary in the matter of purchase of stores did not lead to unreasonable increase in the rates, the Member Mechanical stated :

> "One care we took was this. The price of the armature that was supplied by them was checked and the price of that armature was reasonable, particularly from the costing point of view. The total overall cost was reasonable."

1.65. The Audit paragraph brings out that the CLW came to know about the price differential only in March, 1972 on receipt of quotations from the Indian agent. Asked when did the CLW come to know that the manufacturer had an agent in India, the Member Mechanical stated :

> "We came to know only very late. There was no agent earlier..... In 1971 we put in an advertisement for this in all local papers. There was no response at all. Then we wrote to the manufacturers and asked them whether they had any local agents who could supply us varnish. There was no response to that either. After some time, the local agents

referred to us that this company which manufactures varnish has been taken over by another company and now they are in a position to offer the varnish."

1.66. In a note on the subject, the Railway Board have stated :

"(a) The order of September, 1968 was not the first or initial order in which these varnishes had been ordered. These varnishes had been ordered through earlier contracts also.

(b) Production of motors commenced only in the second half of 1968. The emphasis and concentration in the earlier years was on establishing production and overcoming the various technical and other problems. Arranging inputs of machines, materials, man-power, tooling, training of men and establishing the necessary techniques—all these demanded and engaged the full attention of the Technical Department. There was also no separate organization adequately manned to deal with development and location of sources.

(c) No official attempt was made to locate the Indian Agent till April, 1971, a special advertisement was issued for various requirements of special materials, including H Class varnishes. There was no response to this advertisement.

(d) In sophisticated and specialised items like Silicon Varnishes, where the demand is not much in the country, the logical expectation is that the few Firms who may have the Agency will take initiative and approach the likely users. No approach was made to CLW by Voltas or any other Indian Agent prior to October, 1971, and, as is well known by now, the approach made by Voltas in October, 1971, was the result of a specific reference made by the Technical Department of CLW on its initiative to the Foreign Manufacturer.

(e) To the best of CLW's knowledge/information, there was no advertisement in any of the well-known news media by any Indian Agent so as to attract attention.

(f) There was no directive to the Technical Department at any time for locating the Indian Agent."

1.67. The Committee desired to know who was the officer responsible for negotiating this deal. The Chairman, Railway Board stated in evidence :

"We have appointed a committee to go into the whole business..... The Committee is going into it..... We will not know the names

until the Committee has gone into it. It is not one transaction. There are several transactions."

In a note dated 12th July, 1976, the Railway Board have further informed:

"The report of the Committee appointed by the Railway Board in this case has not yet been finalised.

However, the terms of reference of the Committee are as under:—

(a) to investigate and report on the manner in which overpayments to M/s. Group against orders placed on them by CLW Administration within the overall scope and the provisions of the Collaboration Agreement for the supply of non-group items came to be made over an extended period of time;

(b) to fix responsibility upon the concerned staff, gazetted and/or non-Gazetted, for the lapse/lapses; and

(c) to suggest remedial action, procedural or otherwise, to prevent a recurrence."

1.68. The Committee asked, since this case revealed clear overcharging by Group, whether the Railway Board had considered the possibilities of recovering the estimated overpayments from amounts payable to Group, e.g. royalty payments. In a note, the Railway Board have stated :

"(a) It is mentioned in the question that there is a 'clear over-charging' by GROUP. Alsthom's contention has been that whereas they have overcharged in respect of certain items *viz.* purchased items, they have under-quoted in respect of items manufactured by them and consequently they have suffered loss.

(b) As regards recovery of over-charged amount, it is stated that contractually, supplies are to be paid for as and when they are made. Withholding of bills against shipments would have affected production as the production of electric locos is dependent on imported items for some of which there is no alternative source of supply as yet established.

(c) Payments to M/s. Alsthom—a Member of GROUP are, however, withheld since July, 1974 as the dispute is only with M/s. Alsthom. As regards Royalty payments, they have become due for payment. These payments will be made after the

Arbitration is finalised. It is, however, mentioned that the amounts to be paid as Royalty are not very much."

1.69. The Audit paragraph refers to one instance of overcharging by Group for varnishes. The Committee enquired whether any other instances of overcharging by the Group had come to light. The Member Mechanical stated in evidence:

"It has come to light so far in regard to 41 items where overcharge was made.....The value of such overcharging was Rs. 70 lakhs.....All of it was in foreign exchange."

1.70. The Audit paragraph mentions that there has been accumulation of stock of varnishes. As to the reasons why the stock was allowed to accumulate, the Additional Member Electrical stated during evidence:

"We placed orders for the supply of varnishes in 1967-68 and the supply started coming in 1969 and at that time the production of locomotives started. Now, upto the period of March—April, 1972, production was going on. Then we found certain difficulties on the production side. We found certain defects with the motors that were working. Then we had a technical assessment of it and in September, 1972 we decided that the design was to be slightly altered. Before September, 1972 the production was reduced and after September, 1972 the production was completely stopped. At that time what happened was that we had a stock of varnishes roughly for about six months. But after that some heavy quantities were in the pipeline which we were not able to stop immediately. We could control the supply only after the receipt of this stock."

1.71. The Committee desired to know whether, apart from the deterioration of 620 Kgs. of one variety of varnish mentioned in the Audit paragraph, any other instance of similar spoilage had come to the notice of CLW.

The Railway Board have, in a note, stated:

"The total deterioration to the end of September, 1974 is as under:—

SI 40C	2300 Kgs. in 335 tins
SI 40F	1245 Kgs. in 43 tins
SI 996	1815 Kgs. in 343 tins
	5360 Kgs.

The above quantities are inclusive of 620 Kgs. reported in the Audit Para and 850 Kgs. reported additional. Out of these, deteriorated stock, 750 Kgs. of SI 996 is due for replacement under warranty obligations by M/s. Voltas to which they have agreed recently. It is emphasised in this context that these varnishes being highly volatile and highly critical, they can be declared to be useful or otherwise only after undertaking laboratory tests (The average daily consumption being of the order of 1/2 tin of 5 Kgs. each). Even though on-the-spot examination may indicate that the varnish is not jellified, still its usefulness will depend upon testing of the varnish of each tin just prior to its usage. It is also noticed that the quality of the varnish on opening varies from tin to tin although they belong to the same batch while tested at about the same time. The cost of deteriorated stock excluding free replacement is as under:—

Cost of Spoilt Varnishes on the basis of Bookrate

S.No.	Description	Qty. Spoilt	Bookrate	Total value
		Kgs.	Rs.	Rs. P.
1	Varnish - SI 40C	1675	209·87	3,51,532 25
2	Varnish - SI 40 F	215	238·10	51,191·50
3	Varnish - SI 996	965	103·48	99,858·20
	1715 Kgs. less 750 Kgs. free replacement of SI 997 ex. Voltas			
		TOTAL		5,02,581·95

1.72. The Committee enquired whether the orders on Group stipulated phased deliveries to meet only actual short term requirements and avoid bulk supply which might lead to the deterioration of varnishes before usage and if so, how could a large quantity of one variety of varnish become useless. In a note, the Railway Board have stated:

"The actual deliveries stipulated in each of the contracts are indicated below:—

(a) *CLW/MCO* 145 1004 *dated* 18-9-1968.

SI 40C (MG) 550 Kgs.	Full Qty. by end of June '69.
SI 40C (TAC) 625 Kgs.	20% by end of June '69.
SI 40C (SJ) 40 Kgs.	15% by July '69, 15% by end Oct. '79, 25% by end of Dec. '69 and balance 25% by Feb. '70.
	Full Qty. by end of June '69.

SI 40F 625 Kgs.	20% by end of June '69.
SI 996 125 Kgs.	15% by July, '69, 15% by end of Oct. '69. 25% by end of Dec. '69 and balance 25% by Feb. '70.

(b) *CLW/MCO/*1033/172 *dated* 20-6-1970

SI 40C — 20M/sets x 32 Kgs. 640 Kgs. . . Delivery in 4 months

(c) *CLW/MCO/*1032/178 *dated* 18-6-1970.

SI 40C=450 Kgs. . . . . Delivery in 4 months.

(d) *CLW/MCO* 187/1037 *dated* 2-11-1970 . .

SI 996 =550 Kgs. Ordered . . . 4 months after act approval of contrt.

SI 40C =2300 Kgs. Ordered . . do.

(e) *CLW MCO/IR*-9 199 1056 *dated* 21-9-1971

No varnish was ordered . . . . . .

(f) *MCO IR*-9/199(A) 1058 *dated* 22-11-1971.

SI 40F =1850 Kgs. ordered . . . . . Delivery to be completed by 4 months.

S 996 =865 Kgs. ordered . . . . . do.

SI 40C =2954 Kgs. ordered . . . . . do.

It would be observed that staggering of deliveries had been attempted in contract No. 145 dated 18th September, 1968. Such attempt had not been made in contract Nos. 172, 178 and 187 apparently because of the small quantity involved.

In respect of contract 199A no attempt to stagger delivery was made apparently because of the lack of definiteness in scale of anticipated consumption The actual monthly rate of drawal is

shown in the statement below:—

Monthly Consumption in Kgs.

Description	During 1970	1971	1972	1973	April '74 to Oct. '74	Estimated to next 6 monthsbased on current schedule of Qt per Mot and month. output of 24 motors
	Kgs.					
SI 40 C . .	198	166	210	336	211	408
SI 40 F . .	28	13	15	28	90	134
SI 996 . . .	..	31	38	71	113	192

The 620 Kgs. became unfit for use because of the reason brought out above."

1.73. In another note, the Railway Board have stated:

"As indicated in the Audit para stocks accumulated in 1973 because of an unanticipated and steep shortfall in planned production that occurred in 1971-72 and 1972-73. Also consumption has not followed estimates because of lack of adequate working experience in usage to enable precise estimates of future consumption."

1.74. Asked whether the present deliveries of these varieties of varnishes were phased to match the actual production needs of the motors, the Railway Board in a note, stated:

"Yes. A review of the trends of consumption, stocks and requirements is made periodically—generally monthly—and action is taken for getting further supplies as far as possible."

1.75. The Committee desired to know how the scales of consumption prescribed by the Group, based on which procurement was made, compare with the actual pattern of consumption on the shop floor and if the actual scales of consumption were actually higher, what were the reasons therefor. In a note, the Railway Board have stated:

"Scales for procurement have been revised from time to time. Collaborator's recommendations have also changed from time to time. The present position is as under:—

(Kgs. per Motor)

Varnish	Collaborator's recommendation	CLW's procurement scale/actual consumption
SI 40 C	13	16-17
SI 40 F	4·5	5·6-6
SI 996	4	8

The reasons for higher scale of procurement/consumption are the following:—

(i) There is very little time-lag between manufacture of the varnish and its use abroad; whereas for CLW even getting materials by air, there is a definite time-lag of at least 3 months to allow for inspection, packing and despatch, transit time, customs clearance and final availability for use and final storage in the air-conditioned stores. During that period the varnish is exposed to higher ambient temperature than the specified ideal storage condition of 20 C, even if brought by air;

(ii) There has been special and repeated emphasis during the visit of the Collaborators' representatives on application of liberal varnish at the various stages.

(iii) Provision has to be made for making good failed components on which varnish has been applied in the process but such varnish cannot be recovered. Incidence of such rejections, for a production unit like CLW attempting manufacture for the first time, have been higher compared with M|s. Alsthom who have been in the field for 40 years. Also the training of men on the job and making them conversant with the new techniques has entailed use of larger quantities of varnishes in the initial stages of developing the product.

(iv) Under the higher ambient conditions prevalent in India, some varnishes particularly SI 40C, do deteriorate even during the day's use and part of it has sometimes to be thrown away.

(v) There are also periodical rejections during the routine testing.

(vi) In the use of Nomex Mica paper for Armature Coil insulation, CLW are required to apply varnish SI 996 which is not being done in the Collaborators' Works.

With growing expertise, the recent trend is towards lower consumption. Further planning|procurement will be made taking into account this trend and after watching performance for some more months at the current sustained production levels."

1.76. The Committee desired to know how varnishes obtained from stores but found spoiled on opening on the shop floor (Paint Shop) were

dealt with and whether these were accounted for correctly as losses and written off normally. In a note, the Railway Board have stated:

> "Varnishes SI 996 and SI 40C which have the maximum instability and delicacy are tested in the following manner on a day-to-day basis for full quantities intended to be used in Traction Motor Shops. The tins drawn by the Shops are sent to the testing enclosures, where they are opened and tested. Where a particular tin fails to meet the requirement, it is rejected and retained in the testing enclosure. Collections of such rejected tins over a period are sent to the scrap yard under a proper voucher. Such rejections are not treated as "losses". They are, therefore, not "written off" but are treated as incidental to the manufacture and, therefore, as consumed in the process.
>
> In respect of tins which can be detected by mere inspection as having been spoiled i.e. without detailed testing and in respect of varnishes other than SI 40C and SI 996, tins found defective are treated in the same manner as stated above."

1.77. In another note, the Railway Board have stated:

> "The varnishes are issued from stores to the shops in original sealed containers.
>
> On issue of the varnishes for shop floor work, the physical condition is checked. Varnish which generally shows signs of jellifying is not useable. The jellification takes place after its useful life is over and in this condition it cannot be used on the shop floor. Such quantities as are not useable are treated as losses.
>
> In cases where the manufacturer failed to indicate the date of manufacture on the container, as happened with the earlier supplies, the matter is taken up with the supplier to arrange free replacements.
>
> However, where the date of manufacture is indicated and the varnish is not used during the specified shelf life due to reasons for which the supplier cannot be held responsible then such losses are to be written off after survey by a Committee as a standard practice."

1.78. The Committee note that the Chittaranjan Locomotive Works had purchased through the 'Group'—a Consortium of foreign companies, 11574 Kgs. of special grade silicon insulating varnishes at c.i.f. value of Rs. 26.41 lakhs during the period September, 1968 to November, 1971 to cover the

production requirements of traction motors, the manufacture of which was taken up in collaboration with the Group. The Group had assured the Railways that the prices charged for items procured from others would not exceed the suppliers' prices by more than 5 per cent. The Committee, however, find that in fact the firm of the Group which supplied the silicon insulating varnishes had charged an unconscionably high price; the additional expenditure incurred due to the higher prices being Rs. 18.90 lakhs (excluding Customs Duty) out of which Rs. 15.50 lakhs was in foreign exchange.

1.79. The Committee are concerned to note the following glaring lapses on the part of the Railway authorities who were responsible for indenting and making arrangements for procurement of the silicon insulating varnishes:

1. The quantities indented were far in excess of the requirements. The Committee are not able to appreciate how as against the actual monthly consumption of 198 Kgs. of SI 40C Varnish during 1970, indent for as large a quantity as 2300 Kgs. was placed on 2nd November, 1970. Further indents for 2954 Kgs. of SI 40C, 1850 Kgs. of SI 40F and 865 Kgs. of SI 996 varnish were placed on 2nd November, 1971 against an average monthly consumption of 166 Kgs., 13 Kgs. and 31 Kgs. respectively during that year. Apart from the fact that there were standing directions that the quantities to be indented should take specifically into account the actual consumption in the preceding period, there was the additional need for observing every care as the insulating varnishes were known to deteriorate if kept in storage for more than six months and there were large quantities already in stock.

2. Care had not been taken to contact the firm from whom the supply had been obtained by the Group and whose initials were inscribed on the containers nor to ascertain the price in the market abroad or in India so as to make sure that the Group firm did not charge prices exceeding 5 per cent of the suppliers' prices.

3. Care had not been taken to see that the date of manufacture and the date of expiry of the life of the insulating materials was indicated on each container in spite of a specific provision in the warranty clause to that effect. 2855 Kgs. of insulating varnish costing Rs. 5.03 lakhs (excluding customs duty) had to be thrown away as it lost its property after the specified period.

1.80. The Committee also find that as against the norm of 13 Kg. of SI 40C Varnish per motor, the actual consumption was 16 to 17 Kg.; in case of SI 40F varnish it was 5.6 to 6 Kg. as against 4.5 Kg. per motor recommended by the Collaborator and in case of SI 996 varnish it was as high as 8 Kg. against 4 Kg. recommended by them. The Committee have a feeling that this high rate of consumption is not so much due to the variation in conditions in India as compared to those obtaining in the Collaborator's manufacturing unit but due to the anxiety of the Railway authorities to cover up the losses on account of the varnish losing its properties because of efflux of time by showing it as issued for work, but in fact discarding it. The Committee would like to be informed of the upto-date position of the utilisation of the insulating varnish as they fear that a large quantity of this stock might well have been discarded as having lost its property. The quantity and value of the imported insulating varnish which were discarded as being unfit for use should be specifically indicated in the reply to be furnished to the Committee. The Committee should also be informed of the action taken or proposed to be taken to obviate recurrence of such lapses.

1.81. The Committee are perturbed to note that this is not the only instance where the Group had overcharged. In fact there were as many as 41 other items where the Group has overcharged Rs. 70 lakhs from the Railways. The Committee are not prepared to accept the plea, stated to have been put forward by the Group, that while they had overcharged in certain items, they had undercharged in certain other items.

1.82. The Committee were given to understand that the matter had been referred to arbitration and that the Railways had also appointed a Committee to go into all aspects of these transactions. The Committee cannot see any reason why the Enquiry Committee have not been able to finalise their report on a matter of urgency which had been referred to them as early as in August, 1974. The Committee desire that the Railway Board should see to the completion of this work without further delay. They would like to be informed of the findings of the Committee as well as the action taken by the Government to recover Rs. 70 lakhs which were overcharged by the Group and to fix responsibility on the Railway officials for failure to safeguard in time Government's interests.

1.83. The Committee require that the shortcomings and lapses mentioned in the foregoing paragraphs should be specifically enquired into by a Departmental Committee of senior officers including a representative of the Railway Accounts. Responsibility for failure to safeguard the nation's interest must be so ascertained that important lessons can be learnt and such costly lapses do not recur.

CHAPTER II

GOODS TRANSPORTATION AND ROLLING STOCK USAGE

Central, South Central and South Eastern Railways—Detention to Goods Trains

Audit Paragraph:

2.1. For planned supply of wagons, quotas of the number of wagons to be handed over daily by each Railway to the contiguous Railway at each junction point of interchange of traffic are fixed by the Railway Board. These quotas are periodically determined taking into account the quantum and trends of actual traffic in the past and the capacity of a railway to move such traffic.

2.2. The Central Railway exchanges goods traffic with South Central Railway at, amongst others, Balharshah junction. It does so with South Eastern Railway at, amongst others, Ajni junction. The quotas fixed for interchange of wagons at these two junctions and the actual interchange during April, 1970 to March, 1973 are given below:—

Interchange point	Average number of wagons to be interchanged each* way daily during			Average number of wagons actually interchanged daily					
	1970-71	71-72	72-73	1970-71	71-72	72-73	70-71	71-72	72-73
				South Central to Central.			Central to South Central.		
Balharshah	375	370	370	278	290	285	300	305	300
				South Eastern to Central.			Central to South Eastern.		
Ajni (Nagpur)	600	600	600	447	447	441	389	347	348

*There is no quota for traffic from Central Railway to South Eastern Railway interchanged at Ajni. The figures shown above are for traffic from South Eastern Railway to Central Railway.

2.3. The average number of wagons actually interchanged at Balharshah and Ajni was less than the interchange quotas by 18 to 26 per cent and 25 to 27 per cent respectively. During 1970-71 to 1972-73 there were detentions of goods trains at or short of these two interchange points. When the detentions are likely to be indefinite the engine is detached and the train is stabled. (In what follows detentions for less than an hour and stablings for less than a day have not been taken into account.) The detentions are to be viewed in the light of the facts that (i) while the Railways lose in passenger traffic, profit is made in goods traffic and (ii) although in 1971-72 seventy-two per cent of the freight traffic was hauled by the powerful electric and diesl locomotivs (which aer expensive—each broad gauge electric/diesel locomotive now costs about Rs. 28 lakhs) wagons (broad gauge) ran for 4.07 hours only and covered only 74 kms. per day on the average.

2.4. Two thousand ninety-two goods trains from Central Railway side and 1880 trains from South Central Railway side were actually interchanged at Balharshah in 1971-72. In that year 52 trains proceeding from Central Railway side towards Balharshah were stabled short of that station by not less than a day—their average period of stabling was 2 days. It has not been possible to ascertain whether trains proceeding from South Central Railway side to Balharshah were stabled short of that station on that side. In addition, during the same period 155 goods trains proceeding from Central Railway side were detained on an average for 2 hours short of Balharshah on the Central Railway side and 382 trains proceeding from South Central Railway side were detained on an average for 2 hours on the South Central Railway side. Also, 151 trains of Central Railway handed over to South Central Railway started late from the interchange point (Ballharshah station) by, on an average, 2 hours.

2.5. The Ministry of Railways stated (January, 1974) that, as the section between Balharshah and Bellampalli (109 kms.) was on single line excepting for a short stretch of about 4 kms., some detentions to goods trains for crossing and precedence of passengers carrying or other goods trains were inescapable. Since this section was already working to near saturation point, further doubling of this section had been sanctioned; and during actual execution of these works, the capacity on this section got temporarily reduced on account of speed restrictions and engineering blocks. Besides, Balharshah is a small transit yard with meagre facilities and detention to goods trains short of it is partly on this account. To overcome these limitations, remodelling of this yard has also been sanctioned on a motlest scale. Difficulties were also caused by bunching of express and passenger trains at that station, unforeseen factors such as accidents

etc., and by occasional late availability of engines or late appearance of staff on duty.

2.6. In 1971-72 two thousand five hundred and ninety-six Central Railway goods trains were handed over to South Eastern Railway at Ajni and 3415 trains were taken over by the former from the latter. In that year 21 trains proceeding from Central Railway side towards Ajni were stabled short of that station by not less than a day—the average period of their stabling was 4.62 days. In addition, during April—October, 1971. 16 trains proceeding from South Eastern Railway side towards Ajni were stabled short of that station by not less than a day—the average period of their stabling being 3.69 days. Further, during February—July, 1972, 48 trains of Central Railway and 1001 trains of South Eastern Railway were detained short of Ajni, on an average, for one hour and forty minutes and one hour and eleven minutes on Central and South Eastern Railways respectively. In addition, 115 trains of Central Railway handed over to South Eastern Railway in the same period started late on an average by four hours and eighteen minutes from the interchange point (Ajni).

2.7. The Ministry of Railways stated (January, 1974) that movement of traffic to the eastern region was severely strained in 1971-72 due to heavy strategic Defence movements. Besides, there were frequent cases of dislocation to train services on account of civil disturbances, wildcat strikes and other forms of labour trouble. These factors coupled with usual operating hazards like accidents etc., were responsible for the temporary stabling of these trains. Late starts of goods trains from Ajni were mainly due to unforeseen factors like accidents, failure of signalling and other equipment in yards, cross movement of engines between Nagpur and Ajni and late appearance of staff on duty etc.

[Paragraph 12 of the Report of C & A.G. of India for the year 1972-73 on Railways].

2.8. Asked what was the purpose of fixing quotas for handing over of wagons at interchange points, the Member Traffic explained during evidence:

> There are various junction points on Indian Railways, where traffic is interchanged betwen one Railways and another Railway and there are different streams of traffic coming with different types of traffic. Now, we lay down the quotas taking into consideration, the type and value of traffic moving and expected to move, so that, once the quota is laid down, it serves as a guide and the traffic should flow in accordance with the anticipations and as it offers. We generally keep the quota little higher so that it is difficult of achievement. These quotas govern the movement.

ment through various junctions between one Railway and another Railway.

2.9. In a note on the subject, the Railway Board have further explain-

"Quotas for the interchange of traffic between different railways are determined, periodically, taking into account the pattern of traffic both-ways existing as well as anticipated, and the surge capacity of the concerned railways to move this traffic, given normalcy of other conditions. The quantum of traffic passing through an interchange point is also influenced by the traffic mix and by the constraints further up at the terminals or at transhipment points or over any of the sections *en-route*. These quotas are deliberately pegged at a slightly higher level than the one at which sustained traffic can be handled continuously and, infact, contain a cushion to cover surges in traffic. Surges in traffic may be of two types:

(i) Peakes achieved during busy season; and

(ii) Spurts from time to time.

Advantages of fixing interchange quotas are :

(i) they help in regulating the loading and maximum flows of traffic through an interchange point;

(ii) they provide a basis for working out the requirements of locomotives, staff and other ancillary facilities for handling the traffic upto the prescribed quota;

(iii) they act as a yard-stick for evaluating day-to-day performance at the inter-change points."

2.10. On being asked about the period for which the quota fixed remains valid, the Member Traffic stated :

"We review it every year generally at the operation meetings. If not every year, eighteen months or two years depending upon the volume and pattern of traffic....We take into consideration the volume of traffic expected to flow and the types of traffic. For example, you referred to Godavari area. It is a loading area for rice as well as for certain general goods traffic of the tpe of cement, from the cement factories round Vijayawada, paper from the paper factories in Rajahmundry etc. We take into consideration not only the production from the

factories and the agricultural production, but, also the direction in which it moves. For instance, from the Godavari area, rice traffic moves to Kerala. Paper moves from Rajahmundry to the South and North. In regard to cement, we take into account the dispersal pattern of cement production etc."

2.11. To a question whether unit quotas for every week and month were also fixed, the witness replied :

"Traffic patterns do not fluctuate so violently. After all, we review it every year in relation to the maximum traffic that we expect to carry. When there are violent fluctuations, even during the period of the year itself, we revise it. In fact there is day to day watch on operations throughout the year. When we find that there is a fall in traffic, or there are some situations like drought, we revise the quota as may be found necessary. We advise the Railway accordingly. When there is an upsurge in traffic, we revise it. We provide more resources accordingly. Patterns keep on fluctuating, particularly in regard to foodgrains traffic, from time to time. As you know, at one time, we were importing heavily. Then, we gradually brought down the imports of foodgrains from 1968 when the Green Revolution came. Then, there was heavy movement from North to South. Now, we are faced with a situation where we are going to import more and move less from North."

2.12. In the same context, the Chairman, Railway Board stated in evidence :

"Basically quotas mean a workable level of inter-change at different points; and they can be regarded as a ceiling. If the ceilings are exceeded or are changed, the traffic pattern and the capacities of the various routes would have to be re-arranged. For instance, if some special foodgrain movements come in and which require that the Railways should move at a rate higher than the ceiling, in a particular direction, it is done. I think the word 'quota' is taken as a fixed quantity. It is not so....A junction point means that a quota of 500 is distributed among different directions and that number can be divided *e.g.*, 200 and 300 or any other ratio."

2.13. The Committee enquired if the quota at one point was upset whether it will disturb the working of entire railway system, the Member Traffic stated during evidence:

> "It will affect the stream of traffic, that is, the stream of traffic moving in a particular direction. For instance, this para refers to movement from Ajni. Ajni is an inter-change point, a junction point, through which the movement of traffic is from South Eastern Railway to the West. This traffic stream consists of steel plant traffic, general goods traffic emanating from Calcutta area, cement traffic from the cement factories on the South Eastern Railway and so on. Similarly, the reverse movement from Central Railway to the East consists of the stream of traffic coming from Wadi Bunder, that is, loading in Bombay area and loading in other areas of Western India. It will upset the movement of this particular stream of traffic in the sense that the movement is less than the quota."

2.14. Subsequently, in a note furnished at the instance of the Committee, the Railway Board have stated:

> "Interchange targets are fixed taking into account the planned requirement of wagons of the individual railways. If the stream of loaded traffic to a particular railway is not adequate to meet the loading commitments from that railway empties are provided in interchange which is taken into account while fixing interchange quotas.
>
> Shortfalls in important interchange points like Balharshah and Ajni will affect the stream of traffic moving in a particular direction. For instance, the movement of traffic at Ajni is from South Eastern Railway to the West and this traffic stream consists of steel plant traffic, coal, general goods traffic emanating from Calcutta area, cement traffic from the cement factories on the South Eastern Railway etc. Similarly, the reverse movement from Central Railway to the East consists of the stream of general goods traffic coming from Bombay area and loading in other areas in Western India. When the overall movement through interchange point is less than the prescribed quotas this particular stream of traffic will be upset. But the general pattern of inter-railway operation is self-compensating in the sense that the total despatches out of a railway from the various interchange points normally balance the total receipts through them. If there is any under equali-

sation at one interchange point, the pattern provides for over-equalisation at other interchange point or points over a period of time. The entire strategy of railway operation is directed towards achieving this balance so that the shortfall at a particular interchange point does not affect the working of the railway system as a whole."

2.15. Referring to the figures of wagons actually inter-changed during April, 1970 to March, 1973 at Balharshah and Ajni *vis-a-vis* the quotas fixed for interchange at these two junctions, the Committee desired to know the reasons for the wide fluctuations between the quota and the actuals. The Member Traffic deposed during evidence :

"The position from November, 1968 to April, 1969 is this. From Ajni, we were moving at an average rate of 520 wagons per day. It is on that basis and in anticipation of some additional traffic that a higher quota of 600 was fixed. During the years to which the Para relates, *viz.* during, 1970-71, 1971-72 and 1972-73, there were two main reasons for the traffic not moving *via* Ajni on a regular basis at the rate of 550 wagons per day, *viz.*, disturbed conditions in the eastern sector which affected movement as also the offering of traffic; and the other reason is short materialization of certain types of traffic. But the figures which the Audit Paragraph gives are average ones. I have made an analysis. Even during 1971, during 180 days out of 365 a year, we moved between 500 and 550 wagons. It is only on the remaining days that it was less and it brought down the average."

During 1972-73 there were separate reasons; that years was the first one when the eastern zone was affected by severe power cuts. There were also difficulties in the steel plants. Then there were the strikes in the cement factories.

There were different reasons for different years, *viz.*, the power cuts the strikes. Our own agitation also affected the movement. In the post-strike period, we have been moving at the rate of about 560 wagons per day."

2.16. Giving the specific reasons for the average number of wagons actually interchanged at Ajni and Balharshah falling below the interchange quotas, the Railway Board have, in a note, stated:

"*AJNI* (a) In 1968-69, the target for interchange of traffic from South Eastern Railway to Central Railway at Ajni was 550 wagons daily. Between November, 1968 to April, 1969, the

actual average daily interchange from South Eastern to Central Railway was as under :—

November, 1968	500 wagons
December, 1968	535 wagons
January, 1969	518 wagons
February, 1969	511 wagons
March, 1969	499 wagons
April, 1969	516 wagons
Total	3079 wagons
Monthly average	513 wagons

In view of this performance for 6 consecutive months and the anticipation of more traffic *via* this route, the quota for the interchange of traffic from South Eastern Railway to Central Railway was fixed at 600 wagons in May, 1969.

The shortfall in the interchange as compared to quotas at Ajni during 1970-71; 1971-72 and 1972-73 has been due to the following factors :—

1970-71: During this year shortfall in interchange of traffic from South Eastern to Central Railway *via* Ajni was attributable to the following major factors :—

(i) Shortfall in traffic;

* * * * *

(ii) Unsatisfactory working conditions on the South Eastern Railway.

* * * * *

1971-72: During this year interchange at Ajni continued to be affected by :

(i) Shortfalls in the materialisation of traffic;

(ii) Further deterioration of working conditions on the South Eastern Railway.

* * * * *

1972-73: The interchange performance at Ajni could not improve during this year due to the following factors :—

(i) Shortfall in the materialisation of traffic;

* * * * *

(ii) Frequent cases of power shedding affecting the running of trains; staff agitations and strikes and the effect of Mulki Rules agitations in Andhra Pradesh November, 1972 to February, 1973.

* * * * *

Balharshah—The interchange target at Balharshah was fixed at 370 wagons in 1969-70 (temporarily revised to 375 wagons in 1970-71) on the basis of anticipated materialisation of traffic from North to South consisting mainly of foodgrains from Northern Railway, finished products from steel plants, coal from Chanda coal fields and general goods. In the return direction, the movement was primarily in the nature of balancing traffic, which consisted mostly of general goods and empties.

Against this quota, the actual make-over from Central to South Central Railway during 1970-71, 1971-72 and 1972-73 was 300, 305 and 300 wagons per day respectively. The important constraints, which militated against a higher level of interchange at Balharshah during these 3 years are listed below :

(i) To improve the capacity on the saturated Balharshah-Kazipet section, doubling works were in progress during these years. During the actual execution of these works, the available capacity for movement of trains get further reduced on account of speed restrictions and engineering blocks. This increased the turn-round of locomotives working on this section. This can be gauged from the fact that turn-round of diesel engines on Balharshah-Kazipet section which was 33 hours 53 minutes in 1970-71 increased to 42 hours 35 minutes in 1971-72 and 43 hours 55 minutes in 1972-73 against the target of 32 hours. This in turn affected the interchange level at Balharshah.

(ii) Balharshah yard was a small transit yard with meagre yard facilities. There were only 3 lines for reception of trains from Wardha direction and also for their onward despatch to South Central Railway. These three reception-*cum*-despatch lines

were also used for backing loads formed in Balharshah yard for South Central Railway.

(iii) During 1970-71, 1971-72 and 1972-73, there was perceptible increase in the loading of coal in Bellampalli and Ramagundam collieries on Balharshah-Kazipet section. The increase in the loading of coal has been as under:—

Year	No. of wagons loaded with coal
1970-71	1,06,911
1971-72	1,27,990
1972-73	1,47,670

This coal traffic had to be given preference over other general goods traffic in the overall interest of economy. This led to reduced clearance by South Central Railway from Balharshah."

2.17. As to the steps taken to improve the situation, the Railway Board have stated:

"To improve the interchange at Ajni and Balharshah the following steps have been taken:

1. *Remodelling of interchange yards*

(a) *AJNI*:—The following additional facilities are being provided in Ajni yard:—

UP yard:

(a) Provision of a shunting neck;

(b) provision of two departure lines;

(c) provision of a separate engine line.

Down yard:

(a) Extension of the length of receiving lines from 597 metres to 687 metres to handle larger trains;

(b) Extension of sorting lines from 439 to 686 metres;

(c) Extension of the capacity of the Down grid;

(d) Provision of a shunting neck;

(e) Provision of an engine line to eliminate cross movements.

(b) *Nagpur*:—Provision of route relay inter-locking for Nagpur yard for speeding up movements through this yard.

(c) *Balharshah*:—The following additional facilities are being provided in Balharshah yard:

(a) Provision of 4 classification lines in advance position with connections to the main lines at Kazipet and for direct despatch of Down trains;

(b) Provision of 6 classification lines referred to above;

(c) Conversion of one of the existing sorting lines as a shunting neck for the proposed classification lines.

II. *Extension of doubling on Bellampalli-Kazipet and Wardha-Balharshah Sections*:

The progress of doubling on Bellampalli-Kazipet section during 1971-72 and 1972-73 was as follows:—

Year	No. of kilometres doubled
1971-72	47
1972-73	24

At present, 117 kilometres out of a total length of 326 kilometres on this section are already opened for orthodox doubling.

As regards Wardha-Balharshah section, the progress of doubling is as follows:—

Total length of Wardha—Balharshah section	Total length sanctioned so far for doubling	Length already doubled		Balance doubling yet to be done
		Orthodox doubling	Slow line	
(Kms.)	(Kms.)	(Kms.)	(Kms.)	(Kms.)
132·33	117·70	68·66	9·72	39·32

III. *Extension of Block-rake movement*:

Efforts are being made to extent the concept of running block train to more and more commodities moving *via* these interchange points. Organisation of traffic of finished products from Steel Plants in block rakes moving among others, *via* these two interchange points and of coal loaded from Chanda coal fields *via* Balharshah in block rakes are recent instances of this effort. These will no doubt help in reducing pressure on these yards and to that extent improve the level of interchange of traffic otherwise offering.

IV. *Survey for a line by-passing Nagpur*:

In order to ease movement through Nagpur Yard, survey for providing a bye-pass line from Katol (Nagpur-Itarsi section) to Wardha has been sanctioned. This will held in the movement of North-South traffic without touching Nagpur."

2.18. It is seem from the Audit Paragraph that out of 2092 trains received from Central Railway at Balharshah during the year 1971-72, 155, trains were detained for admission into the yard for an average duration of 2 hours each. Similarly during February—July, 1972, 48 trains of Central Railway and 1001 trains of South Eastern Railway were detained short of Ajni, on an average, for one hour and forty minutes and one hour and eleven minutes on Central and South Eastern Railways respectively. As to the reasons for these detentions, the Railway Board have, in a note, stated:

(a) *Balharshah*

As mentioned in the Audit para out of 2092 trains received from Central Railway at Balharshah during the year 1971-72, 155 trains were detained for admission into this yard for an average duration of 2 hours each. This represents 7 per cent of the total number of trains received from Central Railway.

Out of 1880 trains received from South Central Railway into Balharshah, 382 trains were detained for admission into Balharshah for an average duration of 2 hours. This constitutes about 20 per cent of the total number of trains received from South Central Railway.

In other words, about one goods trains for every two days on Central Railway side and about one goods train per day on the South Central Railway side were detained for admission into Balharshah during this year.

The following are the broad reasons for detention to trains short of Balharshah:—

(i) The facilities in Balharshah yard are meagre. There are only 3 reception-*cum*-despatch lines in respect of trains coming from Wardha direction and 4 reception-*cum*-despatch lines in respect of trains coming from Kazipet direction. These lines are not only used for receiving trains but also for backing the outgoing trains formed in Balharshah yard for Kazipet and Wardha directions respectively. The occupation of these reception-*cum*-despatch lines is heavy due to the difficulties of passage in both directions as explained in subsequent paragraphs. To minimise the detentions caused for want of receiving lines, provision of 4 separate classification-*cum*-despatch lines at the Kazipet-end and 6 separte classification-*cum*-despatch lines at the Wardha-end has been made in the remodelling plan of Balharshah yard, which is now in progress.

(ii) There were passage difficulties on the Balharshah-Kazipet section arising out of a large number of doubling works in progress involving a number of speed restrictions and engineering blocks on the section.

(iii) The pattern of goods train running on Kazipet-Balharshah section is such that in the evening and at nights, preference is given to trains leaving Kazipet with empties for coal loading at Bellampalli and Ramagundem collieries. Other trains for Balharshah and beyond are usually started from Kazipet in the early and late morning hours leading to some bunching. Bunching of these trains as they approach Balharshah in turn causes detention for acceptance by the yard.

(iv) The pattern of Mail, Express and Passenger trains on Kazipet-Balharshah section is such that there is movement towards Balharshah in the morning hours and away from Balharshah towards Kazipet in the evening hours. This pattern results in goods trains being detained for crossings and precedences.

(v) There were 21 yard accidents at Balharshah during 1971-72. Some of these accidents contributed towards detentions to trains short of Balharshah.

(b) *Ajni*

As mentioned in the Audit para, 48 Central Railway trains were detained short of Ajni from February 1972 to July 1972 for admission into the

yard for an average duration of 1 hour 40 minutes. During this 6 month period, 1309 trains were received from the Central Railway in Ajni yard. The number of trains detained works out to only 3.6 per cent of the total number of goods trains received.

4.1. These detentions short of Ajni were caused mainly due to the limitations of Ajni yard. Ajni Yard has 6 sorting-*cum*-departure lines and there is no separate departure yard. In view of the difficulties of passage for trains leaving Ajni towords South Eastern Railway, as explained in the subsequent paragraphs, the occupation of these sorting-cum-departure lines is heavy, which results in delay in sorting of loads and detention to incoming trains. Detentions also occur due to precedence to passenger carrying trains on Wardha-Nagpur section.

4.2. Remodelling of Ajni yard (including the down reception and sorting grid) is in progress.

5. During the same period (February '72 to July, '72), 1001 South Eastern Railway trains were detained at Kalumna and Nagpur short of Ajni out of 1739 trains received from South Eastern Railway during this period for an average duration of 1 hour 11 minutes. Detentions to South Eastern Railway trains short of Ajni are heavy and most of them are caused due to the constraints of passage across Nagpur yard. These constraints are detailed below:—

(i) Acceptance of trains from South Eastern Railway is done in two phases. They are first received in Nagpur goods yard and then in Ajni yard. There are two reception lines at Nagpur goods yard and these two lines are used for receiving trains from South Eastern Railway side as well as from Itarsi side and also for receiving empties and engines from Motibagh loco shed. Due to passage difficulties between Nagpur and Ajni caused by surface cross-movements as explained in (ii) & (iii) below, there is heavy occupation of these two lines and therefore goods trains suffer detention short of Nagpur.

(ii) Goods trains from South Eastern Railway side cannot be received when a train from Itarsi side is being admitted, as there is a common passage for both the directions while entering Nagpur goods yard.

(iii) Goods trains, after being received in Nagpur goods yard, get further detained for the passage of passenger trains, Ajni Nagpur shuttles, loads from Nagpur local goods yard to Ajni

and *vice versa* primarily on account of surface cross-movements.

(iv) The adverse effect of these cross-movements on the passage of trains could be minimised and detentions reduced if the trains from South Eastern Railway could be advanced upto Nagpur outer signal as a regular measure and then admitted into Nagpur yard. Trains are, however, not stopped at the signal outside Nagpur, as experience has shown that the trains are victimised by anti-social elements. In the event of reception lines at Nagpur not being readily available, South Eastern Railway trains are, therefore, generally detained at Kalumna, the adjoining station, to facilitate direct reception into Nagpur yard when the position permits. This increases the incidence and the duration of detentions.

6. (i) Much thought has been given to finding ways and means of avoiding surface cross-movements involved, firstly in the entry into yard and then in the movement from Nagpur to Ajni yard, in regard to movements from East to West and conversely from Ajni yard into Nagpur and again from Nagpur towards both South Eastern Railway and Itarsi. Surveys were made to investigate the possibility of a flyover, but this was not found possible for want of room as a road overbridge spans across the Nagpur railway yard, which is hemmed in by heavily built-up areas on both sides making further expansion extremely difficult.

(ii) However, to minimise the difficulties of passage through Nagpur yard, route-relay interlocking is being introduced. This, could with remodelling of the Ajni yard, which is now in progress, is expected to reduce detentions to South Eastern Railway trains for acceptance by Ajni yard. Besides, a survey for the construction of a bye-pass line from Katol (Nagpur-Itarsi section) to Wardha avoiding Nagpur yard has been sanctioned. This will enable North-South traffic to bye-pass Nagpur and Ajni yards, thereby reducing the pressure of passage across Nagpur yard.

7. Besides, there were 43 yard accidents at Ajni during the period February 1972 to July, 1972. Some of these accidents contributed towards detention to incoming trains short of Ajni."

2.19. The Audit Paragraph also brings at that in 1971-72, 151 trains of Central Railway handed over to South Central Railway started late from the interchange point of Balharshah by, on an average, 2 hours. And during the period February—July, 1972, 115 trains of Central Railway started late on an average by four hours and eighteen minutes from the interchange point of Ajni. The Committee enquired about the

reasons for such late starts of trains at Balharshah and Ajni. In a note, the Railway Board have stated:

Balharshah

151 trains started late from Balharshah Yard towards South Central Railway during 1971-72. The cause-wise break-up of the late starts of these trains is given below:—

For crossing & precedences	97
For late Carriage & Wagon examination	2
For late arrival of train engines	4
Due to signal failures	2
Due to accidents	2
For late turning of staff on duty (drivers, assistant-drivers and guards)	38
Miscellaneous	6
Total	151

These 151 trains, out of a total of 2029 trains made over to South Central Railway during 1971-72, represent 7.2 per cent of the total number of trains.

It would be seen from the analysis that the largest contributory cause for late starts is the delay caused for crossings and precedences. The pattern of Mail, Express and Passenger trains on Balharshah-Kazipet section is such that the movement is towards Balharshah in the morning hours and away from Balharshah in the evening hours. During these periods goods trains have necessarily to wait for crossing and precedences, particularly when movement is over a single line saturated section which is now in the process of doubling.

The other contributory factor for late starts is staff turning up on duty late. 38 such cases led to late start during 1971-72, *i.e.* about three cases per month. In all such cases staff found responsible is appropriately taken up.

Ajni

115 trains had late starts from Ajni for the period February to July 1972. The causewise figures of these late starts are as under:

For passage through Nagpur yard	45
Connecting incoming loads[late formation of out-going trains	22
Late arrival of engines from Loco shed	8
Late Carriage & Wagon examination	8
Accidents	4
Late arrival of staff on duty (Drivers, Firemen & Guards)	25
Miscellaneous	3
Total	115

It may be seen that passage through Nagpur is the major contributory factor for late start of trains from Ajni. Ajni yard is located between Up and Down main lines of the Nagpur-Wardha double line section. The South Eastern Railway engines coming from Motibagh Loco shed have to cut across a number of sensitive points of Nagpur passenger yard and the main lines. Eight cases of late arrival of engines of trains are also for reasons of passage through Nagpur from the Motibagh Loco shed to Ajni yard.

These passage of trains leaving Ajni Yard for South Eastern Railway are subjected to the same difficulties. They have to cut across the Down main line of the Wardha-Nagpur section and pass over a number of sensitive points before they can reach the main line of the South Eastern Railway.

Another factor leading to late starts from Ajni is the late arrival of staff on duty. The runing staff of the South Eastern Railway are mostly housed in Motibagh colony and they have to reach Ajni by using a jeep, which has been provided for the purpose. Whenever any of the staff turns up late on duty, suitable action is taken.

It may not be out of place to mention that these 115 trains represent only 9.8 per cent of the total of 1215 trains made over to South Eastern Railway at Ajni during the period covered by the Audit para."

2.20. The Committee asked whether performance in these interchange points had now improved. In a note, the Railway Board have stated:

"All India Railwaymen strike was called off at the end of May 1974. The position in regard to movement of traffic started improving from June, 1974 onwards even though the adverse effects of arrears in the maintenance of engines persisted. The improving trend would be evident from the figures of interchange at Ajni and Balharshah from June, 1974 onwards as follows:—

"AJNI

Month	South Eastern Railway to Central Railway	Central Railway to South Eastern Railway
June, 74	378	363
July, 74	454·1	375
August, 74	505·0	409

BALHARSHAH

Month	South Central Railway to Central Railway	Central Railway to South Central Railway
June, 74	363	324
July, 74*	314*	297*
August, 74	342	329

*Interchange at Balharshah was adversely affected in July. 74 due to the following reasons:—

(a) Drop in the materialisation of foodgrain traffic from North to South on account of heavy receipt of imported foodgrains at the Southern ports. These foodgrains were mostly distributed to different Southern states while loading of foodgrains from Northern India was diverted towards the Eastern states.

(b) Increase in the percentage of ineffective diesel locomotives based at Itarsi diesel loco shed of the Central Railway resulted in lesser availability of diesel locomotives for movement of and from Balharshah. This was due, inter alia, to non-availability of some vital spare parts which had to be imported."

2.21. According to the Audit Paragraph in 1971-72, 52 trains proceeding from Central Railway side towards Balharshah were stabled short of that station by not less than a day—their average period of stabling was

2 days. Similarly in 1971-72, 21 trains proceeding from Central Railway side towards Ajni were stabled short of that station by not less than a day—the average period of their stabling was 4.62 days. The Committee asked what were the reasons for stabling a number of goods trains short of Balharshah/Ajni for more than a day during the period covered by the audit paragraph and whether this had created problems of security, staff deployment etc. In a note, on the subject, the Railway Board have stated:

"*AJNI*

(*a*) *South-Eastern Railway to Central Railway*:

During April-October, 1971, 16 trains were stabled on the South Eastern Railway short of Ajni, out of a total of 1975 trains received from South Eastern Railway. The number of trains stabled works out to a more 0.8 per cent of the total number of trains received from South Eastern Railway.

In brief the stabling of these 16 trains was caused due to the following major causes:—

Causes	No. of trains
(*i*) Occasional spurt in the interchange making it difficult for Ajni to accept trains after having received 12 or more trains (interchange quota is for 600 wagons, which represents 12 trains)	4
(*ii*) Labour trouble at Ghughus Cement Factory	1
(*iii*) Accident	1
(*iv*) Heavy over-lap of traffic for via-Balharshah on Central Railway .	4
(*v*) Regulation of traffic for Bombay area due to congestions in that area .	5
(*vi*) Offer of 2 rakes for Daund Loco Shed on the same day . . .	1
	16

(b) *Central Railway to South Eastern Railway*:

Similarly, the number of trains stabled on Central Railway side short of Ajni during 1971-72 was 21. During this period, 2596 trains were made over by Central Railway to South Eastern Railway and the number of trains stabled represents a mere 0.8 per cent of the total number of trains.

The broad reasons for stabling are summarised under:—

(*i*) Regulation of traffic to Calcutta area due to various Bundhs, strikes aggitations etc. which caused heavy congestion at terminals in Calcutta area.	7
(*ii*) Congestion at Itrwari Goods shed due to heavy receipts and poor releases	4
(*iii*) Due to difficulties in movement in and across Chakradharpur and Kharagpur Divisions of South Eastern Railway as a result of the disturbed law and order situation	10
Total	21

BALHARSHAH:

(a) *Central Railway to South Central Railway*:

During 1971-72, 52 trains were stabled on the Central Railway side short of Balharshah, representing 2.4 per cent of 2092 trains made over by Central Railway to South Central Railway via this interchange point.

(b) *South Central to Central Railway*:

During 1971-72 only 4 trains were stabled short of Balharshah on the South Central Railway side, out of a total of 1880 trains received from South Central Railway. This stabling is negligible.

Whenever trains are stabled, their further clearance not merely depends upon the removal of the cause which led to their stabling but also on the availability of engines and staff required to clear these stabled loads, over and above what is required for handling the normal traffic. The duration for which trains are stabled depends on these factors.

Generally, trains are stabled at suitable locations which would facilitate prompt clearance just as soon as the position permits. Care is taken to see that stabling of trains is not likely to affect the movement of other trains on the section. Suitable action is also taken in vulnerable areas to depute the Railway Protection Force staff to guard the stabled trains to prevent miscreant activity."

2.22. The Committee were informed by Audit that in 1950-51 only 2 per cent of traffic was handled by diesel/electric locomotives and the daily average time and distance covered by a B.G. wagon was 3.58 hours and 62 kms. In 1960-61, 10 per cent of traffic was hauled by diesel/electric locomotives and the daily average time and distance covered by a B.G. wagon was 4.77 hours and 77 kms. The Committee enquired why

the daily average running time of and distance covered by a broad gauge wagon in 1971-72 was as low as 4.07 hours and 74 kms. respectively in spite of addition and usage of a large number of diesel/electric locomotives to the Railway fleet. The Member Traffic stated during evidence:

> "The number of hours done by a wagon per day are a constituent of so many factors. As I explained, the loading and unloading time for ordinary wagons is 5 hours, for box wagons 5-7-10 and 12 hours. From there, they go to the yards. From there, there is movement onwards and then unloading at destination. All these are constituent of the 24 hour day. It is not that for all the 24 hours all wagons are moving. You must give some time for loading and unloading by the consigner and consignee, some time for changing the engine. Then when it is a through train it can cover a longer distance and move for more number of hours when it is shunting train stopping at every station, where the wagons are detained, the number of hours in movement is less and the average is brought down."

He further added:

> "Between 1960-61 and 1971-72, you will kindly see that the density of traffic had increased vastly on the Indian railways. After all, our business is to carry the traffic. If you see the net tonne kilo-metres of tonnage lifted, it has vastly increased in 1971-72 compared to the figure, in 1950-51."

2.23. In a note on the subject, the Railway Board have further explained:

> "What is referred to as the distance covered by a wagon is technically known as "wagon kilometres per wagon day" and this is a statistical result derived by diving the total kilometrage covered during a period by the entire fleet of railway wagons including ineffective stock and wagons immobilised or stabled as surplus. This index includes detentions to wagons involved in loading and unloading of wagons after placement, detentions in industrial and colliery sidings, steel plants and ports; also detentions in marshalling yards for sorting and formation of train loads and at transhipment points, and detentions for repairs and maintenance of wagons.

1.2. The average running time of a wagon is worked out by dividing the "wagon kilometres per wagon day" by the average speeds of all goods trains. This, however, is not a standard statistical index.

1.3. Figures of "wagon kilometres per wagon day" and the average running time of a wagon per day do not indicate that every individual wagon moves only for that much distance or for that much period of time in a day. These are statistical derivatives and represent, *inter alia*, the effect of detentions suffered by the wagon fleet at various points and in various phases of handling as mentioned above. While such of the wagons as are on the run on through goods trains cover a longer distance, those wagons which are on sectional shunting trains which perform shunting at road-side stations for the supply and clearance of wagons, cover a much lesser distance.

1.4. Similarly wagons detained for part of the day in sick lines or marshalling yards or goods sheds or other industrial sidings etc. move a comparatively lesser distance. The index of "wagon kilometres per wagon day" embodies the effect of all such detentions.

2. The crux of the query raised by the Committee is why the indices of "wagon kilometres per wagon day" and the average running time of a wagon have not improved despite the addition of a large number of diesel and electric locomotives. The question, therefore, seeks to establish a direct relation between the progress of dieselisation/electrification and the mobility of wagons.

3.1. The benefits of dieselisation/electrification cannot be related to the speed aspect only. Greater benefits of these types of traction lie in the higher loads that can be hauled by these engines which lead to considerable economy on the run and in the reduction in the number of trains and consequent increase in section capacity. The maximum permissible speed of a wagon has remained the same in respect of all the tractions, irrespective of whether the train is worked by steam/diesel/electric locomotives depending as it does upon a number of other factors like track conditions, type and design of rolling stock, load of trains, signalling and communication facilities and the pattern and density of traffic. In view of this the advantage of dieselisation/electrification over steam traction so far as speed is concerned is only marginal as the only time which is saved on run is by the elimination of watering required for steam locomotives.

3.2. The pattern of dieselisation/electrification on the Indian Railways has generally been influenced by the following considerations:—

3.2.(i) On sections where rapid increases in materialisation of traffic had outstripped the capacity, dieselisation/electrification had to be resorted to for dealing with the higher level of traffic. Dieselisation/electrification of important routes on the Eastern and South Eastern Railways, where over 50 per cent of the revenue earning traffic of the Indian Railways

originates, are cases in point. The vast increase in density on some of the vital dieselised/electrified routes on these Railways is given below:—

Density in terms of net tonne kms. per route km. per day.

	1960-61	1971-72
Eastern Railway		
Dehri-on-sone—Mughalsarai	36852	61423
Gomoh—Manpur	31849	56691
South Eastern Railway		
Anara—Chandil	27417	38594
Sini—Rajkharswan	40621	51194

The percentage of goods train kms. worked by steam, diesel and electric traction on the Eastern and South Eastern Railways during 1960-61 and 1971-72 as well as the average speeds of all goods trains traction-wise on these two Railways for these 2 years is as under:

Railway		Percentage of goods trains Km.		Average speed of all Goods trains	
		1960-61	1971-72	1960-61	1971-72
Eastern . .	Steam	80·3	32·5	15·5	9·47
	Diesel	18·9	20·5	30·1	23·7
	Electric . . .	0·8	47·0	20·3	26·5
South Eastern .	Steam	85·9	23·3	12·9	12·6
	Diesel	13·6	41·9	17·9	24·6
	Electric . . .	0·5	34·8	18·2	22·0

This would bear out that in spite of large additions to the fleet of diesel and electric locomotives between 1960-61 and 1971-72, there has not been a corresponding increase in the speeds of trains worked by diesel and electric traction, clearly bringing out the fact that while the advantage of dieselisation/electrification has been mainly in the ability to handle the vast increase in the volume of traffic, the gain by way of speed has been marginal in view of the heavy density factor.

3.2(ii). Dieselisation on certain sections has also been resorted to to cope with the changes in the pattern of traffic, which threw heavy strain on certain routes, in which capacity could not be increased as fast as the development of traffic. To cite an instance, the green revolution in Punjab

and Haryana resulted in heavy movement of foodgrains from North to South India throwing a heavy strain on the Grand Trunk route, which at the time was predominently single line. The resultant prosperity in Northern India attracted more traffic to the North from all parts of the country, particularly from Central and Southern parts of India. Dieselisation had to be introduced to carry this essential traffic with the deliberate knowledge that the utilisation of diesels in terms of speeds and kms. earned per day would be poor on the single line sections.

The utilisation of diesels on such sections has also been affected by the heavy line capacity works like doubling, additional crossing stations, extension of loops, new signalling works etc., which had to be undertaken to provide the necessary capacity required on these sections in the long run. These works necessitated imposition of speed restrictions and engineering blocks, which further reduced the capacity and, to that extent, the utilisation of engines.

3.2(iii). Although with progressive dieselisation and electrification, steam engines have been relegated to inferior services, they could not be dispensed with completely over many sections due to the paucity of diesel/electric engines. On certain sections, only a limited number of through goods trains could be run by diesels while the rest are running by steam engines. This mixed traction has affected the average speed both of diesel/electric as well as of steam goods trains on such sections. This is yet another reason why increase in dieselisation/electrification has not resulted in higher wagon kms. because in such cases of mixed traction the average speed of trains is affected by the speeds of trains hauled by the slowest mode of traction.

4. It is pertinent to mention here that despite a much lesser degree of dieselisation and electrification as compared to some foreign railways the average time for which wagons are on the run on the Indian Railways is the best when compared to that on these foreign railways:—

Railway	Proportion of haulage by diesel/electric to total freight gross tonne Kms.	Average time in hours per day for which the wagons are on the run
Indian Railways (BG 71-72) . . .	77	4·07
Canadian Pacific Railway . . .	100	2·64
Canadian National Railways . . .	NA	2·31
German Federal Railways . . .	82	1·54
Italian State Railway . . .	98	0·97
Japanese National Railway . . .	82	2·5
Australian Federal Railway . . .	NA	2·20
U.S. Class I Railways	100	2·76

It is evident from this table that despite the various constraints enumerated above the mobility of the wagons fleet on Indian Railways compares very favourably with other world railways which are technologically more advanced."

2.24. The Committee called for the comparable figures of "wagon kilometres per wagon day" and the average running time of a B.G. wagon for 1950-51, 1960-61 and 1971-72 and enquired whether these were indicative of increase in detention to wagons at interchange points and marshalling yards. The Railway Board have, in a note, stated:

The comparable figures of "wagon kilometres per wagon day" and the average running time of a Broad Gauge wagon for 1950-51, 1960-61 and 1971-72 are as follows:—

	1950-51	1960-61	1971-72
(i) Wagon kilometres per wagon day . .	62·3	76·9	74·0
(ii) Average running time of a Broad Gauge wagon per day (in hours) . . .	3·6	4·7	4·07

It may be seen that as compared to 1950-51, these indices have shown improvement in 1971-72. There is, however, a drop as compared to the figures of 1960-61.

2.1. Before enumerating the reasons for the drop in these indices during 1970-71 as compared to 1960-61, it would be relevant to recount the trend of "wagon kms. per wagon day" over the different Zonal Railway systems since 1960-61.

2.2. 1960-61 being the last year of the 2nd Five Year Plan, witnessed a phenomenal increase in Traffic which continued up to the end of the Third Plan (1965-66). Following this boom in the economy, a recession set in. The "wagon kms per wagon day" touched the lowest level of 70.3 during 1966-67 when the capacity on the Railways was ahead of the demands and wagons had to be stabled for want of demand.

2.3. Consequent upon the revival of economic activity from 1968-69 onwards, "wagon kms. per wagon day" showed a progressive improvement and during 1969-70, this index touched the figure of 75.6. Unfortunately, however, this trend could not continue as a result of the disturbances in law and order conditions which set during 1970-71, particularly in the Eastern sector. During this year, the "wagon kms. per wagon day" dropped to 73.4. Some improvement could be achieved during

1971-72, but the unsatisfactory working conditions in the Eastern sector such as theft of wagon parts, interruptions to communications, obstructions to and interruptions in train running, Bundhs and agitations, running train thefts, etc., continued. As a result, the performance of the Eastern Railway and the North East Frontier Railways in particular, failed to improve.

2.3. Zonewise figures of "wagon kilometres per wagon day" are set out below:—

Wagon Kms. per wagon day

Railway	1960-61	1966-67	1970-71	1971-72
Central	102·2	74·2	87·7	97·3
Northern	100·3	76·6	75·6	77·1
Southern	66·0	54·3	60·9	66·6
South Eastern	57·9	69·0	80·3	81·0
Western	109·3	94·6	89·7	108·9
North East	..	50·9	41·8	30·9
Frontier Eastern	58·5	61·1	51·9	45·8
All Railways	76·9	72·3	73·4	74·1

Note: South Central Railway did not exist during 1960-61. N.E. Railway is a predominently Metre Gauge system.

2.4. Compared to 1966-67 during which year, the "wagon kilometres per wagon day" was the lowest, the index showed improvement in 1971-72 on all railways except Eastern and North East Frontier Railways. During 1971-72, the all-India index also improved as compared to 1970-71 but the loss of Eastern and North Frontier Railways could not be sufficiently offset by the gain of the other Railways.

2.5. Eastern Railway held about 30 per cent of the total fleet of wagons on Indian Railways during 1971-72 and the deterioration that set into the working of this Railway, therefore, had a pronounced repercussion on the overall indices of wagons kms. earned by all the Railways. As an instance of the impact of the disturbed working conditions on the

mobility of wagons on the Eastern Railway, the following figures of performance of Calcutta terminals are illustrative:

Year	Daily average number of wagons placed	Daily average number of wagons released	Percentage of wagons released to those placed
1970-71 . .	2027	1658	83·3
1971-72 . .	2664	1621	60·8

2.6. Mobility of wagons on the Northeast Frontier Railway was also severely strained in 1971-72 due to ferry crossing difficulties on account of unfavourable riverine conditions caused by the narrowing of the channel as the construction of the Farakka barrage progressed.

2.7. The working of these two Railways, *i.e.* Eastern and Northeast Frontier, was further affected during 1971-72 by the large scale military moves, POW and refugee specials etc. in connection with the Indo-Pak war. A number of wagons were immobilised on both these Railways which further depressed "wagon kms. per wagon day."

2.8. Had it not been for the sharp decline in wagon mobility on a vital zone like the Eastern Railway holding above 30 per cent of the total wagons fleet caused particularly by factors beyond the control of Railways, the all-Railway index of "wagon kilometres per wagon day" would have been much higher during 1971-72.

2.9. Besides, there were other specific factors on account of which "wagon kms. per wagon day" during 1971-72 were less than those achieved during 1960-61:—

(a) As compared to 1960-61, there was a sharp increase in the movement of traffic to steel plants, ports, etc., which are allowed a comparatively higher free time ranging upto 48 hours for detailed placements and drawals etc. The extent of increase in these categories of traffic can be appreciated from the following figures:—

(In million tonnes)

Category of traffic	Tonnage during 1960-61	Tonnage during 1971-72
(i) Coal for steel plants and washeries	8·2	16·8
(ii) Other raw materials for steel plants	10·5	15·8
(iii) Finished products from steel plants	3·8	6·0
(iv) Iron ore for export.	2·6	9·9

Increase in the number of wagons used for steel plant traffic resulted in increase in the idle time of wagons on account of higher free time, which depressed the "wagon kms. per wagon day."

(b) Similarly, with the growth of industrialisation, there has been a progressive increase in the number of collieries and other industrial sidings, which form pockets, where wagons get detained for longer durations due to the higher free time allowed for wagons in these sidings for loading/unloading operations. This in turn increases the idle period of wagons and, to that extent, affects the "wagon kms. per wagon day."

(c) As explained in answer to part (a) of the question, increase in dieselisation/electrification on the Indian Railways network predominantly influenced the handling of the vast increase in volume of traffic and the gain by way of improving speeds of goods trains was marginal due to the heavy density factor on the routes on which dieselisation electrification was introduced. This density factor combined with mixed traction militated against improvement in "wagon kilometres per wagon day."

(d) Yet another reason which affected the mobility of wagons during 1970-71 (and which was almost totally absent during 1960-61) is the coupler incompatibility of different types of wagons. The Railways had to progressively go in for the introduction of Box wagons with Centre Buffer Coupling (CBC) for improving the throughout across heavy-density sections. Centre-buffer-coupling arrangement provides the necessary buffiing capacity, which cannot be achieved in the conventional screw coupling arrangement for the haulage of loads. The CBC arrangement also reduces the space between two wagons and enables heavier loads to be hauled without increasing the lengths of trains. Conventional wagons not provided with transition gear arrangement cannot be linked to wagons which have CBC arrangement. This acts as a constraint on the mobility of wagons and, to that extent, wagons suffer extra detention. While the Railways have plans to launch a time-bound programme for achieving coupler compatibility, this programme will have to spread over at least 10 years due to limitation of funds. In the meantime, some impediments to wagon mobility on this account will have to be put up with. This will have its effect on the "wagon kilometres per wagon day."

4. These are the factors which have mainly caused a slight depression in the index of "wagon kilometres per wagon day."

2.25. The interchange of wagons at important yards between railway systems constitutes an important operation. The Committee find that at Balharshah and Ajni, which constitute two important interchange points between South Central—Central Railways and Central—South Eastern Railways, the targets were fixed in 1969, but the performance had fallen far short. In the case of Balharshah yard, the inter-change target of 370 wagons per day was fixed in 1969-70 (temporarily revised to 375 in 1970-71) on the basis of anticipated materialisation of traffic. The actual figures were, however, 300-305 wagons only, during the three-year period, 1970-71 to 1972-73. Likewise, in the case of Ajni yard, the target was raised in April 1969 from 550 wagons to 600 wagons per day, whereas the actual number of wagons interchanged daily in the preceding six months (from November 1968 to April 1969) was 513 only. The target was raised in anticipation of more traffic which did not eventually materialise. The average number of wagons interchanged at Ajni from South Eastern to Central Railway and vice-versa fell far short of even earlier target of 550 wagons in the three-year period under review.

2.26. The Committee are constrained to observe that the manner in which unrealistic targets were fixed at these interchange points without strictly taking into account either the requirements or the physical conditions prevailing, give an impression that such important matters do not receive detailed consideration of either the Zonal Railway or the Railway Board.

2.27. Another disturbing feature is that no review of the targets for these interchange yards appears to have been carried out systematically every year in the light of the performance, requirements and the physical conditions obtaining. The targets for Balharshah and Ajni have remained unaltered since 1969, even though the performance has been less than the interchange quota by 18 per cent to 26 per cent for Balharshah and 25 per cent to 27 per cent for Ajni for three successive years from 1970-71 to 1972-73.

2.28. The Committee also find that goods trains were detained short of both these yards. During 1971-72, out of 3972 trains meant for Balharshah as many as 537 (about 13.5 per cent) goods trains suffered detention on an average for two hours each; the broad reasons for such detention being meagre facilities in Balharshah yard, speed restrictions and engineering blocks on Balharshah-Kazipet Section on account of doubling works, bunching of trains, accidents etc.

2.29. Similarly, in the case of Ajni, out of 3048 trains during the period of 6 months (February—July, 1972) 1049 (34 per cent) goods trains

were detained short of Ajni and suffered detention of over one hour—the main reasons for it being the limitations of Ajni yard, constraints of passage across Nagpur yard, accidents etc.

2.30. The Committee also note that in certain cases, trains had to be stabled for periods ranging from 2 days to 4.62 days short of these yards. They find that in the case of Balharshah 52 trains had to be stabled short of that station during 1971-72, the average period of stabling being 2 days. Similarly, in the case of Ajni 37 trains were stabled during the year 1971-72 for a period ranging from 3.69 days to 4.62 days.

2.31. The Committee are not convinced by the reasons advanced by the Railways for the heavy detention to goods trains at Balharshah and Ajni, and are particularly disturbed by the heavy losses caused by the stabling of a large number of trains for periods ranging from 2 days to 4.62 days. The Committee would like to point out that detentions/ stablings for hours and days of goods traffic in these yards represent very heavy loss in respect of engine and wagon days which could otherwise have been available for moving goods traffic. The Committee are distressed that instead of achieving improvement in the daily average time and distance covered by wagons as a result of heavy investment in modernization and acquisition of diesel and electric locomotives, the average time and distance covered by a broad gauge wagon has even come down to 4.07 hours and 74 kms. in 1971-72 as compared to 4.7 hours and 76.9 kms. in 1960-61.

2.32. The Railway Board have given a very elaborate explanation in extenuation of their performance. They have emphasised that diesel and electric locomotives were utilised largely to carry heavier loads and that for various reasons it was not found possible to effect appreciable improvement in the speed of goods trains. The Committee cannot help concluding that one of the important reasons for the decline in operational efficiency as reflected in the statistics given in the earlier paragraphs may well be due to unwarranted detention which the goods trains have been suffering in important yards, particularly inter-change yards. The Railways have to realise at all levels that any detention or idling of the rolling stock means a national loss of valuable remunerative assets.

2.33. The Committee would like the Railway Board to review systematically, in conjunction with the Zonal Railways, the targets, the requirements and the physical capacity available in important interchange points, and also to see that these are operated upto the required level and with the requisite efficiency. Concerted measures should be taken to effect improvement in efficiency of these interchange yards. The Committee would like to be informed of the concrete steps taken in this behalf and the improvements actually effected.

REFRIGERATED FISH VAN SERVICE

Audit Paragraph

2.34. For development of fisheries Government of India decided in 1958 to provide refrigerated transport facilities for fresh fish from catching points. Six refrigerated vans were constructed in 1960-61, as an experimental measure, at a cost of Rs. 24.40 lakhs including the cost of refrigerated equipment worth $ 1.27 lakhs (Rs. 6.05 lakhs) received under a foreign aid programme. Three more vans were acquired during July, 1968 to January, 1969 at a cost of Rs. 10.51 lakhs. Orders for three more vans were placed in November, 1969. The cost of these vans was borne by the Ministry of Food and Agriculture. According to the agreement entered into with the Railways in January, 1963, that Ministry was to bear annual maintenance and service charges at the rate of 5 per cent of the cost of construction of these vans. Freight was fixed by the Railways at 15 per cent over and above the normal tariff rates. In order to attract more traffic, the Railways decided in June, 1963 to reduce the surcharge to 5 per cent over the normal tariff rate with effect from August, 1963. The Ministry of Food and Agriculture also paid Rs. 10.99 lakhs to the Railways as reimbursement of losses sustained till March, 1965.

2.35. At the request of the Ministry of Food and Agriculture the Railways agreed to take over the responsibility for maintenance and operation of the refrigerated fish vans with effect from April, 1965 but the ownership of these vans continues to be of that Ministry.

2.36. Two of the six refrigerated vans of 15 tonnes capacity each, built in 1960-61, were put on line in South Eastern Railways in November, 1960. Two more vans of 15 and 18 tonnes capacity each were transferred to that Railway in June, 1967 and June, 1969. Another van of 15 tonnes capacity was transferred in defective condition to South Eastern Railway from Central Railway in August, 1970 and, except two trips in each of the months of December, 1971 and January, 1972, could not be put to regular service before October, 1972. They carry fish from eight stations near Palasa (Andhra Pradesh) to Howrah and their capacity was utilised to the extent of 77 per cent and more during 1969-70 to 1972-73 and thus were being intensively used when on the run. However, against the planned trip of one van daily *i.e.* 365 trips annually, 167.5 trips were made annually on an average during 1969-70 to 1972-73.

2.37. Two vans were allotted to Southern Railway. They are being used for carrying fish from Calicut to Madras. The service started in October, 1960 and was scheduled to run bi-weekly. However, the vans made only 43.5 trips on an average per year during April, 1969 to 1973 against 104 trips which were planned, due to the vans remaining out of commission for long periods. The average weight carried ranged from a quarter to slightly more than half the 15 tonnes capacity of a van. With a view to securing better utilisation of the service, the Railway Board suggested in June, 1963 that half the space in the van might be utilised for carrying other commodities like fresh fruits, vegetables etc., as a permanent measure by deodorizing one compartment of the van. This, however, was not implemented by the Southern Railway. From August, 1972 the refrigerated equipment was removed from one van which is being used now as an insulated van for carrying fish baskets packed with ice. It was also occasionally sent to Kakinada for carrying frozen shrimps from Kakinada to Cochin for export. The earnings in Southern Railway from these vans during four years from April, 1969 to March, 1973 were only Rs. 1.27 lakhs as against the expenditure of Rs. 5.24 lakhs on maintenance and operation of these two vans.

2.38. One van which was put in service for carrying fish from Vijayawada to Howrah from February, 1964 was sent for periodical overhaul to workshops in December, 1966 and thereafter the service was not resumed. This van was later on transferred to South Eastern Railway.

2.39. The Western Railway started a service in January, 1961 for carrying fish from Ahmedabad to Delhi with one van, but it was discontinued in August, 1961. It was again introduced in September, 1961 but was stopped from June, 1962. This van was also subsequently transferred to South Eastern Railway.

2.40. Two metre gauge refrigerated fish vans were also allotted to the Western Railway in 1968-69. One of them was put in service from October, 1968 between Veraval and Delhi. From November, 1968 one compartment (out of two) of the van has been reserved for carrying fish from Veraval to Delhi and the other for milk from Mehsana to Delhi. The second van was introduced in January, 1969 for carrying milk from Mehsana to Delhi. One van made only 35 trips annually on an average during 1969-70 to 1972-73 (upto December, 1972); the other made only 42 trips during the same period. The earnings from these two vans were Rs. 3.49 lakhs against expenditure of Rs. 5.99 lakhs during the period 1969-70 to 1972-73 (up to December, 1972) resulting in loss of Rs. 2.50 lakhs.

2.41. The Ministry of Railways (Railway Board) stated (January, 1974) that the trade did not patronise the scheme well because the vans

did not run regularly. The absence of a daily service also added to this, secondly, there were many mechanical and electrical breakdowns initially and the vans were detained in the shops for long periods owing to difficulty in getting spare parts which had to be imported.

2.42. The South Eastern Railway has five vans and service in that Railway is better than in Southern and Western Railways. The latter two Railways have two vans each. When the refrigeration equipments in them breakdown, owing to there being no reserve vans with them the service is interrupted in these Railways. Thus, the service in those Railways has been quite irregular with the necessary consequence that customers do not patronise the service there. How the refrigerated fish van service can be improved merits consideration.

[Paragraph 13 of the Report of C.&A.G. of India for the year 1972-73 on Railways.]

2.43. The Committee were informed that the Ministry of Agriculture owned 8 B.G. and 4 M.G. refrigerated fish vans. Out of these, one B.G. and two M.G. vans have not yet been commissioned. One refrigerated fish van is working as an insulated van.

2.44. The Committee desired to know how many refrigerated vans were running at present on the Indian Railways and what were the present operation costs and the earnings of each of these services. In a note, the Railway Board have intimated:

> "Only two refrigerated vans are running at present on the Indian Railways. The service is being maintained between Palasa-Howrah section of the South Eastern Railways. The operation costs and the earnings are given bleow:—

		Operation costs			
		Cost of haulage	Cost of repairs and maintenance	Total	Earnings
		Rs.	Rs.	Rs.	Rs.
Palasa-Howrah	1972-73	4,32,624·00	33,638·00	4,66,262·00	336,736·00
	1973-74	—Not readily available—"			

2.45. In another note, the Railway Board have stated:

> "The total quantum of fish traffic originating at Palasa-Khurda Road Section (Palasa-Howrah) is about 20 tonnes per day, out of which on the days refrigerated fish van is available, about 15 tonnes are carried by refrigerated fish vans."

2.46. Asked about the advantages of an insulated van over the refrigerated van, the Railway Board, in a note, stated:

> "Insulated Van has no advantage over refrigerated van. The cost of maintenance of refrigerated van is more than the insulated van, so far as cost of operation is concerned."

2.47. The Committee enquired whether the Ministry of Agriculture had reviewed the performance of the existing refrigerated fish van services and whether it could be called satisfactory. In a note furnished to the Committee, the Ministry of Agriculture have stated:

> "The Ministry of Railways assumed the responsibility for operation of the refrigerated fish vans with effect from 1st April, 1965. Among the various routes tried in recent years, namely, Palasa-Howrah, Calicut-Madras and Veraval-Delhi, only on the Howrah-Palasa route utilisation of the capacity was satisfactory. Therefore, the two B.G. Vans (one of which is an insulated van without the refrigeration equipment) running on the Calicut-Madras route were transferred to Palasa-Howrah route. The present utilisation of the B.G. vans on the Palasa-Howrah route is satisfactory.
>
> 2. As regards the M.G. vans, the two vans running between Veraval-Delhi did not pick up adequate traffic. However, between Mehsana and Delhi, the capacity was utilised for the transportation of milk. This traffic also stopped with the acquisition of milk tankers by the Delhi Milk Scheme. Utilisation of the M.G. vans on the Rameswaram-Coimbatore-Madras route has not been found economical since adequate fish traffic has not been forthcoming. At a meeting held on 17th June, 1975 at Madras organised by the Ministry of Agriculture and attended by representatives of the Southern Railway, Directors of Fisheries, representatives of fish merchants etc., the whole question was reviewed. It was decided in that meeting to operate the service on Tirunelveli-Madras route as an experimental measure and the Tamilnadu Fisheries Development Corporation were requested to examine the feasibility of the Corporation taking up the responsibility of collecting fish parcels and loading at Tirunelveli Junction. However, the Director of Fisheries, Tamilnadu has since advised that the Tamilnadu Fisheries Development Corporation is not in a position to act as a forwarding agent for the despatch of fish parcels in refrigerated vans. Pending a satisfactory solution all the 4 M.G. fish vans are stabled.
>
> 3. In the meantime, Ministry of Agriculture is examining the possibility of converting these 0°C vans to frozen fish vans main-

taining—20°C to cater to frozen fish traffic on Veraval-Delhi sector. It is also proposed to discuss with RDSO, Lucknow some modifications required in the vans to facilitate quick loading and unloading."

2.48. Questioned about the steps taken by the Railway Board to give publicity to the service and persuade the traders to use the service; the Railway Board, in a note, stated:

"The refrigerated fish van service was introduced on the routes and trains on the recommendations of the Ministry of Food and Agriculture. The Ministry of Food and Agriculture had recommended the routes where there was adequate offering of fish traffic. Publicity was given by the Railway staff at the fish booking stations. Constant liaison with the Fish Merchants was also maintained by the Marketing and Sales Organisations of the Zonal Railway Headquarters. This is a continuous process.

The object of introducing the refrigerated fish van service on a few selected routes was to extend the benefits of advanced technology of refrigerated transport in the areas where there is adequate offering of fish traffic by rail. The entire scheme of transport of fish by refrigerated vans was undertaken by the Ministry of Agriculture as a developmental project. It was for this reason that various routes, such as Ahmedabad-Delhi, Agra-Howrah and Vijayawada-Howrah were tried and given up due to poor patronage of the fish trade. It has since been decided to concentrate all the Broad Gauge vans on the Palasa-Howrah section of the South-Eastern Railway where the refrigerated service is comparatively popular. Similarly the Metre Gauge vans are also proposed to be utilised on one or two sections which are likely to be most productive."

2.49. According to the Audit paragraph the Western Railway started a service in January, 1961 for carrying fish from Ahmedabad to Delhi with one van, but it was discontinued in August, 1961. It was again introduced in September, 1961 but was stopped from June, 1962. On the Southern Railway one van which had been put in service for carrying fish from Vijayawada to Howrah from February, 1964 was sent for periodical overhaul to workshop in December, 1966, but the service was not resumed. Asked for reasons of such discontinuance the Railway Board have stated in a Note:

"On the Vijayawada-Howrah route, a weekly refrigerated fish van service was run from 1964 to 1966. The total traffic booked during the year 1966 on this service was 2491 qtls. out of

which 1950 qtls., was iced fish. Thus, against the carrying capacity of 15 tonnes in the fish van, the average load came to only 48 qtls. consisting of 37 qtls. of fish and 11 qtls. of other perishables. The service was discontinued in view of poor utilisation.

On the Ahmedabad-New Delhi route, a refrigerated fish van service was introduced in January 1961, but the service had to be discontinued in August 1961 because of insufficient traffic. The service was re-started in September 1961. Before the monsoon months of 1962, the Gujarat Fisheries Central Co-operative Association, who were the consignes of fish from Ahmedabad, advised that they would not be able to offer fish traffic during the rain season. The service was therefore once again discontinued in June 1962. After the monsoon season of 1962, the service was not re-introduced for want of traffic."

2.50. Audit paragraph also states that from November, 1968 one compartment (out of two) of the van on Western Railway had been reserved for carrying fish from Veraval to Delhi and the other for milk from Mehsana to Delhi. This presumably means that it was feasible to use part of the van for other services. The Committee asked why, if this was possible, the Southern Railway did not try to implement the suggestion of the Board in 1963 to use part of the vans on that Railway for other services. In a note, the Railway Board have stated:

"Action was taken by the Southern Railway administration to deodorise one compartment of the refrigerated fish van with the assistance of the Central Food Technological Research Institute, Mysore and it was earmarked for carrying other perishable traffic such as fruits and vegetables. However the patronage from the Trade was not much and traffic other than fish moved by the van was negligible. The quantum of perishables other than fish carried in refrigerated fish vans on the Calicut-Madras service was only 768 qtls. in 1964-65 and 124 qtls. in 1965-66.

2. In this context, it may be mentioned that M/s. J. Stone & Co. had given their expert opinion that the two refrigerated fish vans in service on the Calicut-Madras route were not constructed with the provision to carry perishables other than fish. According to them, one of the main requirements for carrying most types of fruits and almost all vegetables in such vans was provision to admit some fresh air into the compartment, which did not exist in these vans. They had also opined that bananas, which is a commodity transported in the Southern region, required higher temperatures than that maintained in the two vans."

2.51. The Committee note that for the development of fisheries, the Ministry of Agriculture had, between 1960-61 and January 1969, acquired 9 refrigerated fish vans and placed orders for 3 more in November 1969. It appears to have been agreed that the Ministry of Food and Agriculture would bear the annual maintenance and service charges of those vans and the Railways would have the responsibility for their maintenance and operation with effect from April 1965. Their ownership, however, continued to vest in the former Ministry.

2.52. The Committee further note that the service of 5 vans with the South Eastern Railway was better than those in the Southern and Western Railways which had 2 vans each. The earnings of the vans with Western Railway were Rs. 3.49 lakhs as against an expenditure of Rs. 5.99 lakhs during the period 1969-70 to 1972-73 (upto December 1972), which meant a loss of Rs. 2.50 lakhs. The Southern Railway earned on this account Rs. 1.27 lakhs against an expenditure of Rs. 5.24 lakhs during the period from April 1969 to March 1973, thus involving a loss of about Rs. 4 lakhs.

2.53. The Committee learn further that out of the 12 vans, four M.G. vans have been stabled and one BG van is yet to be commissioned and that out of the others only two vans were running between Palasa and Howrah. These two vans, running between Palasa and Howrah, have also been incurring loss, the operational costs during 1972-73 alone being Rs. 4.66 lakhs against the earning of Rs. 3.37 lakhs. According to the Audit Report, the Ministry of Agriculture is stated to have paid to the Railways Rs. 10.99 lakhs towards re-imbursement of losses sustained by them till March 1965.

2.54. The Ministry of Railways explained (January 1974) that the losses were due to lack of support from the trade on account of the irregular running of the vans. The absence of a daily service also contributed to their inadequate utilisation. Besides, there were many mechanical and electrical break-downs initially and the vans were detained in the shops for long periods owing to difficulty in getting spare parts, etc.

2.55. The Committee deplore the lack of adequate attention to the task of running the service regularly and efficiently. It is a pity that the fleet of refrigerated van built at a cost of Rs. 34.91 lakhs (9 vans only) has largely remained unutilised. The Railways have had to bear a heavy burden of expenditure on account of this default.

2.56. At present only two vans are working. It seems strange that 4 vans (including 2 newly constructed) have been stabled for want of traffic, while one more is yet to be commissioned.

2.57. The Committee have been informed that though there was no difference between the operation costs of refrigerated and insulated vans, the cost of maintenance was more in the case of the former. The question whether it would be more expedient to run insulated vans instead of refrigerated vans which have proved neither popular nor economical, should be examined.

2.58. The Committee would like to know why it was not found possible to run regular and daily service on certain routes as required by the trade. The precise reasons for retention of the vehicles under repair for long periods, and the general lack of urgency in this matter has to be explained.

2.59. The Committee would ask Government to set up a competent committee to look closely into the working of the 'Refrigerated Fish Van Service', identify the reasons for its failure and suggest measures for improvement. It is essential to demarcate and specify the responsibilities of both the Ministries in regard to the scheme, and also to find out how the present fleet of vans could be put to optimum use. The entire position in regard to the feasibility of such a service and the conditions in which it can operate, should also be carefully examined.

Southern Railway—Detention to Wagons in Perambur Works Area

Audit Paragraph

2.60. Perambur complex deals with the following installations:

(1) Locomotive shops,

(2) Carriage and Wagon shops,

(3) General stores depot,

(4) Mechanical stores depot, and

(5) Integral Coach Factory.

Wagons containing consignments for Perambur Workshops, the two stores depots and the Integral Coach Factory are handed over, at Villivakkam station yard which forms part of the Perambur complex, to the Mechanical department for being hauled by shunting engines and placement at the unloading points. Thereafter the wagons are moved by shunting engines to different yards in Perambur works area and placed at the appropriate sidings for unloading. It would be seen from the following that there are serious delays (on the average of 18 days after allowing

a period of 10 days) after the wagons are handed over at Villivakkam station yard, in placement and unloading of such wagons:—

Year	No. of wagons detained in excess of ten days	Total No. of days for which detained (beyond 10 days)	Monthly average		Average detention of a wagon in days (beyond 10 days)
			No. of wagons	No. of days (beyond 10 days)	
1970-71	1943	37440	162	3120	19·3
1971-72	1842	33870	153·5	2823	18·4
1972-73	1288	20206	107·3	1684	15·7

Some wagons containing sundry consignments suffered heavy detention of over 100 days as they had to be placed at various unloading points to which the consignments pertained.

2.61. During the same period, on the average there were unsatisfied demands for 104 wagons in Madras area.

2.62. A review of the position in Parel and Jamalpur workshops as well as in Chittranjan Locomotive Works and Diesel Locomotive Works disclosed that detention ranged between less than one day, in the Diesel Locomotive Works during 1971-72 and 5.6 days in Jamalpur Workshop during 1972-73.

2.63. The Railway Administration stated (January 1974) that the main factors contributing to the detention of wagons are non-availability of cranes and shunting engines, non-placement of wagons at the appropriate place for unloading, improper lay out of the yards which had been planned over a quarter of a century ago, poor maintenance of track inside stores depots and workshops yards resulting in frequent derailments and movement of wagons containing sundry consignments to diffeent points for unloading. The Railway Administration has further stated that it has been taking action to streamline the operations to avoid recurring heavy detentions to wagons inside the works area.

[Paragraph 16 of the Report of C.&A.G. of India for the year 1972-73 on Railways]

2.64. Explaining the reasons for heavy detentions to wagons in Perambur works area, the Member Mechanical stated during evidence: "The reason for the detention was that the classification of the wagons for the various deposts was not done.... Now proper classification has been done and the detention today as a result of this action is below the notional ten days."

The witness further added: 'The wagons handed over at Villivakkam had to be placed at about half a dozen places. The wagons had got mixed up and so there was delay in placing the wagons from one yard to another yard. Now that has been rectified."

2.65. The Committee asked about the action taken to streamline the operations with a view to avoid recurring heavy detentions to wagons inside the works area. The Chairman, Railway Board stated during evidence: "The basic point was that the yard was not equipped for classifying the wagons. Now it has been done."

2.66. In a note furnished to the Committee, the Railway Board have further informed:—

"The position regarding detention to wagon in Perambur Complex has been analysed and the following remedial measures have been taken to reduce the detention of wagons as a result of which the average detention has come down to 14 days (November 1973) as against earlier higher level indicating 100 per cent improvement:

(i) Shunting operations at Villivakkam goods yard have been taken over by the Traffic Department with effect from 1-10-72 with a view to ensure proper placement of wagons to different parties, such as DCOS/GSD*, MSD**, Loco Works, C&W Works, ICF, etc., and also prompt removal of the empties.

(ii) Unloading is done outside office hours in Stores Department in the evenings when the overhead crane is available after release by the shops. This has resulted i quicker release of traffic wagons.

(iii) Wagons booked to DCOS/MSD in the case of loco items and C&W items, purchase orders now indicate the consignee particulars as DCOS/MSD/Loco and DCOS/MSD/C&W, enabling direct placement on the proper sidings. This has eliminated confusion of the shunting staff in placement thus helping earlier releases.

(iv) A space of 900 mm is kept clear on either side of the track to avoid derailment and facilities Engineering Department for the needed track maintenance.

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*General Stores Depot.

**Mechanical Stores Depot.

The following further measures have been pinpointed for provisioning and will be processed at the due stage when such programmes are considered:

(i) Provision of an additional steam crane to handle loads simultaneously at different locations.

(ii) Provision of loading/unloading platforms for C&W and loco depots.

(iii) Permanent way replacement of track within shops/stores."

2.67. Asked about the non-availability of cranes, the Member Mechanical stated "Now the job is done after the workshop hours so that the crane is available."

2.68. In reply to another question whether remodelling of the yard was required to be done, the Member Mechanical stated:

"It was found that remodelling was not necessary because the classification was done and, as a result of that, the movement of wagons was smooth. The rate of detention now is about 9.5 days. It was now below the notional period. Ten days is a datum line. The issue was regarding the detention above 10 days. The delay here was at the average of 18 days after allowing for 10 days. Now it is below 10 days."

2.69. It was stated during evidence that the wagons suffered long detentions in the Perambur complex for quite sometime and as soon as it came to notice remedial action was taken. On being asked whether it took many years to realise the gravity of the situation, the Member Mechanical replied:

"That is true".

2.70. The Committee were informed that the detentions to wagons had now been reduced to 9.5 days, which was less than the notional ten days. In reply to a question whether it was not possible to reduce this period still further, the witness stated: "We shall make an effort to reduce it further".

2.71. The Committee enquired how the position of detentions in Perambur complex compared with that in other important Railway workshops and Production Units during the years 1972-73 and 1973-74. The Member Mechanical stated during evidence: "These figures are not comparable because they pertain to different complexes. The Perambur com-

plex is a very large complex. Therefore, making a direct comparison like this would not give the true picture."

2.72. Subsequently in a note furnished to the Committee, the Railway Board stated:—

"The detention in Perambur complex as compared to D.L.W. and Jamalpur Workshop is as follows:—

Workshop area.	Year	Average detention to wagons in days.
Perambur	1972-73	15·7
Jamalpur	1972-73	5·6
D. H. W.	1971-72	1

Performance figures are not strictly comparable, as a number of sidings/nature of consignments differ materially from shop to shop. In addition, the facilities for handling are different and adapted to the earlier plans."

2.73. According to the Audit paragraph while there was average detention of a wagon for 19.3, 18.4 and 15.7 days (beyond the allowable limit of 10 days) during three years *viz.*, 1970-71 to 1972-73, there were on an average unsatisfied demands for 104 wagons in Madras area. Referring to this observation, the Member Mechanical deposed during evidence:—

"The demand of Madras was not from this source actually. In fact, the empty wagons are supplied from Madras to other places. That did not really affect the wagon availability for Madras area."

2.74. In the same context, the Member Traffic stated during evidence:—

"I take it that you are referring to wagons for which demands have been placed in the indent registers of the stations. So far as ordinary wagons are concerned, the Madras area is a surplus area. Actually it deals with the release of loaded wagons at other points also. For instance, a covered wagon unloaded in the Madras area or Southern Railway goes to Vijayawada where it is loaded with rice in return. So, in my opinion, it is not directly connected with the outstanding

registrations, because the outstanding registrations in the Madras area could have been met by normal releases. But these registrations may have been pending due to other causes—such as for restricted ruotes for special type of stock like well wagons etc."

2.75. The Committee desired to know what was the free time allowed for unloading of wagons at the railway stations and whether similar time limits for unloading wagons containing Railways' own consignments were observed. The Member Traffic stated: "There is no difference. The wagon is placed for unloading and whether material belongs to the Preambur Workshop or any other departmental establishment, the same rules are observed. They must unload within the free time as allowed to the public."

2.76. Asked about the free time allowed for unloading the wagons at the railway stations, the Member Mechanical stated during evidence:

"Ordinary conventional wagons may take about five hours from the time that they come to the station till they are unloaded at the usual place where unloading is done. For the box wagons we allow a slightly higher time. For a group upto 10 box wagons, 5 hours are allowed and for a group of less than 20 box wagons, 7 to 8 hours are allowed and for a group of over 20 box wagons we allow 10 to 12 hours. They are generally loaded with minerals, coal, iron and steel material."

2.77. Asked whether these timings were observed in Perambur complex, the Railway Board, in a note, stated:

"Instructions have been issued to the Railways in October 1974, that a proper time study should be undertaken to assess the free time that should be allowed for all traffic dealt with inside workshop sidings taking into consideration local conditions and that demurrage for detention of wagons in excess of free time so determined should be recovered from the concerned departments. Necessary action is being taken by the Southern Railway to fix the free time that should be allowed for the various loading/unloading points inside the Perambur Workshop Complex."

2.78. The Committee were informed by Audit that since October, 1972 all the smalls were being received at Salt Cotaurs instead of at Perambur complex *via* Villivakkam and this involved expenditure in transporting consignments by road from Salt Cotaurs to Perambur area

besides the wharfage accrued due to failure to remove consignments within free time. In this connection the Member Traffic stated during evidence:

> "The reason is that, previously the small packages or parcels were all mixed together and put in a wagon and this one wagon had to traverse from A to B, B to C and so on with the result that it was heavily detained. So by taking these small consignments from Salt Cotaurs by road we would save time."

The Chairman Railway Board added:—

> "For short hauls of that kind, you will appreciate that it is most inadvisable and uneconomic to use wagons and load them at five or six different points. It is much more efficient to do it by road."

2.79. In regard to expenditure incurred in transporting small consignments from Salt Cotaurs to Perambur Complex by road, the Railway Board have in a note stated:—

> "Expenditure from October 1972 to September 1974 incurred in transportation of consignments from Salt Cotaurs to Stores Depots at Perambur was of the order of Rs. 3,09,502. Exact rate per tonne could not be worked out as weight particulars are not maintained for these varied commodities such as steel wares, hose pipes, wires, waste cotton, paint drums, barrels, soap cases, oil, jute, canvas, glass sheets, couplings, rubber items like washers, linen etc. and transportation is arranged through available departmental lorries exclusively utilized for this purpose. Value of Credit Notes issued (in favour of the Commercial Department) on account of wharfage on departmental consignments for the period October 1972 to August 1974 is Rs. 4,17,570. Steps to increase the number of lorry trips are being taken so as to reduce the wharfage charges."

2.80. The Committee are distressed that there have been serious delays in the placement and the unloading of wagons in Perambur Works Area. The detention of wagons on an average during the 3 years (1970-71 to 1972-73) was of the order of 28 days. Some wagons containing sundry consignments suffered heavy detention of even over 100 days. The Railways have admitted that the main factors contributing to the detention of wagons were non-availability of cranes and shunting engines, non-placement of wagons at the appropriate places for unloading, improper layout of the yards, poor maintenance of the tracks inside the stores depots, etc.

2.81. The Committee note that the position has shown some improvement after certain remedial measures were taken in pursuance of the

findings of Audit. Such detentions have come down from the average of 28 days (inclusive of free period) to about 9.5 days (September 1974).

2.82. The Committee regret the complacent attitude of the Railway authorities. For years they did not appear to have realised the wasteful nature of the operations. This casual attitude seems to be due to two factors; first, that the Railways had not fixed any specific time limit (free time) for unloading/loading of wagons in the departmental yards, and secondly, the demurrage charges do not appear to have been levied/collected. No effort even seems to have been made to enforce accountability on the field officers. The Committee feel that this perfunctory approach in the matter of the use of wagons for departmental purposes was responsible for the default which persisted over the years. The Committee desire that the Railways should, without delay, fix norms for loading and unloading of wagons not only at Perambur yard but at all major departmental sidings, and ensure that the wharfage/demurrages are charged from the departmental authorities who are found exceeding the prescribed "free time". The Committee further desire that the "free time" to be prescribed should be laid down strictly so as to act as a self-regulatory discipline for efficient operation.

2.83. In this context, the Committee would point out that in the Diesel Locomotive Works, Varanasi, the time taken for handling of wagons for departmental stores etc. is only one day. There is no reason why it should not be possible with modernisation schemes under way on the Railways to bring down the time in other departmental yards to this level.

2.84. It is significant that the Railways have now found it possible to reduce the detention time of wagons from an average of 28 days in Perambur to 9.5 days without having to physically alter the layout of the Perambur yard etc. The Committee would, therefore, emphasise that the constraints of the layout of departmental yards should not be over-emphasised, and concerted efforts should be made to see that minimum time is prescribed for the loading and unloading of goods in the departmental yards.

2.85. There should also be a well regulated system and procedure by which excessive detention time and demurrage charges are promptly checked by supervisory officials and adequate action taken against those found responsible for avoidable and costly detentions.

2.86. The Committee would reiterate that wagons have been acquired with the nation's money and should be treated as a national asset to be put to the best economic use. The Railways in fact have to set an example by releasing the wagons loaded with departmental goods quickly so as to act as model to other users. The Committee need hardly point out that

reduction in detention to wagons would enhance their availability for greater public use and thus subserve the larger public objective.

2.87. The Committee note that with a view to rationalising the movement of stores from Salt Cotaurs to the Stores Depot at Perambur, the goods are being unloaded and carried by road instead of wagons. The Committee would like the Railways to make sure that these operations by road are economical and less costly than movement by wagons. The Committee also find that heavy wharfage to the extent of Rs. 4.17 lakhs was incurred between October, 1972 and August, 1974 on account of departmental consignments lying at Salt Cotaurs for excessive periods. The Committee are unable to appreciate why the Railways were not able to organize the transport of these stores more efficiently and obviate incurrence of such heavy wharfage. The Committee would like responsibility for this to be fixed and positive measures taken to ensure that departmental stores and consignments which are unloaded at Salt Cotaurs for the Stores Depot at Perambur are moved away within the permissible and prescribed period so as not to attract any wharfage charges. The Committee would like to be informed of the concrete steps taken in this behalf.

CHAPTER III

OTHER TOPICS

North-east Frontier Railway—Cost of patrolling of railway track

Audit Paragraph

3.1. Policing in railway premises is done by Government Railway police which is part of the State police. The duties of Government Railway police have been divided into 'crime duties' and 'order duties'. The former include detention and investigation of offences concerning railways as also arrest and prosecution of offenders in cognizable cases under the Indian Penal Code and the Indian Railways Act, 1890. The cost of police employed on 'crime duties' is borne by State Governments. The main functions under 'order duties' are control of passenger traffic in station premises, control of vehicular and other traffic in station compounds, maintenance of order in standing passenger trains, prevention of overcrowding etc. The cost of police staff solely employed on 'order duties' and one-fourth of the cost of supervisory staff including ministerial and inferior staff is borne by the Railways.

3.2. Apart from Government Railway police, the Railways have their own protection force, mainly employed to protect and safeguard railway property, remove obstruction in movement of railway property and to do any other act conducive to the better protection and security of railway property.

3.3. For maintaining rail communication, security patrolling of railway track was intensified by the Northeast Frontier Railway Administration from 1964-65. The security patrolling was discontinued from April, 1972 except in two sections.

3.4. On the expectation that the expenditure on security patrolling would be reimbursed by the State Governments, the Railway Board instructed the Railway Administration in May, 1965 to present bills to the State Governments for those charges. Accordingly, the Railway Administration had raised debits against four State Governments for recovering the cost of such patrolling which was Rs. 3.60 crores till 31st March, 1973. So far (November, 1973) the State Governments have not accepted the debits.

[Paragraph 8 of the Report of the Comptroller & Auditor General of India for the year 1972-73 on Railways]

3.5. In a note, the Railway Board have stated:

> "Security patrolling was started from 1962. While upto 15th April, 1965 the number of patrolmen deployed was only 238, the track patrolling was intensified thereafter from May/65 when the area under track patrolling was increased at the suggestion of State Governments and the number of patrolmen was increased to 674 for the period from 16th April, 1965 to 15th July, 1965; and there was a progressive increase, the maximum number deployed being 1967 during the period from 31st March, 1968 to 30th January, 1969."

3.6. The Committee asked whether the patrolling was done by Railway Protection Force or by the Engineering Department and how were the staff employed demobilised in April, 1972, when patrolling was discontinued. In a note, the Railway Board have stated:

> "Patrolling was done by employing Engineering gangmen. The entire patrolling was not discontinued in April, 1972. It was, however, continued in Naga hostile areas. Over the sections where it was discontinued, the persons rendered surplus were either discharged or engaged against other requirements."

3.7. The Committee asked whether security patrolling of railway track is not a part of 'crime duties' of Government Railway Police and if so, why such patrolling was taken up by the Northeast Frontier Railway. In a note, the Railway Board have stated:

> "Track patrolling is not a normal function of the Government Railway Police. Responsibility for security track patrolling devolves on the State Governments, and as such the cost involved in such patrolling undertaken by the Railway at the instance of the Inspectors General of different States, has to be borne by the respective State Governments."

3.8. In reply to a question whether advance notice was given to the State Governments and their concurrence for accepting debits obtained before patrolling was undertaken, the Railway Board have stated:

> "No advance notice was given to the State Governments nor any specific concurrence obtained for accepting debits as patrolling had to be arranged with immediate effect in view of emergencies caused due to Chinese aggression, Naga hostile activities, Indo-Pak war etc."

3.9. The Committee pointed out that security patrolling during civil disturbances might have been undertaken by other Railways in other

States. Asked whether in such cases cost was recovered from the State Governments, the Railway Board, in a note, state:

> "There have been no cases of security patrolling of railway track during civil disturbances on the Central, South Central, Eastern, South Eastern and Western Railways.
>
> Security patrolling has been undertaken on the Northern Railway during civil disturbances, strikes and other emergencies on the suggestion of civil authorities but the cost thereof has not been recovered from the State Governments, being short term arrangement."

3.10. The Railway Board had informed the Railway Convention Committee, 1971, that in order to combat the incidence of crime on Railways, particularly theft of copper wires and brake beams, patrolling of the effected sectors was undertaken by Railway Protection Force, Railway Protection Special Force and/or Government Railway Police. In reply to a question whether in such cases also, the cost of patrolling as debited to State Governments concerned, the Railway Board in a note stated:—

> "The protection of railway property from damage/theft is one of the prime duties of the Railway Protection Force/Railway Protection Special Force under the Railway Protection Force Rules. As such, no debits on this account have been raised against the State Governments."

3.11. The details of debits against the four State Governments are as follows:—

Assam	Rs. 3·15 crores.
Nagaland	Rs. ·08 crores.
West Bengal	Rs. ·29 crores.
Bihar	Rs. ·08 crores.

3.12. As regards the latest position of acceptance of debits by the four State Governments the Railway Board have in a note, intimated:—

> "The State Governments have declined to accept any of the debits intimating that their resources were limited and that the Railways in their own interest are expected to give assistance for maintaining safety of railway traffic for which no debit should be raised against the State Governments. This matter is now under further examination."

3.13. In their note dated the 16th June, 1976, the Railway Board have further intimated:—

> "The question of recovery of cost of patrolling of Railway Track from the State Governments was discussed at a meeting held with the Ministry of Home Affairs in which it was decided that the matter should be put up to the Committee of Secretaries on Internal Affairs for a decision. Necessary action in the matter is being accordingly taken."

3.14. The Committee note that the security patrolling of the railway track on North-east Frontier Railway was started from 1962 and subsequently at the suggestion of the State Governments concerned, the track patrolling was intensified. The patrolling continued right upto April 1972 and thereafter it continued in two Sections. Upto 31st March, 1973, the Railway Administration had incurred on it an expenditure of Rs. 3.60 crores.

3.15. The Committee further note that although the security patrolling was done at the suggestion of the State Governments, claims for the expenditure were not preferred on them till May 1965, when the Railway Board instructed the Railway Administration to present the bills to the State Governments. According to the information furnished to the Committee by the Railway Board, "The State Governments have declined to accept any of the debits intimating that their resources were limited and that the Railways in their own interest are expected to give assistance for maintaining safety of railway traffic."

3.16. The Committee have been informed in June 1976 by the Railway Board that the question of recovery of cost of patrolling of Railway Track from the State Governments was discussed at a meeting held with the Ministry of Home Affairs in which it was decided that the matter should be put up to the Committee of Secretaries on Internal Affairs for a decision. This long lapse of time over a decision that still remains to be made appears to the Committee to be an instance of an entirely avoidable dilatoriness in Government functioning which should be shed purposefully and effectively forthwith.

3.17. The Railway Administration should have, in its own interest, entered into a meaningful dialogue with the State Governments much earlier and not relied on the assumption that as the responsibility for patrolling devolved on the State Governments they would bear the cost involved on such patrolling. The Committee fail to understand how the whole matter came to be dealt with in such a very casual and purfunctory manner. Keeping in view the very large amount involved, the Railway Administration should have resolved the matter in time with the State/Central authorities concerned.

North Eastern Railway—Handling Contract at Muzaffarpur

Audit Paragraph

3.18. Tenders were invited in February 1971 for eight items of work relating to handling of goods, parcels and luggage etc., at Muzaffarpur station of North Eastern Railway. Four tenders were received and opened on 27th February, 1971. The Railway Administration evaluated the tenders on the basis of the anticipated quantum of all items of work except one, and awarded the contract for three years from 1st April, 1971 to tenderer 'A' whose tender was found to be the lowest on the basis of such evaluation. The excluded item, for which the quantum of work had not been estimated, was handling of emergency tools and electrical flood light boxes (these belong to the Railway itself), which was being done by the previous contractor at Muzaffarpur, free of charge, from 1969. Had the tenders been evaluated taking into account also the work under this item during the year before, the tender of 'B' would have been the lowest since the estimated total value of his tender would then have been Rs. 69,181 as against Rs. 1,14,895 of tenderer 'A'.

3.19. Tenderer 'A' had quoted a high rate (Rs. 1,000 per 1000 quintals against the rate of Rs. 400 per 1000 quintals prevailing prior to April, 1971) for repacking transit packages of parcels/luggage and very low rates for certain other items. The actual quantum of work of the former item during the first and second year of the contract turned out to be nearly three times and two times respectively of what had been anticipated by the Railway Administration, whereas the quantum of traffic, for which he had quoted very low rates, had generally decreased, resulting in unintended gain to tenderer 'A'.

3.20. Had the tender of 'B' been accepted from April 1971, the Administration would have saved Rs. 1.411 lakhs on the basis of traffic actually handled at that station during 1971-72 and 1972-73. The contract of tenderer 'A' is continuing for the third year in 1973-74 also.

3.21. The Railway Administration stated (January 1974) that, prior to April 1971, no precise records were kept for the item of work excluded while evaluating the tenders, as it was done free till then and consequently no estimation of the quantum thereof was possible at the time of calling tenders. The Railway Administration is conducting an inquiry in the case.

[Paragraph 28 of the Report of the C.&A.G. of India for the year 1972-73 on Railways]

3.22. The Committee desired to know why was the item relating to emergency tools and electrical flood light boxes excluded while evaluating tenders, though this had been included while inviting tenders, as a specification of work. In a note, the Railway Board have stated:

> "As the item relating the handling of emergency tools, electrical flood light boxes, etc. was being done free of charge by the previous contractor and there was no record to judge the quantum of traffic, this item was excluded at the time of evaluation."

3.23. The Committee pointed out that even if this item of work was being handled free by the previous contractors, some records must have been maintained to record the transactions of handling over and taking over from the handling contractor. In that event, why was it not possible for the Railway Administration to assess with reasonable accuracy the number, weight etc. of these boxes from those records or from the connected railway material consignment notes and the invoices. In this connection, the Railway Board have in a note stated:

> "Under the rules, namely paras 1907, 1912 and 1916 of the Indian Railway Commercial Manual, Vol. II, invoices will have to be issued only for railway material booked for carriage by train against 'Railway material consignment notes'. Electrical food light boxes and emergency tools, etc. are not booked for carriage by train but moved as a part of the equipment of the Guard in the brakevan for safety purposes. Hence, they are not booked under 'Railway material consignment notes'. However, it is admitted that an assessment of this traffic could have been an omission in this record. This made from other station records and there has been an omission in this regard. This omission has been taken up with the North Eastern Railway Administration."

3.24. The Committee asked whether the estimates for the quantum of work were reasonably assessed taking into account future trends of traffic. To this the Railway Board replied:

> 'Under extent instructions, the quantum of traffic for the purposes of tenders has to be evaluated based on the traffic handled during the past 12 months. In the case of this contract, the quantum of traffic handled during 12 months was taken into account. Unfortunately, there had been some unforeseen traffic fluctuations resulting in the traffic under certain items going up and the traffic in certain other items decreasing as compared to the estimates, for which, it is considered no blame can be attached."

3.25. According to the Audit paragraph the tenderer 'A' had quoted a very high rate for repacking transit packages of parcels/luggage and very low rates for certain other items. The actual quantum of work of the former item during the first and the second years of the contract turned out to be nearly three times and two times respectively of what had been anticipated by the Railway Administration. The Committee enquired about the circumstances in which the estimates of quantum of work of repacking transit packages of parcels/luggage based on which tenders were evaluated turned out to be far less even in the first year itself. In a note, the Railway Board have explained:

> "A detailed enquiry is in progress which is examining, among other things, the reasons for the fluctuations in the quantum of work in regard to repacking transit packages of parcels/luggage. However, it is understood that the fluctuations in regard to this traffic could have been on account of unforeseen circumstances specially diversion of traffic due to breaches on the Main Line (Barauni-Katihar section), dislocation of ferry services between Palezaghat and Mahendru Ghat, and wild cat strikes at Barauni station during 1971-72."

3.26. The Committee desired to know the results of the enquiry conducted by the Railway Administration in the case. The Railway Board in a note, informed:

> "The Committee which had been appointed to conduct an enquiry in this case, has been directed to make a thorough probe into the various aspects of the award of the handling contract at Muzaffarpur and submit its reports suggesting remedial measures.
>
> Due to the Railway strike and the conditions prevailing thereafter, the work of the Enquiry Committee received a setback. It is expected that their findings will be made available shortly."

3.27. In a note dated 1st April, 1976, the Railway Board had informed the Committee as under:—

> "The Joint Enquiry Committee Report submitted in September 1974 was not accepted by the Railway Board. The Railway has been asked to conduct a more detailed enquiry on a number of issues. The report is still awaited."

3.28. In a further communication dated 2nd July, 1976, the Railway Board informed the Committee that the Joint Enquiry Committee had submitted two supplementary reports on 20th January, 1975 and 10th April, 1975. In regard to the action taken thereon it has been stated:

"Although the Enquiry Committee did not hold the Tender Committee responsible for not evaluating the tenders correctly, the Administration however has come to the conclusion that the Tender Committee erred in evaluating the tender correctly. The officers who constituted the Tender Committee are being asked to explain. (out of the three officers on the Tender Committee, one has already been retired from service w.e.f. 23-1-1973).

Board's instructions regarding evaluation of each item of the tender schedule correctly have also been re-iterated to the Divisional Supdts. in April, 1975."

3.29. The Committee note that for handling of goods, parcels and luggage etc. at Muzaffarpur Station, a contract was awarded for 3 years from 1st April, 1971 to tenderer 'A' whose tender was found to be the lowest on the basis of evaluation of anticipated quantum of all items of work except one, which related to handling of emergency tools and electrical flood light boxes and which was being done by the previous contractor free of charge, from 1969. It has been stated in the Audit Report that had the tenders been evaluated taking into account also the work under the left out item during the year before, the tender of 'B' would have been the lowest. The Committee are further given to understand that had the tender of 'B' been accepted from April 1971, the Administration would have saved Rs. 1.41 lakhs on the basis of traffic handled at Muzaffarpur during 1971-72 and 1972-73 alone. The contention of the Railway Board that the excluded item being free of charge, there was no record to judge the quantum of traffic, is not convincing. In fact, the Board have admitted that "the assessment of the traffic could have been made from other station records and there has been an omission in this regard."

3.30. An intriguing aspect of the case is that the tenderer 'A' had quoted a very high rate for repacking transit packages of parcels/luggage and very low rates for certain other items. The actual quantum of work of the former items during the first and the second years of the contract turned out to be nearly three times and two times respectively of what had been anticipated by the Railway Administration. This resulted in unintended gain to 'A'.

3.31. According to information furnished to the Committee a Joint Enquiry Committee appointed by Railway Board has gone thoroughly into various aspects of the award of handling contract and on the basis of the findings of that Committee, "Government have come to the conclusion that the Tender Committee erred in evaluating the tender correctly. The officers who constituted the Tender Committee are being asked to explain."

3.32. The Committee are constrained to observe the unconscionable delay in reaching conclusions on the report of the Joint Enquiry Committee, both by the Railway Administration and the Railway Board. Where the conclusions of an enquiry committee are not found acceptable and further probe is called for, it should be done on a priority basis, so as to clinch the issue and take conclusive action without delay. The Committee urge that the Railway Board and the Railway Administration should take conclusive action in the present case against the defaulting officers without further delay, under intimation to them.

3.33. The Committee note that a report for initiating termination proceedings against the contractor was given by the Deputy Financial Adviser of the North Eastern Railway as early as October 1971. Had the matter been attended to with the seriousness that it deserved, it should have been possible to take conclusive action against the contractor in order to safeguard public interest. The Committee would like the Railway Board to go into the aspect conclusively and inform the Committee of the action taken.

3.34. The Committee would also like the Railway Board to review their general orders on the subject in the light of the short-comings which have come to notice in the present case, so as to ensure that such lapses do not recur on other Railways. In particular, the Committee stress that strict instructions should be issued to regulate payments to the contractor within the limits of the estimated quantities, unless these are got enhanced in time, for special reasons to be recorded by the competent authority. This would ensure that the premises on the basis of which quotations of a tenderer are accepted would be specifically kept in view, while making the payment to the contractor, so as to obviate chances of any unintended benefits accruing to him. The Committee would like to be informed of the precise action taken in this behalf by the Railway Board.

Import of Creosote

Audit Paragraph:

3.35. Non-Durable wooden sleepers have to be treated with creosote before being put on the track. As a policy measure, the Railways have been procuring less number of non-durable wooden sleepers over the years and obtaining in their place other sleepers.

3.36. Prior to 1961 the requirements of creosote of the (four) Railway sleeper treatment plants were met mostly from imports. However, with the new steel plants going into production import of creosote was stopped by 1961. In the three steel plants of Hindustan Steel Limited crude tar,

a by-product in the coke oven batteries, is processed further to recover various coal tar products including creosote oil (constituting 30 per cent) and pitch (which constitutes about 60 per cent). In the Rourkela and Bhilai steel plants the pitch is converted into pitch creosote mixture (by using part of the creosote), road tar and processing tar. In the Durgapur steel plant the entire pitch is converted to pitch creosote mixture. The latter is burnt in the boilers of the steel plants which sell to the Railways the remaining creosote. The Tata Iron and Steel company burns crude tar, and not pitch creosote mixture, in its boilers.

3.37. The requirements of creosote of the Railways sleeper treatment plants (estimated at about 8400 tonnes per annum in 1964-65) were never met fully; the actual annual supplies ranged between 7118 tonnes and 2470 tonnes between the year 1965-66 and 1972-73. A proposal was mooted in 1964 to import 2000 tonnes to keep a buffer stock. But this was not implemented, partly on acount ot tight foreign exchange position and partly on the anticipation that Hindustan Steel would be able to step up supplies by diverting more coal tar for distillation into creosote and other products.

3.38. Supply of creosote, instead of improving, has substantially deteriorated over the years as would be seen from the following:—

Year	Creosote supplies. (tonnes)
1965-66	7118
1966-67	4897
1967-68	5008
1968-69	6214
1969-70	5615
1970-71	4047
1971-72	2882
1972-73	2470

3.39. In November 1972 the Ministry of Steel admitted that the steel plants have been using their crude tar and its by-products as fuel instead of getting it distilled into creosote and other by-products in their own and other private distillaries. Some of the distilling units, supplying creosote to the Railway sleeper treatment plants, also stopped distillation and closed by 1969 their works due to non-availability of crude tar.

3.40. Against this background the Ministry of Railways (Railway Board) decided to import 4000 tonnes of creosote and a global tender was issued in August, 1971. The lowest tenderer 'A' quoting the rate of $ 65.72 per tonne at a United Kingdom port for supply in packed drums of 200/300 kgs., offered to supply only 750 tonnes. A lower offer received after the closing date of this tender indicated the possibility of getting more competitive rates and, therefore, it was decided in November, 1971 to procure only 750 tonnes from 'A' at the rate of $ 65.72 (Rs. 492.90) per tonne in packed drums and reinvite tenders for the balance. In the retender issued for supply of 3250 tonnes and opened in December, 1971, it was found that the rates received were higher than in the previous tender, the lowest rate, for supply upto 1000 tonnes only, being $ 73.99 per tonne from 'A' for supply in packed drums. That tenderer also offered supplies from two other sources in U.K. but at higher prices *viz.*, $ 84.68 per tonne for supply of 800 tonnes and $ 96.40 per tonne for supply of 1000 tonnes.

3.41. It was finally decided in March, 1972 after negotiation with 'A' to procure 1500 tonnes at the rate of $ 73.99 per tonne, and the balance through 'A' from the two other sources in U.K. specified by it, the rate for 400 tonnes was $ 84.68 per tonne and for the balance of 1750 tonnes it was $ 96.40 per tonne. Thus import of 4400 tonnes in all was ordered at the average price of $ 82.12 per tonne. The average landed cost of this import was Rs. 1453 per tonne (Rs. 908 exclusive of customs duty) which was substantially higher than the price of Rs. 595 per tonne paid to the steel plants for creosote.

3.42. Had indigenous production of creosote been stepped up, the need to import would have been correspondingly less.

3.43. It may be mentioned that Indian Oil Corporation imported furnace oil as follows:—

Year	Quantity (in lakh tonnes)	c.i.f. value (Rs. in lakhs)
1971-72	10·36	1141·99
1972-73	19·93	1973·23

Thus, the price paid as Rs. 100—110 per tonne.

3.44. A tonne of furnace oil is, more or less, thermally equivalent to one tonne of crude tar which yields creosote (30 per cent) and other tar

oils. One tonne of creosote indigenously produced requires 3.3 tonnes of crude tar, thermally equivalent to 3.3 tonnes of furnace oil costing not more than 363 (c.i.f.) as against Rs. 908 (c.i.f.) per tonne of imported creosote. Import of creosote meant substantial additional expenditure in foreign exchange.

3.45. The Ministry of Railways (Railway Board) explained (December 1973) that import of creosote was inescapable as adequate creosote could not be supplied by the steel plants.

[Paragraph 30 of the Report of C. & A.G. of India for the year 1972-73 on Railways]

3.46. The Committee desired to know what efforts were made by the Ministry of Railways (Railway Board) in the past five or six years to increase the supplies of creosote from Hindustan Steel. In a note, the Railway Board have stated:

"The Railways stopped import of creosote oil in 1961 as soon as the public sector Steel Plants went into production. The supplies were, however, not sufficient to meet the requirements of Railways and the Ministry of Steel were continuously pressed for improving the production of creosote. In 1965, however, a proposal was mooted for import of creosote oil on account of the persistent failure on the part of the Ministry of Steel to meet the requirements of the Ministry of Railways. The proposal was, however, dropped as soon as the assurance was given by the Ministry of Steel that the output of creosote will be increased to meet the Railways' requirements. In 1966-67, however, the supplies dropped further and when this was brought to the notice of H.S.L., they pointed out that they had to produce various products including road tar, processed tar, pitch creosote mixture in order to keep oil pitch balance. Pitch creosote mixture was required by them urgently for use in steel melting shop as fuel. They further stated that production of more creosote will result in production of more pitch as a by-product which had very little demand in the country. As a result of the above communication of the H.S.L., expressing their inability to meet the requirements of creosote of the Railways, it was decided to cut down the intake of non-durable sleepers to a level which could be treated using indigenous creosote. The supplies of creosote continued to be marginally short of the reduced requirement but the problem was not very grave to warrant any action at high level. The H.S.L. were, however, pressed in periodical meet-

ings held on 9-11-1967, and 18-9-1968 to increase their production to meet the demands. Letters were also addressed on 24-2-68 and 17-1-70 through the R.L.O. for increased supplies. The individual Zonal Railways also addressed the H.S.L. direct from time to time to give the promised supplies of Creosote. After 1970-71 when the supplies suddenly came down to a level very much below the requirements of the Railways the matter was immediately taken up at a high level. At this stage the C.R.B. himself wrote a D.O. letter on 19-4-1971 to the Secretary, Ministry of Steel and Heavy Engineering impressing upon him the need for keeping down the consumption of pitch creosote mixture in steel manufacture and to ensure sufficient creosote oil supplies to the Railways. In his reply dated 2-6-1971 the Secretary, Steel assured that supply will be made at the rate of 300 tonnes per month. The actual supplies did not, however, come upto this level and the Chairman, Railway Board again addressed the Ministry of Steel on 9-8-71 to solve the problem of inadequate supplies. In reply dated 10-10-71 the Secretary, Steel reduced the target of supplies to 250 tonnes per month. The Ministry of Steel was again addressed on 19-10-1971 at the Joint Secretary's level to confirm that the performance of the H.S.L. could not be improved to ensure supplies of more than 250 tonnes per month in which case import of creosote would have to be arranged by the Ministry of Railways. Their clearance for import of creosote was sought. The quantity proposed to be imported was, however, not indicated to the Ministry of Steel. Since the supplies continued to be at a low level, the Railways had no alternative but to arrange imports. Even after the import was arranged, efforts were continued to persuade the Ministry of Steel to produce more creosote in order to avoid further imports in future. The Minister of Railways addressed the Minister of Steel and Mines on 26-7-1972 suggesting that the possibility of using furnace oil in place of crude tar as fuel in steel plants may be explored so that sufficient quantities of creosote could be made available to the Railways for their use. The Minister of Steel brought out the various compulsions on account of which he did not expect the supply of creosote to imporve immediately although when the coke oven batteries were repaired and when the additional batteries at Bokaro were commissioned, he expected substantial improvement in the supplies of creosote to the Railways."

3.47. Referring to the assurance given by the Secretary, Steel in his

letter of 2nd June, 1971 to the Chairman Railway Board to the effect that supplies of creosote at the rate of 300 tonnes per month will be made to Railways, the Committee enquired about the factors responsible for the Steel Ministry not keeping up their assurance. A representative of the Ministry of Steel stated during evidence:

"Earlier, we were meeting, by and large, the creosote oil requirements of the Railways. During 1971, the main problem arose in the coke oven batteries, especially in the Bhilai steel plant which was the largest supplier of that oil to Railways. Bhilai is the largest supplier; but Durgapur and Rourkela are also supplying—no doubt at a lesser level. The creosote oil is supplied to the Railways after meeting the requirements of the steel plant itself.

There is total fuel requirement for the steel plant as a whole; *i.e.* in the furnaces, boilers and the rolling mills. If our coal throughput is good, both in terms of quantity and quality, we can get more coke oven gas. If the overall supply of coke oven gas gets reduced, the plants have to depend on supplementary fuels facilities which have been provided in all the Hindustan steel plants *viz.* pitch creosote mixture which is also called coal-tar fuel. When the coke oven gas gets reduced because of the problems in the coke oven batteries in all the 3 steel plants, we have naturally to depend more and more on the PCM or CTF.

We have all the desire to meet the requirements of the Railways; but our primary concern is that the production of steel should be kept at an even keel to the extent possible. When we found it difficult to meet the requirements for our steel plants from the coke oven blast furnace gases we had to depend on the larger use of CTF for our own requirements. We could obviously given to the Railway only whatever was surplus to us.

3.48. The Committee desired to know what was the rated annual capacity for production of creosote in the plants of Hindustan Steel and what had been the actual production in the past 5 years. In a note, the Ministry of Steel have stated:

"Creosote oil is one of the many fractions of oil such as light oil, middle oil, creosote oil, wash oil, anthracene oil, etc., as are produced by the fractional distillation of crude tar, a direct by-product recovered during the coal carbonisation process at the Coke Ovens of the integrated steel plants. The recovery of tar which in turn governs the recovery of these oils, depends amongst other things on the quality of coal carbonised, quantity

of coal carbonised temperature of carbonisation etc. The recovery of creosote oil from Crude Tar like that of any other fraction of tar distillation depends upon the particular temperature of the fractional distillation and the process of making various distillates adopted in individual steel plants. There is as such no specifically earmarked rated capacity for production of creosote oil, at Bhilai and Rourkela, while at Durgapur there is an indication that the annual capacity is 1,825 tonnes of creosote oil.

2. Actual production of creosote oil at the HSL plants during the last five years has been as under:

Unit 'tonnes'

Year	Bhilai Steel Plant	Durgapur Steel Plant	Rourkela Steel Plant	Total
1969-70	2,610	1,161	985	4,756
1970-71	2,130	888	810	3,828
1971-72	995	695	1,372	3,062
1972-73	1,877	1,182	332	3,391
1973-74	976	1,473	134	2,583

3.49. On being asked about the steps taken by the Ministry of Steel to improve supply of creosote to the Railways, the Ministry of Steel have in a note stated:

"The overall generation of crude tar at the HSL plants has been low during the last few years on account of lower coal throughput because of technological troubles in the coke ovens during the years 1970-71 and 1971-72 and due to difficulties in the availability of coking coal thereafter, particularly in the year 1973-74 on account of power shortage and railway movement difficulties. There has also been a distinct deterioration in the quality of coking coal, particularly in respect of the volatile matter content, which is the constituent of coal that forms crude tar and other by-products.

2. The despatches of creosote oil during the year 1973-74 from the HSL plants to the Railways were as under:

Bhilai Steel Plant	1,000 tonnes
Durgapur Steel Plant	1,134 tonnes
Rourkela Steel Plant	136 tonnes
TOTAL	2,270 tonnes

3. The availability of creosote oil being dependent firstly on the quantity of coal carbonised and also quality thereof and secondly on the availability of tar oils in excess of the requirements of the steel plants, the availability of creosote oil for the Railways in future would by and large be governed by these factors. During the year 1974-75, assuming improvement in operations at the steel plants, the availability of creosote oil to the Railways is estimated to be about 3800 tonnes. The availability of creosote oil thereafter cannot be forecast precisely. It may, however, be mentioned that the availability during the subsequent years from H.S.L. plants would be of the order of 3800 tonnes as in the current year."

3.50. The representative of the Ministry of Steel also stated during evidence:

"The position is substantially better. We have promised the railways this year that we would be able to meet their requirements to the tune of 3800 tonnes. As a matter of fact, this year, the Railways have not been able to lift some of the creosote oil which we have offered to them. Apparently they have shifted to other sleepers or some of the creosote which they have imported is gradually coming in.

I may also submit that when the tar distillation unit in Bokaro goes into commission which is expected in the second quarter of 1975, we will have roughly 10,000 tonnes of creosote from Bokaro, alone. But here also I would like to sound a note of caution that after the 4 million tonne stage at Bokaro in which we will have 15,000 tonnes of creosote oil from Bokaro alone, Bokaro will not be able to spare any because of its requirement of overall fuel balance. I would also add that we had changed over to oil firing in some furnances of Rourkela and in Durga-

pur not so much to meet the requirement of the Railways but to meet our requirements of the fuel balance in the plants. We are now faced with the problem of availability of furnace oil. We have now to think in terms of coal gasification or something like that to meet our requirements."

3.51. During evidence the Committee enquired whether the Ministry of Steel had worked out the economics of using imported furnace oil instead of burning coal tar as fuel for their boilers. The representative of the Ministry of Steel stated:

"As I have submitted earlier, the steel plants are basically to use the coke oven gas and then the blast furnace gas. In addition, all the 3 steel plants have provision to use the liquid fuel *i.e.* coal-tar fuel. Changing over to furnace oil would have meant addition of certain facilities which would have taken some time. Even then, we were hoping that we would soon be able to get over the problem. Obviously, when this problem of coke oven gas continued over a year, we had to change over to oil firing also in some of the furnaces of the Rourkela and Durgapur steel plants with a view to meeting the overall fuel requirements."

3.52. The Audit paragraph mentions that 3.3 tonnes of fuel oil costing not more than Rs. 363 (c.i.f.) were thermally equivalent to one tonne of creosote (import prices Rs. 908 c.i.f.). The Committee asked whether in view of the price differential it would not have been financially justified to import fuel oil for burning in boilers rather than burn creosote. The Committee also asked whether this aspect was considered by the Ministry of Steel while concurring with the proposal of the Ministry of Railways to import creosote. In a note, the Ministry of Steel have stated:

"Creosote oil, as such, is not used as fuel in steel plants. It is mixed with pitch (the residue left in the tar distillation process) along with other tar oils in varying proportions ranging from 30 to 40 per cent to produce Coal Tar Fuel (commonly known as pitch creosote mixture). This coal tar fuel (C.T.F.) is used in steel plants in steel melting furnaces and boilers. H.S.L. plants had been designed to use C.T.F. as liquid fuel and facilities have been provided at the plants for this purpose from the very beginning.

In the event of shortfall in production of crude tar which is the raw material for processing into either as coal tar fuel or as creosote oil, in the interest of steel production the steel plants were obliged from time to time to produce the required quantity of

C.T.F. and the availability of creosote oil depended on surplus tar oils.

As the steel plants did not have the facilities for use of fuel oil in the furnaces where C.T.F. is used, they could not substitute CTF by fuel oil. As regards boilers, Durgapur Steel Plant does not use CTF as a fuel. Rourkela Steel Plant use CTF as well as fuel oil. Bhilai Steel Plant has been using CTF as a fuel in their boilers and it does not have necessary facilities to use furnace oil instead. The use of fuel oil as part replacement of CTF was also not possible technically as it is impermissible to mix CTF and fuel oil. Fuel oil is not amenable to mixing with pitch as is the case with creosote and other tar oils.

Regarding use of fuel oil in Steel Plants, it may however, be added that considering the overall fuel requirement and the internal availability of fuel in the steel plants, particularly gaseous fuel, steel plants at Durgapur and Rourkela have installed additional facilities for use of fuel oil in some of the furnaces. The fuel oil system at Rourkela was commissioned in stages between October 1971 and May, 1972. Fuel oil facilities on a large scale have come into being at Durgapur during the middle of 1973. A feasibility report was prepared for creation of additional facilities for use of fuel oil at Bhilai also, in their Open Hearth Furnaces, but this was not executed because of economic considerations, as in case of Bhilai the use of fuel oil would have required apart from the fuel oil facilities, major modification to furnaces also.

Now, however, in view of the necessity for curtailing the consumption of fuel oil, bulk of which is imported, the steel plants are examining the possibilities of replacing at least a part of the fuel oil requirement with coal-based fuels.

The Department of Steel was not formally consulted by the Ministry of Railways about the import of creosote oil."

3.53. The Committee drew attention to the statement of the Ministry of Steel to the effect that they were not formally consulted by the Ministry of Railway about the import of creosote oil and enquired from the representatives of the Ministry of Railways during evidence whether the import of creosote in 1971 was done with the prior formal concurrence of the Ministry of Steel. The Chairman, Railway Board stated:

"It was not a formal concurrence, as such....They (Ministry of Steel) said that they would not be able to give as more than

300 tonnes per month. In fact, the actual supply came to a lesser quantity, namely, 250 tonnes per month. About the formal clearance for the import, we process it through the DGTD."

3.54. In this connection the Committee referred to a written note furnished to them by the Ministry of Railways wherein it had been stated that "Their (Ministry of Steel) clearance for import of creosote was sought. The quantity proposed to be imported, was, however, not indicated to the Ministry of Steel."

3.55. On being pointed out that there was an obvious contradiction between the statements made by the Ministry of Steel and the Ministry of Railways, the Chairman, Railway Board stated in evidence: "In our statement, the written statement that was given, there is an ambiguity quite clearly."

3.56. Subsequently in a written note, furnished at the instance of the Committee, the Railway Board have stated:

"The competent authority for giving clearance for imports is the Director General of Technical Development. Before obtaining his clearance it was essential to obtain the clearance of indigenous suppliers to the effect that they were not in a position to meet the requirements of the creosote of the Railways. The Department of Steel were, therefore, addressed repreatedly by the Ministry of Railways urging them to improve the production of creosote in order to meet the requirements of the Railways. They, however, expressed their inability to meet the requirements in full and finally they were informed vide Railway Board's letter No. 70/WSC/STP/22 dated 19-10-1971 that they had not been in a position to supply creosote oil to their originally committed rate of 300 tonnes per month or even the reduced quantity of 250 tonnes per month promised by them vide their letter No. COY/21(2)/71 dated Nil, and unless the supplies were improved the Railways would be left with no alternative but to either import creosote oil on long term basis or further reduce drastically the intake of wooden sleepers requiring treatment and to close down almost all the sleeper treatment plants etc. They were asked to confirm that the level of supplies actually made by them in the preceding months was the best that could be expected from them. In reply to this letter, the H. S. L. confirmed that the supplies of creosote in the remaining months of the financial year could be expected to be only at a level of 175 tonnes per month and

the total quantity to be supplied in the next financial year would be only about 2500 tonnes. It was only after obtaining this confirmation from HSL that the Railways proceeded with the procurement of imported creosote oil".

3.57. A representative of the Ministry of Steel informed the Committee during evidence:

"Formal concurrence from our side means that no specific quantity was indicated but they had only indicated a proposal for consideration."

3.58. The Committee pointed out that in 1965 when the Ministry of Steel gave an assurance that they would improve the supplies of creosote, the Ministry of Railways' proposal for import of creosote was shelved. Asked whether in the context of circumstances obtaining in 1971 the Ministry of Steel would have given clearance for import of creosote by Ministry of Railways, the representative of the Ministry of Steel stated: "Sir, if they had asked, possibly we would have given them clearance for the import of this material."

3.59. The relevant portions of the correspondence exchanged between the Ministry of Steel and the Railway Board are extracted below:

"4. The promise of 250 tonnes per month *i.e.* 100 tonnes from Bhilai and 75 tonnes each from Rourkela and Durgapur is 50 tonnes less than the promise made hardly four months ago in Shri Sarin's D.O. letter dated 2-6-71. On the basis of actual materialisation, it appears that the Railways can expect only about 160 tonnes on the average per month. This is not even a trickle when compared with the performance of HSL in past as detailed in earlier correspondence on the subject of dwindling supplies over the years. However, it may be confirmed that this is the best that could be expected as proposals to either import creosote oil on a long term basis or to further drastically reduce the intake of wooden sleepers requiring treatment and to close down almost all the Sleeper Treatment Plants etc. would have to be taken up for consideration."

(D.O. letter No. 70/WSC/STP/22 dated 19-10-71 from Railway Board to Ministry of Steel and Mines)

"HSL have informed this department that during the current financial year they have actually supplied 1,573 tonnes of creosote

oil till October, 1971 against their earlier indication of 1,750 tonnes. The shortfall is due to a major breakdown in the coke ovens in the steel plants during this year. HSL, however, will be able to resume the expected supply of 175 tonnes per month for the rest of the financial year. They will also endeavour to make up the shortfall as far as possible. During the next financial year, it will be possible for them to supply about 2,500 tonnes of creosote oil. We hope this will meet your requirement to a considerable extent. It is regretted that, due to unexpected troubles in the coke ovens in Bhilai and Rourkela, it has not been possible to keep up the supply indicated earlier."

(D.O. letter No. COY-21(2)/71 dated 27-12-71 from Department of Steel to Railway Board).

3.60. The Committee were informed during evidence that the proposal for import of creosote had been under consideration since June, 1971 and in August, 1971, an advertisement calling for global tenders for import had been made. In reply to a question as to why in the letter of 19th October, 1971 sent to the Ministry of Steel no reference to the global tenders having been invited was made, the Chairman, Railway Board stated:

"We have got the clearance of DG TD, otherwise we cannot import. It is not necessary to get the clearance of the Steel Ministry. In what way, that information would have helped or would have been relevant to them."

3.61. A proposal for the import of creosote oil in 1965 was dropped after an assurance given by the Department of Steel about the increase in supplies of creosote to Railways. Explaining the circumstances under which this was done, the Chairman, Railway Board stated in evidence:

"In 1965, the point was, supplies were not forthcoming, and if I remember correctly, from what I have seen, offers were invited, but, in the last moment, before finalising the offers, we went to the Steel Ministry again and they gave an assurance that the supplies will be made. On that, the proposal to purchase was dropped."

3.62. The Committee called for details of the utilisation of the imported creosote and enquired whether in order to utilise the 4,400 tonnes of imported creosote, the Ministry of Railways had initiated any action to increase the procurement of raw sleepers requiring treatment. In a note, the Railway Board have stated:—

"The imports were arranged to overcome the continuous shortage of indigenous supplies and to build a buffer stock for future

use. As such there was no question of stepping up of procurement of raw sleepers.

Bulk of the imports ordered in 1972 were received in the years 1972-73 and 1973-74. In 1972-73 the total consumption was 3306 tonnes out of which the imported quantity was 1396 tonnes. In 1973-74 the actual consumption was 3169 tonnes against the receipt of imported creosote of 2546 tonnes."

3.63. The Committee called for details of the creosote oil imported by the Railways year-wise from 1955 to 1961 as also the price paid for these imports. In a note, the Railway Board have intimated:

"Full information for the period in question is not available now. As per the information available a contract for supply of 1200 tons (1219 tonnes) was finalised between the ISM/London and M/s. Lancashire Tar Distillers Limited in 1957. Imports in the years 1958, 1959 and 1960 were to the tune of 209, 400 gallons (983 tonnes app.), 41,985 gallons (238 tonnes app.) and 90 gallons (less than half a tonne) respectively. No imported creosote was received in the years 1955, 1956, 1957 and 1961. No information as to the price paid is available."

3.64. The Committee desired to know whether the Ministry of Railways had assessed their total requirements of creosote oil during the next few years and how do they propose to meet it. In a note, the Railway Board have stated:

"On the basis of the actual consumption in the past few years and taking into account the higher percentage of creosote now being used in the treatment mixture, it is expected that the requirement of creosote in the next few years will be about 4500 tonnes per annum. It is expected that the entire requirement will be met from supplies from indigenous resources. Adequate buffer stock is also available with the Sleeper Treatment Plants in order to meet shortfalls, if any, in the indigenous supplies."

3.65. The Committee note that the average annual supplies of Creosote for the four Railway Sleeper treatment plants from the three steel plants in the Public Sector showed a marked declining trend during the period 1965-66 to 1973-74. As against the estimated requirement of about 8400 tonnes (assessed in 1964-65), the supply was 7118 tonnes in 1965-66 and this gradually declined to as low a figure as 2470 tonnes in 1973-74. In view of the inability of the Steel Plants to meet the Railways' requirements, the latter were compelled to import 4400 tonnes of Creosote in August, 1971 at an average cost of Rs. 908 per tonne (exclusive of customs

duty), which was substantially higher than the price of Rs. 595 per tonne paid to the Steel Plants.

3.66. It is no doubt true that the Railway Ministry wanted as far as possible the supplies to come from the steel plants but the matter dragged on for a number of years (from November, 1967 to January, 1970) through periodical meetings and other correspondence with Hindustan Steel Limited. The Committee feel that initiative should have been taken at a high enough level to clinch the issue as soon as it was apparent that routine efforts were not proving effective. As far as the Ministry of Steel are concerned, it is distressing that it went on shifting from one assurance to another without making a correct assessment of the quantity of creosote which could be made available to Railways. In fact, the various promises made by the Ministry never came up to the level of actual supplies. All this gave rise to ambiguity and confusion, with the result that the requirements of creosote oil were never met fully and ultimately these had to be imported at higher costs which the country could ill afford.

3.67. The Committee further note that on account of problems in the coke oven batteries, the Steel plants had to resort to use pitch creosote mixture as fuel with the result that production of creosote had to be severely curtailed. The alternative suggestion to use furnace oil [then costing only Rs. 363 (c.i.f.) per tonne] was not found feasible as it would have required the addition of certain facilities which would have taken considerable time to provide.

3.68. The Committee trust that with the improvement in the working of the steel plants, the Ministry of Steel are now in a position to ensure an adequate and sustained supply of creosote oil to the Railways treatment plants and so to obviate costly imports.

GENERAL

3.69. For lack of time the Committee have not been able to look thoroughly as they had originally intended, into some of the paragraphs included in the Report of the Comptroller and Auditor General of India for the year 1972-73—Union Government (Railways). The Committee expect, however, that the Ministry of Railways (Railway Board) will take necessary action in these cases, in consultation with Audit.

NEW DELHI;
August 2, 1976.
Sravana 11, 1898 (*S*).

H. N. MUKERJEE,
Chairman,
Public Accounts Committee.

APPENDIX

Conclusion /Recommendations

Sl. No.	Para No.	Ministry concerned	Recommendation
1	2	3	4
1	1.45	Railways	The Committee note that the Ministry of Railways decided in 1959 to go in for production of AC freight type (ACFT) broad gauge electric locomotives and entered into a collaboration agreement with a foreign consortium called (Group) in November, 1962, providing for grant of manufacturing rights and technical assistance by the 'Group' for indigenous production of such locomotives for a period of eight years. Production in the Chittaranjan Locomotive Works started from December, 1963. The Committee are concerned to note that 82 ACFT locomotives, costing each about Rs. 24 lakhs, which were delivered by the Chittaranjan Locomotive Works to the South-Eastern Railway between December, 1963 and October, 1967 started developing a number of defects within a few months of their commissioning (from October, 1964 onwards) and had to be withdrawn from service. Apart from loss on account of stabling of the locomotives, an expenditure of Rs. 1.4 crores (about 10 per cent of the cost of manufacture) was incurred on major repairs and modifications of these locomotives.

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2	1.46	Railways	The Committee have been given to understand that one of the principal reasons for the failure of AC freight-type locomotives was the severe gradients on the South-Eastern Railway which "required the locomotive to exert higher tractive effort than originally specified in the design for these locos." The representative of the Ministry of Railways has pleaded that there was no inadequacy of design on the part of the collaborators, as the locomotives were made as per specifications laid down by the Railway Board. This raises the basic question as to how the Railway Board settled the specifications of the freight-type locomotive for indigenous manufacture without making sure that it had the tractive capability of hauling the loads on the South -Eastern Railway where such locomotives were primarily to be used. Surely, the Railway Board cannot plead ignorance of the existence of higher gradients on the South Eastern Railway or the tractive effort required therefor, as they had experience of years of running heavy goods trains on that Railway. If there were any grounds for doubt, prudence required that the Railways should have imported ACFT locomotives according to the specifications worked out by them, tried them out on the sections where these were likely to be used, come to a considered conclusion and thereafter, taken a firm decision about its indigenous manufacture within the country. The Committee should not be understood to imply that there should be needless dragging of feet in the matter of undertaking an imaginative and well-planned programme of manufacture within the country, in the interest of attaining self-reliance in crucial sectors; but obviously, these high-sounding principles cannot serve as an *alibi* for not acting with prudence

			and care, so as to make sure that what was sought to be manufactured within the country was actually suited to the requirements. In fact, the net result of this hasty experimentation was the heavy loss sustained when a large number of these ACFT locomotives became ineffective and had to be withdrawn for effecting substantial modifications and repairs at a heavy cost of Rs. 1.4 crores.
3	1.47	Railways	The failure of the imported traction motors fitted on these locomotives from December, 1969 onwards due to breakage of shafts and pinions is indicative of the fact that the design and capability of the traction motor had not been selected with the requisite care and prudence. While the Committee note that these traction motors have since been replaced by the collaborators at their own expense at a cost of over Rs. 1 crore, the fact remains that a very large number of AFCT locomotives were rendered inoperative thereby denying the Railways the use of these costly locomotives for hauling goods traffic on electric traction at competitive costs. The Committee would like the Ministry of Railways to constitute a high level inquiry into both the matters referred to above, namely, inadequacy of the design for the ACFT locomotives and large scale failure of shafts and pinions of the traction motors which rendered the locomotives inoperative for long periods. They would like to be informed of the action taken against the defaulting officers as well as the lessons which have been learnt from these costly lapses so that these are at least avoided in the future.
4	1.48	Railways	The Committee note that two of the other reasons given for the unsatisfactory performance of the indigenously manufactured ACFT

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			locomotives were use of indigenous materials as well as inadequacy of inspection and poor workmanship. The Committee feel that it should have been possible for the Railways to overcome the first deficiency by adopting strict standards, from the very inception, in the matter of indigenisation of materials and by exercising strict quality control by thorough inspection at all stages of manufacture. As regards poor workmanship, attributed to the time required for development of skills the Committee feel that it should have been possible to overcome this deficiency by initiating the training programme on priority basis as soon as the collaboration agreement was entered into. The training facilities available under the collaboration agreement should have been made full use of and meaningful help of the collaborators taken to train our workers in the Chittaranjan Locomotive Works so that these deficiencies of workmanship were not allowed to come in the way of satisfactory manufacture of locomotives.
5	1.49	Railways	The Committee are even more disturbed by the wholesale failure of traction motors and armatures of AC electric mixed type (ACMT) BG locomotives whose manufacture was taken up in 1967. The Committee are unable to appreciate how there could be such wholesale failure of armatures which resulted in rendering inoperative a large number of these locomotives particularly on the South Eastern Railway for periods ranging from 10 to 184 days, besides the stabling of 19 locomotives for want of traction motors. While the Committee can understand the

Railway Board's inclination to procure the traction motors and armatures from one of the Group firms as they had an "on going" collaboration agreement with that firm of the Group for manufacture of electric traction motors for ACFT electric freight locomotives, it was the bounden duty of the Railway Board to ensure that the specifications were properly laid down and the armature motors were put to realistic field tests to determine their suitability for the ACMT electric locomotives for Indian conditions. If the Railway Board had any doubt in the matter, it would have obviously been better either to import the equipment on trial basis, test its capability and suitability by field trials in India and then gone in for imports and indigenous manufacture or else to have floated a global tender in order to get the quotations for traction motors from all over the world, evaluated their suitability and capability for Indian conditions and then taken a decision on the large scale imports and indigenous manufacturing programme.

6	1.50	-do-

It is a moot point whether in evaluation the performance of traction motors/armatures for import/manufacturing programme, the Research Designs and Standards Organisation (who had already designed a traction motor on their own) and Bharat Heavy Electricals (a public sector undertaking, who were already manufacturing traction motors for DG electric locomotives) should have been closely associated. Had there been a meaningful dialogue between these agencies in the public sector and critical evaluation of the traction motors and armatures which were available in the world market it should have been possible to lay down more suitable specifications and undertake the import/manufacture of the most suitable armature motors for the ACMT locomotive programme from the very inception.

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7	1.51	Railways	In this context it is pertinent to recall that when the Railway Board were faced with the spectre of wholesale failure of electric traction motors on the ACMT locomotives in 1973, they floated a global tender and imported as many as 400 traction motors from Hitachi, a Japanese firm. Had the Railway Board either selected in 1967 the traction motor of the Group design after proper tests and trials especially when the motors of this design were not in use in any country, or purchased traction motors of proved design against open tender as they did in 1973, the ACMT locomotives would not have been rendered inoperative for such long periods.
8	1.52	-do-	The Committee have already in paragraph 1.47 asked for an inquiry to be made to fix responsibility for the inadequacy of design of ACFT locomotives. They would like this inquiry to cover also the manufacturing programme for ACMT mixed type electric locomotives with special reference to the specifications for traction motors/armatures, their import and indigenous manufacture within the country. The Committee would like to be informed of the result of the investigation and the action taken against the officers found responsible for failure to discharge their responsibility. Lessons should be learnt from these costly lapses in order to ensure that these do not recur.
9	1.53	-do-	The Committee are concerned over the heavy percentage (about 20 percent in 1972-73) of ineffective locos as compared to total holding of

			both ACFT and ACMT locos, due to repairs etc. The number of ineffective locos increased progressively from 68 (18 per cent) in 1968-69 to 104 (20 per cent) in 1972-73 against total holdings of 364 and 528 locos respectively. The position improved slightly, since according to information received from the Railway Board on 12th July, 1976 the number of inoperative ACFT/ACMT locos out of a total holding of 629 locos was 118 (18.7 per cent). Even so, it is a pity that such a large fleet of powerful locomotives built at great cost for hauling the heavy goods traffic should have remained inoperative for long periods. The Committee would like the Ministry of Railways to examine the matter in depth in consultation with the Railway authorities concerned and take concerted measures to see that the number of electric locomotives kept under repairs is reduced to the minimum and that as many of them as possible are put to effective service to haul goods and other traffic efficiently and at most economic costs.
10	1.78	-do-	The Committee note that the Chittaranjan Locomotive Works had purchased through the 'Group'—a Consortium of foreign companies 11574 Kgs. of special grade silicon insulating varnishes at c.i.f. value of Rs. 26.41 lakhs during the period September 1968 to November, 1971 to cover the production requirements of traction motors, the manufacture of which was taken up in collaboration with the Group. The Group had assured the Railways that the prices charged for items procured from others would not exceed the suppliers' prices by more than 5 per cent. The Committee, however, find that in fact the firm of the Group which supplied the silicon insulating varnishes had charged an unconscionably

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			high price; the additional expenditure incurred due to the higher prices being Rs. 18.90 lakhs (excluding Customs Duty) out of which Rs. 15.50 lakhs was in foreign exchange.
1	1.79	Railways	The Committee are concerned to note the following glaring lapses on the part of the Railway authorities who were responsible for indenting and making arrangements for procurement of the silicon insulating varnishes : 1. The quantities indented were far in excess of the requirements. The Committee are not able to appreciate how as against the actual monthly consumption of 198 Kgs. of SI 40C Varnish during 1970, indent for as large a quantity as 2300 Kgs. was placed on 2nd November, 1970. Further indents for 2954 Kgs. of SI 40C, 1850 Kgs. of SI 40F and 865 Kgs. of SI 996 varnish were placed on 2nd November, 1971 against an average monthly consumption of 166 Kgs., 13 Kgs. and 31 Kgs. respectively during that year. Apart from the fact that there were standing directions that the quantities to be indented should take specifically into account the actual consumption in the preceding period, there was the additional need for observing every care as the insulating varnishes were known to deteriorate if kept in storage for more than six months and there were large quantities already in stock.

2. Care had not been taken to contact the firm from whom the supply had been obtained by the Group and whose initials were inscribed on the containers nor to ascertain the price in the market abroad or in India so as to make sure that the Group firm did not charge prices exceeding 5 per cent of the suppliers' prices.

3. Care had not been taken to see that the date of manufacture and the date of expiry of the life of the insulating materials was indicated on each container in spite of a specific provision in the warranty clause to that effect. 2855 Kgs. of insulating varnish costing Rs. 5.03 lakhs (excluding customs duty) had to be thrown away as it lost its property after the specified period.

12	1.80	-do-	The Committee also find that as against the norm of 13 Kg. of SI 40C Varnish per motor, the actual consumption was 16 to 17 Kg. in case of SI 40F varnish it was 5.6 to 6 Kg. as against 4.5 Kg. per motor recommended by the Collaborator and in case of SI 996 varnish it was as high as 8 Kg. against 4 Kg. recommended by them. The Committee have a feeling that this high rate of consumption is not so much due to the variation in conditions in India as compared to those obtaining in the Collaborator's manufacturing unit but due to the anxiety of the Railway authorities to cover up the losses on account of the varnish losing its properties because of efflux of time by showing it as issued for work, but in fact discarding it. The Committee would like to be informed of the up-to-date position of the utilisation of the insulating varnish as they

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			fear that a large quantity of this stock might well have been discarded as having lost its property. The quantity and value of the imported insulating varnish which were discarded as being unfit for use should be specifically indicated in the reply to be furnished to the Committee. The Committee should also be informed of the action taken or proposed to be taken to obviate recurrence of such lapses.
13	1.81	Railways	The Committee are perturbed to note that this is not the only instance where the Group had overcharged. In fact there were as many as 41 other items where the Group has overcharged Rs. 70 lakhs from the Railways. The Committee are not prepared to accept the plea, stated to have been put forward by the Group, that while they had overcharged in certain items, they had undercharged in certain other items.
14	1.82	-do-	The Committee were given to understand that the matter had been referred to arbitration and that the Railways had also appointed a Committee to go into all aspects of these transactions. The Committee cannot see any reason why the Enquiry Committee have not been able to finalise their report on a matter of urgency which had been referred to them as early as in August, 1974. The Committee desire that the Railway Board should see to the completion of this work without further delay. They would like to be informed of the findings of the Committee as well as the action taken by the Government to recover Rs. 70 lakhs which were overcharged by the Group and to fix responsibility on the Railway officials for failure to safeguard in time Government's interests.

15	1.83	-do-	The Committee require that the shortcomings and lapses mentioned in the foregoing paragraphs should be specifically enquired into by a Departmental Committee of senior officers including a representative of the Railway Accounts. Responsibility for failure to safeguard the nation's interest must be so ascertained that important lessons can be learnt and such costly lapses do not recur.
16	2.25	-do-	The interchange of wagons at important yards between railway systems constitutes an important operation. The Committee find that at Balharshah and Ajni, which constitute two important interchange points between South Central-Central Railways and Central-South Eastern Railways, the targets were fixed in 1969, but the performance had fallen far short. In the case of Balharshah yard, the inter-change target of 370 wagons per day was fixed in 1969-70 (temporarily revised to 375 in 1970-71) on the basis of anticipated materialisation of traffic. The actual figures were, however, 300-305 wagons only, during the three-year period, 1970-71 to 1972-73. Likewise, in the case of Ajni yard, the target was raised in April 1969 from 550 wagons to 600 wagons per day, whereas the actual number of wagons interchanged daily in the preceding six months (from November 1968 to April 1969) was 513 only. The target was raised in anticipation of more traffic which did not eventually materialise. The average number of wagons interchanged at Ajni from South Eastern to Central Railway and *vice-versa* fell far short of even the earlier target of 550 wagons in the three-year period under review.
17	2,26	-do-	The Committee are constrained to observe that the manner in which unrealistic targets were fixed at these interchanged points without strictly

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			taking into account either the requirements or the physical conditions prevailing, give an impression that such important matters do not receive detailed consideration of either the Zonal Railway or the Railway Board.
18	2.27	Railways	Another disturbing feature is that no review of the targets for these interchange yards appears to have been carried out systematically every year in the light of the performance, requirements and the physical conditions obtaining. The targets for Balharshah and Ajni have remained unaltered since 1969, even though the performance has been less than the interchange quota by 18 per cent to 26 per cent for Balharshah and 25 per cent to 27 per cent for Ajni for three successive years from 1970-71 to 1972-73.
19	2.28	-do-	The Committee also find that goods trains were detained short of both these yards. During 1971-72, out of 3972 trains meant for Balharshah as many as 537 (about 13.5 per cent goods train suffered detention on an average for two hours each; the broad reasons for such detention being meagre facilities in Balharshah yard, speed restrictions and engineering blocks on Balharshah-Kazipet Section on account of doubling works, bunching of trains, accidents etc.
20	2.29	-do-	Similarly, in the case of Ajni, out of 3048 trains during the period of 6 months (February-July, 1972) 1049 (34 per cent) goods trains were detained short of Ajni and suffered detention of over one hour—the main rea-

			sons for it being the limitations of Ajni yard, constraints of passage across Nagpur yard, accidents etc.
21	2.30	-do-	The Committee also note that in certain cases, trains had to be stabled for priods ranging from 2 days to 4.62 days short of these yards. They find that in the case of Balharshah 52 trains had to be stabled short of that Station during 1971-72, the average period of stabling being 2 days. Similarly, in the case of Ajni 37 trains were stabled during the year 1971-72 for a period ranging from 3.69 days to 4.62 days.
22	2.31	-do-	The Committee are not convinced by the reasons advanced by the Railways for the heavy detention to goods trains at Balharshah and Ajni, and are particularly disturbed by the heavy losses caused by the stabling of a large number of trains for periods ranging from 2 days to 4.62 days. The Committee would like to point out that detentions/stablings for hours and days of goods traffic in these yards represent very heavy loss in respect of engine and wagon days which could otherwise have been available for moving goods traffic. The Committee are distressed that instead of achieving improvement in the daily average time and distance covered by wagons as a result of heavy investment in modernization and acquisition of diesel and electric locomotives, the average time and distance covered by a broad-gauge wagon has even come down to 4.07 hours and 74 kms. in 1971-72 as compared to 4.7 hours and 76.9 kms. in 1960-61.
23	2.32	do-	The Railway Board have given a very elaborate explanation in extenuation of their performance. They have emphasised that diesel and electric locomotives were utilised largely to carry heavier loads and that for various reasons it was not found possible to effect appreciable improvement in the

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			speed of goods trains. The Committee cannot help concluding that one of the important reasons for the decline in operational efficiency as reflected in the statistics given in the earlier paragraphs may well be due to unwarranted detention which the goods trains have been suffering in important yards, particularly inter-change yards. The Railways have to realise at all levels that any detention or idling of the rolling stock means a national loss of valuable remunerative assets.
24	2.33	Railways	The Committee would like the Railway Board to review systematically, in conjunction with the Zonal Railways, the targets, the requirements and the physical capacity available in important interchange points, and also to see that these are operated upto the required level and with the requisite efficiency. Concerted measures should be taken to effect improvement in efficiency of these interchange yards. The Committee would like to be informed of the concrete steps taken in this behalf and the improvements actually effected.
25	2.51	Railways Agriculture	The Committee note that for the development of fisheries, the Ministry of Agriculture had, between 1960-61 and January 1969, acquired 9 refrigerated fish vans and placed orders for 3 more in November, 1969. It appears to have been agreed that the Ministry of Food and Agriculture would bear the annual maintenance and service charges of those vans and the Railways would have the responsibility for their maintenance and operation with effect from April 1965. Their ownership, however, continued to vest in the former Ministry.

26.	2.52	-do-	The Committee further note that the service of 5 vans with the South Eastern Railway was better than those in the Southern and Western Railways which had 2 vans each. The earnings of the vans with Western Railway were Rs. 3.49 lakhs as against an expenditure of Rs. 5.99 lakhs during the period 1969-70 to 1972-73 (upto December 1972), which meant a loss of Rs. 2.50 lakhs. The Southern Railway earned on this account Rs. 1.27 lakhs against an expenditure of Rs. 5.24 lakhs during the period from April 1969 to March 1973, thus involving a loss of about Rs. 4 lakhs.
27.	2.53	-do-	The Committee learn further that out of the 12 vans, four M.G. vans have been stabled and one B.G. van is yet to be commissioned and that out of the others only two vans were running between Palasa and Howrah. These two vans, running between Palasa and Howrah, have also been incurring loss, the operational costs during 1972-73 alone being Rs. 4.66 lakhs against the earning of Rs. 3.37 lakhs. According to the Audit Report, the Ministry of Agriculture is stated to have paid to the Railways Rs. 10.99 lakhs towards re-imbursement of losses sustained by them till March 1965.
28.	2.54	-do-	The Ministry of Railways explained (January 1974) that the losses were due to lack of support from the trade on account of the irregular running of the vans. The absence of a daily service also contributed to their inadequate utilisation. Besides, there were many mechanical and electrical break-downs initially and the vans were detained in the shops for long periods owing to difficulty in getting spare parts. etc.

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29.	2.55	Railways Agriculture	The Committee deplore the lack of adequate attention to the task of running the service regularly and efficiently. It is a pity that the fleet of refrigerated vans built at a cost of Rs. 34.91 lakhs (9 vans only) has largely remained unutilised. The Railways have had to bear a heavy burden of expenditure on account of this default.
30.	2.56	-do	At present only two vans are working. It seems strange that 4 vans (including 2 newly constructed) have been stabled for want of traffic, while one more is yet to be commissioned.
31.	2.57	-do-	The Committee have been informed that though there was no difference between the operation costs of refrigerated and insulated vans, the cost of maintenance was more in the case of the former. The question whether it would be more expedient to run insulated vans instead of refrigerated vans which have proved neither popular nor economical, should be examined.
32.	2.58	-do-	The Committee would like to know why it was not found possible to run regular and daily service on certain routes as required by the trade. The precise reasons for retention of the vehicles under repair for long periods, and the general lack of urgency in this matter has to be explained.
33.	2.59	-do-	The Committee would ask Government to set up a competent committee to look closely into the working of the 'Refrigerated Fish Van Service', identify the reasons for its failure and suggest measures for improvement.

			It is essential to demarcate and specify the responsibilities of both the Ministries in regard to the scheme, and also to find out how the present fleet of vans could be put to optimum use. The entire position in regard to the feasibility of such a service and the conditions in which it can operate, should also be carefully examined.
34.	2.80	Railways	The Committee are distressed that there have been serious delays in the placement and the unloading of wagons in Perambur Works Area. The detention of wagons on an average during the 3 years (1970-71 to 1972-73) was of the order of 28 days. Some wagons containing sundry consignment suffered heavy detention of even over 100 days. The Railways have admitted that the main factors contributing to the detention of wagons were non-availability of cranes and shunting engines, non-placement of wagons at the appropriate places for unloading, improper layout of the yards, poor maintenance of the tracks inside the stores, depots, etc.
35.	2.81	-do-	The Committee note that the position has shown some improvement after certain remedial measures were taken in pursuance of the findings of Audit. Such detentions have come down from the average of 28 days (inclusive of free period) to about 9.5 days (September 1974).
36.	2.82	-do-	The Committee regret the complacent attitude of the Railway authorities. For years they did not appear to have realised the wasteful nature of the operations. This casual attitude seems to be due to two factors; first, that the Railways had not fixed any specific time limit (free

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			time) for unloading|loading of wagons in the departmental yards, and secondly, the demurrage charges do not appear to have been levied|collected. No effort even seems to have been made to enforce accountability on the field officers. The Committee feel that this perfunctory approach in the matter of the use of wagons for departmental purposes was responsible for the default which persisted over the years. The Committee desire that the Railways should, without delay, fix norms for loading and unloading of wagons not only at Perambur yard but at all major departmental sidings, and ensure that the wharfage|demurrages are charged from the departmental authorities who are found exceeding the prescribed "free time". The Committee further desire that the "free time" to be prescribed should be laid down strictly so as to act as a self-regulatory discipline for efficient operation.
37.	2.83	Railways	In this context, the Committee would point out that in the Diesel Locomotive Works, Varanasi, the time taken for handling of wagons for departmental stores etc. is only one day. There is no reason why it should not be possible with modernization schemes under way on the Railways to bring down the time in other departmental yards to this level.
38.	2.84	-do-	It is significant that the Railways have now found it possible to reduce the detention time of wagons from an average of 28 days in Perambur to 9.5 days without having to physically alter the layout of the Perambur

			yard etc. The Committee would, therefore, emphasise that the constraints of the layout of departmental yards should not be over-emphasised, and concerted efforts should be made to see that minimum time is prescribed for the loading and unloading of goods in the departmental yards.
39.	2.85	-do-	There should also be a well regulated system and procedure by which excessive detention time and demurrage charges are promptly checked by supervisory officials and adequate action taken against those found responsible for avoidable and costly detentions.
40.	2.86	-do-	The Committee would reiterate that wagons have been acquired with the nation's money and should be treated as a national asset to be put to the best economic use. The Railways in fact have to set an example by releasing the wagons loaded with departmental goods quickly so as to act as model to other users. The Committee need hardly point out that reduction in detention to wagons would enhance their availability for greater public use and thus subserve the larger public objective.
41.	2.87	-do-	The Committee note that with a view to rationalising the movement of stores from Salt Cotaurs to the Stores Depot at Perambur, the goods are being unloaded and carried by road instead of wagons. The Committee would like the Railways to make sure that these operations by road are economical and less costly than movement by wagons. The Committee also find that heavy wharfage to the extent of Rs. 4.17 lafihs was incurred between October, 1972 and August, 1974 on account of departmental consignments lying at Salt Cotaurs for excessive periods. The Committee

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			are unable to appreciate why the Railways were not able to organize the transport of these stores more efficiently and obviate incurrence of such heavy wharfage. The Committee would like responsibility for this to be fixed and positive measures taken to ensure that departmental stores and consignments which are unloaded at Salt Cotaurs for the Stores Depot at Perambur are moved away within the permissible and prescribed period so as not to attract any wharfage charges. The Committee would like to be informed of the concrete steps taken in this behalf.
42.	3.14	Railways	The Committee note that the security patrolling of the railway track on North-east Frontier Railway was started from 1962 and subsequently at the suggestion of the State Governments concerned, the track patrolling was intensified. The patrolling continued right upto April, 1972 and thereafter it continued in two Sections. Upto 31st March, 1973, the Railway Administration had incurred on it an expenditure of Rs. 3.60 crores.
43	3.15	-do-	The Committee further note that although the security patrolling was done at the suggestion of the State Governments, claims for the expenditure were not preferred on them till May 1965, when the Railway Board instructed the Railway Administration to present the bills to the State Governments. According to the information furnished to the Committee by the Railway Board, "The State Governments have declined to accept any of the debits intimating that their resources were limited and that

			the Railways in their own interest are expected to give assistance for maintaining safety of railway traffic."
44.	3.16	-do-	The Committee have been informed in June 1976 by the Railway Board that the question of recovery of cost of patrolling of Railway Track from the State Governments was discussed at a meeting held with the Ministry of Home Affairs in which it was decided that the matter should be put up to the Committee of Secretaries on Internal Affairs for a decision. This long lapse of time over a decision that still remains to be made appears to the Committee to be an instance of an entirely avoidable dilatoriness in Government functioning which should be shed purposefully and effectively forthwith.
45.	3.17	-do-	The Railway Administration should have, in its own interest, entered into a meaningful dialogue with the State Governments much earlier and not relied on the assumption that as the responsibility for patrolling devolved on the State Governments they would bear the cost involved on such patrolling. The Committee fail to understand how the whole matter came to be dealt with in such a very casual and perfunctory manner. Keeping in view the very large amount involved, the Railway Administration should have resolved the matter in time with the State/Central authorities concerned.
46.	3.29	-do-	The Committee note that for handling of goods, parcels and luggage etc. at Muzaffarpur Station, a contract was awarded for 3 years from 1st April, 1971 to tenderer 'A' whose tender was found to be the lowest or

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			the basis of evaluation of anticipated quantum of all items of work except one, which related to handling of emergency tools and electrical flood light boxes and which was being done by the previous contractor free of charge, from 1969. It has been stated in the Audit Report that had the tenders been evaluated taking into account also the work under the left out item during the year before, the tender of 'B' would have been the lowest. The Committee are further given to understand that had the tender of 'B' been accepted from April 1971, the Administration would have saved Rs. 1.41 lakhs on the basis of traffic handled at Muzaffarpur during 1971-72 and 1972-73 alone. The contention of the Railway Board that the excluded item being free of charge, there was no record to judge the quantum of traffic, is not convincing. In fact, the Board have admitted that "the assessment of the traffic could have been made from other station records and there has been an omission in this regard."
47.	3 30	Railways	An intriguing aspect of the case is that the tenderer 'A' had quoted a very high rate for repacking transit packages of parcels/luggage and very low rates for certain other items. The actual quantum of work of the former items during the first and the second years of the contract turned out to be nearly three times and two times respectively of what had been anticipated by the Railway Administration. This resulted in unintended gain to 'A'.

48	3.31	do-	According to information furnished to the Committee, a Joint Enquiry Committee appointed by Railway Board has gone thoroughly into various aspects of the award of handling contract and on the basis of the findings of that Committee, "Government have come to the conclusion that the Tender Committee erred in evaluating the tender correctly. The officers who constituted the Tender Committee are being asked to explain."
49	3.32	-do-	The Committee are constrained to observe the unconscionable delay in reaching conclusions on the report of the Joint Enquiry Committee, both by the Railway Administration and the Railway Board. Where the conclusions of an enquiry committee are not found acceptable and further probe is called for, it should be done on a priority basis, so as to clinch the issue and take conclusive action without delay. The Committee urge that the Railway Board and the Railway Administration should take conclusive action in the present case against the defaulting officers without further delay, under intimation to them.
50	3.34	-do-	The Committee note that a report for initiating termination proceedings against the contractor was given by the Deputy Financial Adviser of the North Eastern Railway as early as October 1971. Had the matter been attended to with the seriousness that it deserved, it should have been possible to take conclusive action against the contractor in order to safeguard public interest. The Committee would like the Railway Board to go into this aspect conclusively and inform the Committee of the action taken.

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51	3.34	Railways	The Committee would also like the Railway Board to review their general orders on the subject in the light of the shortcomings which have come to notice in the present case, so as to ensure that such lapses do not recur on other Railways. In particular, the Committee stress that strict instructions should be issued to regulate payments to the contractor within the limits of the estimated quantities, unless these are not enhanced in time, for special reasons to be recorded by the competent authority. This would ensure that the premises on the basis of which quotations of a tenderer are accepted would be specifically kept in view, while making the payment to the contractor, so as to obviate chances of any unintended benefits accruing to him. The Committee would like to be informed of the precise action taken in this behalf by the Railway Board.
52	3.65	Railways Deptt. of Steel	The Committee note that the average annual supplies of Creosote for the four Railway Sleeper treatment plants from the three steel plants in the Public Sector showed a marked declining trend during the period 1965-66 to 1973-74. As against the estimated requirement of about 8400 tonnes (assessed in 1964-65), the supply was 7118 tonnes in 1965-66 and this gradually declined to as low a figure as 2470 tonnes in 1973-74. In view of the inability of the Steel Plants to meet the Railways' requirements, the latter were compelled to import 4400 tonnes of Creosote in August 1971 at an average cost of Rs. 908 per tonne (exclusive of customs duty), which was substantially higher than the price of Rs. 595 per tonne paid to the Steel Plants.

53	3.66	-do-	It is no doubt true that the Railway Ministry wanted as far as possible the supplies to come from the steel plants but the matter dragged on for a number of years (from November 1967 to January 1970) through periodical meetings and other correspondence with Hindustan Steel Limited. The Committee feel that initiative should have been taken at a high enough level to clinch the issue as soon as it was apparent that routine efforts were not proving effective. As far as the Ministry of Steel are concerned, it is distressing that it went on shifting from one assurance to another without making a correct assessment of the quantity of creosote which could be made available to Railways. In fact, the various promises made by the Ministry never came up to the level of actual supplies. All this gave rise to ambiguity and confusion with the result that the requirements of creosote oil were never met fully and ultimately these had to be imported at higher costs which the country could ill afford.
54	3.67	Deptt. of Steel	The Committee further note that on account of problems in the coke oven batteries, the Steel plants had to resort to use pitch creosote mixture as fuel with the result that production of creosote had to be severely curtailed. The alternative suggestion to use furnace oil [then costing only Rs. 363 (c.i.f.) per tonne] was not found feasible as it would have required the addition of certain facilities which would have taken considerable time to provide.
55	3.68	-do-	The Committee trust that with the improvement in the working of the steel plants the Ministry of Steel are now in a position to ensure an adequate and sustained supply of creosote oil to the Railways treatment plants and so to obviate costly imports.

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			GENERAL
56	3.69	Railways	For lack of time the Committee have not been able to look thoroughly as they had originally intended, into some of the paragraphs included in the Report of the Comptroller and Auditor General of India for the year 1972-73 Union Government (Railways). The Committee expect, however, that the Ministry of Railways (Railway Board) will take necessary action in these cases, in consultation with Audit.

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