REPORT OF

THE COMPTROLLER AND AUDITOR GENERAL

OF INDIA

FOR THE YEAR ENDED 31 MARCH 1988

NO. 10 OF 1989

UNION GOVERNMENT (RAILWAYS)

10 MAY 1989

Laid in Lok Sabha on

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PREFATORY REMARKS

This Report has been prepared for submission to the President under Article 151 of the Constitution of India. It relates mainly to matters arising from the Appropriation Accounts of Indian Railways for 1987-88 together with other points arising from audit of the financial transactions of the Railways.

The cases mentioned in this Report are among those which came to notice in the course of test audit during 1987-88 as well as those which had come to notice in earlier years but could not be dealt with in the previous Reports. Matters relating to the period subsequent to 1987-88 have also been included, wherever considered necessary. The Report includes, among others, reviews on Procurement and Utilisation of Computers on Indian Railways, Utilisation of BFR/BRH wagons, Consumption of Energy - Coal, Diesel and Electricity, Modernisation of workshops on Indian Railways and Parcel Business on the Railways besides comments on Purchases, Stores, Works, Establishment, Earnings, etc.

OVERVIEW

This Report contains comments on the financial management of Railways besides nine reviews and fifty nine paragraphs on individual irregularities. Salient points emanating therefrom are:

I. Financial Results

(i) The net surplus for the year 1987-88 was Rs.84.29 crores against Rs.69 crores anticipated in the Budget.

(Para 1.1)

(ii) Indebtedness of Railways to the General Revenues at the end of 1987-88 was Rs.890.65 crores which comprised loans from General Revenues (Rs.401.96 crores) and deferred dividend (Rs. 488.69 crores) kept outside the Railway Accounts.

(Para 1.2)

(iii) Dividend of Rs.638.86 crores was paid to the General Revenues for 1987-88 but the Railways obtained subsidy of Rs. 173.56 crores resulting in effective rate of return of four per cent only.

(Para 1.1.4)

(iv) Operating ratio which is an index of profitability of railway operations showed a deterioration during the year.

(Para 1.8)

(v) As compared to the approved plan, the Railways spent during the year more on new assets than on renewals and replacements.

(Para 1.10.2)

(vi) Excesses of Rs.157.15 crores under three voted Grants and Rs.26.50 lakhs under charged Appropriation require Parliamentary regularisation.

(Paras1.10.4 and 1.10.5)

(viii) Rs. 33.35 lakhs were irregularly re-appropriated from Plan to Non-Plan heads for purchase of Maruti Vans, Colour T.V., V.C.R., Intercom Telephones and construction of Seminar Centre-cum-Marriage Hall.

(Para 1.11.5)

II. Appraisals

(i) Procurement and utilisation of computers on Indian Railways.

- Delayed withdrawal of IBM 1401 computers resulted in avoidable expenditure of Rs. 35.89 lakhs.

- Delay in placement of orders for advanced computers resulted in avoidable extra expenditure of Rs.2.78 crores due to escalation in costs.

- Non-completion of a phase of software application by the System Development Group in Integral Coach Factory resulted in avoidable expenditure of Rs. 13.55 lakhs.

- The purchase of five ECIL computers at a cost of Rs.2.07 crores was injudicious.

- Delay in site preparation work for advanced computers resulted in avoidable expenditure of Rs. 3.03 crores.

- The revenue of Rs.2.70 crores anticipated from introduction of Passenger Reservation System for Delhi Area could not be realised due to high cost overrun on account of changes in the original specifications of hardware and software systems and inclusion of additional items.

- Mini computers/Microprocessors, though not justified on the basis of actual workload, were procured by the Railways for Rs. 6.13 crores and were grossly underutilised without any financial savings or improvement in efficiency.

(Para 2.1)

(ii) Utilisation of BFR/BRH wagons

- Avoidable provision was made for 1600 units of BFR/BRH wagons costing Rs.93.36 crores for 1985-86 and 1986-87 adopting incorrect norms, while the actual traffic lifted by the existing stocks ranged between 35 and 71.7 per cent only of the capacity available for the period 1982-83 to 1987-88.

- The actual turn round of wagons achieved during the last six years ranged between 35.66 and 45.25 days against the prescribed norm of 21.8 days which resulted in loss of earning capacity to the extent of Rs.610.82 crores.

- The loss in earning capacity due to the percentage of ineffective wagons exceeding the prescribed norm of four per cent of the holding worked out to Rs.49.79 crores.

- The detentions caused at some terminals, steel plants, marshalling yards, etc. resulted in loss of earning capacity of Rs.11.30 crores.

- Orders issued for carrying out certain modifications without consulting the users and reversing them later resulted in avoidable expenditure of Rs. 46 lakhs.

- The value of fittings found deficient in respect of stocks placed in four steel plants worked out to Rs. 5.49 crores.

- Claims for infringement charges amounting to Rs.44.10 lakhs remained unsettled due to delay of over five years in declaring them as over dimensional.

(Para 2.2)

(iii) Consumption of Energy - Coal, Diesel and Electricity

- Increased consumption of coal led to non-achievement of savings of Rs.483 lakhs due to non-condemnation of over-aged steam locos.

- Less replacement of steam locos due to shortfall in production of diesel and electric locos led to extra operational cost of Rs.8.75 crores.

- Inadequate inspections by the Organisation of the Chief Mining Adviser, Railway Board resulted in supply of inferior quality of coal to the Railways and short levy of penalties on the suppliers to the extent of Rs.3.01 crores and Rs.2.93 crores during 1985-86 and 1986-87 respectively.

- Consumption in excess of the quantity fixed as trip ration resulted in extra expenditure of Rs. 42.27 lakhs in coal and of Rs.314.95 lakhs in diesel oil.

- Non-reduction of fire-grate area of steam locos used in light services resulted in excess consumption of fuel costing Rs.42.62 lakhs.

- Keeping ineffective diesel locos in excess of the prescribed percentage resulted in excess operational costs of Rs.567 lakhs during 1986-87.

- Delay in setting up of Diesel Engine Design and Development Organisation resulted in blocking up of capital of about Rs. 715 lakhs and non-development of improved fuel efficient engines.

- Non-provision of shunt capacitors, unsatisfactory performance of capacitors and consumption of energy more/less than the maximum/minimum demands led to payment of penalties of Rs.1041.76 lakhs.

- The Southern Railway Administration paid penalty of Rs.33.02 lakhs due to non-availing of 33 KV supply.

(Para 2.3)

(iv) Modernisation of workshops on Indian Railways

- Delay in completion of Civil Engineering and other works resulted in cost and time overrun of Rs. 36 crores and non-completion of the Project as targeted.

- Delayed finalisation of specifications/indents and non-finalisation of tenders/contracts led to escalation in cost of plant and machinery. Against 1674 machines at a cost of Rs. 45.57 crores envisaged in the Project Report, only 723 machines at a cost of Rs. 76.77 crores could be procured.

- Underutilisation of high productivity machines resulted in short fall in outturn.

- Delayed commissioning of 32 high productivity machines caused blocking up of capital of Rs. 6.33 crores.

- Reduction by the Railway Board in outturn for periodical overhaul of Electrical Multiple Units (EMUs) from 5.5 to 3 units per day in Matunga Workshop resulted in idling of facilities worth Rs. 301.33 lakhs.

- The time taken for periodical overhaul of Passenger Coaching Vehicles and EMUs on the Central Railway did not improve after modernisation and fell short of target.

(Para 2.4)

(v) Parcel Business on the Railways

- There was hardly any growth in parcel traffic during 1982-83 to 1986-87.

- Earnings from parcel traffic came down from 2.2 per cent of Gross Traffic Receipts in 1982-83 to 1.6 per cent in 1986-87.

- Despite 70 per cent underutilisation of the existing capacity, additional rolling stock costing Rs.80.68 crores was acquired during 1982-83 to 1986-87.

- Reduction in surcharge on parcel traffic carried by Superfast, Mail and Express trains in 1983-84 to attract more traffic resulted in loss of earnings of Rs.2.13 crores without any growth in traffic.

- Introduction of station to station rates in Northern Railway for transport of Maruti Cars resulted in a loss of earnings of Rs.2.18 crores.

(Para 2.5)

(vi) Manufacture of Traction Motors at Chittaranjan Locomotive Works.

- Against the target of 488 motors per annum for production indicated in 1978-79 the average production during 1978-79 to 1982-83 was only 415. The actual production during 1982-83 was 402 and during 1984-85 and 1985-86 it was 305 and 325 respectively.

- Of the total overhead expenditure of Rs.381 lakhs and Rs.364 lakhs during 1984-85 and 1985-86, the element of unproductive expenditure was Rs. 102.87 lakhs and Rs. 80.08 lakhs respectively.

- Belated adoption of Kapton Conductors led to incurrence of expenditure of Rs.3.19 crores on rewinding.

- Non-adoption of the use of Kapton tape resulted in extra expenditure of Rs.11.15 lakhs.

- Rejection of armature heads due to dimensional deviations, etc. involved a loss of Rs. 18.10 lakhs.

(Para 2.6)

(vii) Planning, execution and performance of Wagon Repair Workshop, Rayanapadu

- The non-fixing of time schedule for each item resulted in delay of over nine years in completion of works and in cost overrun of Rs. 1130 lakhs.

- Delay in placing order for liquid oxygen involved avoidable expenditure of Rs.15 lakhs.

- Idling of wagons received for periodical overhaul in advance of the due dates and excess time taken in periodical overhaul caused detention to wagons involving loss of their earning capacity for Rs. 49 lakhs and Rs.79

lakhs respectively.

(Para 2.7)

(viii) Outstanding claims against defaulting contractors

- Claims against defaulting firms increased from Rs.2.71 crores in 1978 to Rs.6.21 crores in 1986 due to lack of effective machinery to enforce recoveries of risk purchase dues.

- Claims of Rs.31.12 lakhs became unsustainable due to delayed action by the Railways.

- Non-enforcement of recovery of risk cost from defaulting firms led to a loss of Rs.13.49 lakhs

- Claims of Rs.34.20 lakhs were pending against firms due to non-observance of risk purchase procedure.

(Para 2.8)

(ix) Working of Telegraph Circuits

- Delay in implementing Railway Board's instructions of 1975 for closing down Morse telegraph circuits having little or no traffic resulted in avoidable expenditure of Rs.91.38 lakhs per annum on six Zonal Railways.

(Para 2.9)

Purchases,Stores, Works, Establishment **and Other Expenditure**

(i) Extra expenditure of Rs.3.2 crores was incurred in procurement of Elastic Rail Clips required for fastening rails and sleepers mainly on account of incorrect assessment of raw materials required and delayed implementation of Railway Reforms Committee's recommendation for clubbing the requirements for two years.

(Para 3.1)

(ii) Payment of material escalation claims against a contract for purchase of CASNUB bogies by including the cost of scrap supplied at a fixed price resulted in overpayment of Rs. 41.61 lakhs.

(Para 3.2)

(iii) Excess procurement of bearings valuing Rs.8.9 crores was made due to incorrect assessment of the quantity to be procured and extra expenditure of Rs. 33.84 lakhs incurred due to bypassing the lowest offer.

(Para 3.3)

(iv) Provision for price variation over and above the built-in escalation in the rates for purchase of miniature plug-in-type relays resulted in an extra expenditure of Rs.15 lakhs.

(Para 3.4)

(v) Non-installation of a new Direct Arc Electric Melting Furnace procured by the Chittaranjan Locomotive Works in August 1986 for Rs.65.15 lakhs led to idling of the furnace.

(Para 3.6)

(vi) Failure to obtain requisite customs duty exemption certificates from the competent authorities resulted in avoidable payment of customs duty of Rs. 35 lakhs on import of medical equipments by the Southern Railway.

(Para 3.7)

(vii) Delay in taking delivery of imported goods due to non-production of the import licence copy to Customs in time resulted in avoidable payment of Rs.29.66 lakhs towards demurrage charges by the Central Railway.

(Para 3.8)

(viii) Two battery locomotives with spares procured at a cost of Rs.17.30 lakhs on the advice of technical experts for use in tunnelling works on the Metro Railway Project, Calcutta remained idle since their procurement in 1980.

(Para 3.9)

(ix) An expenditure of Rs.33.47 lakhs was incurred upto May 1988 on the servicing of road rollers (against an amount of Rs. 5.60 lakhs realised as their hire charges during the same period) lying unused since their purchase during 1972 to 1982.

(Para 3.10)

(x) Placement of indent with incorrect specification led to procurement of an Angle and Channel Straightening Machine for Rs.8.02 lakhs for which the Railway concerned has no use.

(Para 3.13)

(xi) Failure to exercise prescribed checks on bills relating to advance payments and to maintain necessary checks on supplies against purchase orders by the Diesel Locomotive Works Administration resulted in a supplier obtaining fraudulent payments of Rs.9.15 lakhs.

(Para 3.15)

(xii) The needless insistence on the part of the Administration for getting relaxation of rules by the Overseas Economic Cooperation Fund (OECF) through Ministry of Finance and for splitting the contract contrary to OECF guidelines and the consequent delay in finalisation of contract for construction of subway structures by the Metro Railway, Calcutta not only resulted in the Administration accepting the two post-tender additional stipulations increasing the cost of the contract by Rs.8.17 crores but also in payment of heavy advances and financial accommodation for Rs. 1.86 crores.

(Para 3.21)

(xiii) Omission to provide in the estimates of Deposit Works for the cost of consumption of extra fuel, etc. on account of imposition of speed restrictions/ stoppages of trains during execution of works on the South Eastern Railway involved financial implication of Rs.1.31 crores.

(Para 3.22)

(xiv) Despite the Administration being aware that power generation and its distribution was a State subject, the Central Railway undertook rehabilitation of the dilapidated Power House at Thakurli and also attempted to set up a new 60 MW Power House there which was later given up resulting in infructuous expenditure of Rs. 92 lakhs.

(Para 3.23)

(xv) Adoption of incorrect higher rates for paints for framing of the Basic Schedule of Rates, 1984 by the Southern Railway resulted in extra expenditure of Rs.52.52 lakhs.

(Para 3.24)

(xvi) Irregularities in the award of fabrication contracts to two sister firms and in issue of Zinc and Steel to them resulted in extra expenditure of Rs.49.46 lakhs apart from heavy dues of Rs. 40.25 lakhs still pending recovery from the firms.

(Para 3.25)

(xvii) Delay in installation of tanks for storage of lubricating oil at the loco shed, Jhansi resulted in avoidable expenditure of Rs. 36.11 lakhs.

(Para 3.26)

(xviii) Due to lack of a firm and timely decision and total coordination of all issues, assets worth Rs. 33.07 lakhs created in connection with the shifting of the Metallurgical and Chemical Wing of the RDSO from Chittaranjan Locomotive Works to Lucknow remained unutilised for over three years.

(Para 3.27)

(xix) The Sleeper Creosoting Plant at Clutterbuckganj was underutilised, creosote oil and furnace oil were excess consumed to the extent of Rs. 36.23 lakhs during 1975-76 to 1982-83 and loss of Rs.12.95 lakhs was incurred during 1983-84 to 1985-86 due to failure to give prophylactic treatment to sleepers.

(Para 3.28)

(xx) Post contract modifications allowed in the contract for construction of Vasai-Creek bridges resulted in grant of unintended benefit of Rs.8.14 lakhs to the contractor.

(Para 3.30)

(xxi) The Southern Railway Administration constructed irregularly a swimming pool at a cost of Rs. 10.29 lakhs at the request of the Railway Officers' club at Madras and charged the Railways a major portion of the expenditure (Rs. 6.79 lakhs) on the ground that the swimming pool provided fire fighting assistance to officers' quarters although two ground level reservoirs were already available in the vicinity of these quarters for fire fighting purposes .

(Para 3.31)

(xxii) Out of Rs.960 crores raised by Indian Railway Finance Cor-

poration, a Government Company, set up for the purpose of mobilising resources for Railways, only Rs. 770 crores were drawn during 1987-88. In accordance with the arrangement worked out by the Railways, lease rental is payable to the corporation in respect of rolling stocks indentified and placed on line. During 1987-88 rolling stocks valuing Rs.295.10 crores only were identified and placed on line. Payment of lease rental amounting to Rs.25.89 crores for rolling stocks (valuing Rs.293.38 crores) from 1 September 1987 for which no date/month has been indicated for placing on line and from 1 March 1988 in respect of rolling stocks (valuing Rs. 181.52 crores) for which identification has not been furnished, is not covered by the above arrangement.

(Para 3.37)

(xxiii) Contrary to the instructions of the Railway Board, the South Central Railway Administration allowed the benefit of fixation of pay retrospectively to staff promoted in chain vacancies arising out of upgradation of posts due to restructuring of cadres involving overpayments of Rs. 41.38 lakhs during January 1979 to December 1985.

(Para 3.44)

IV. Earnings

(i) Review in Audit of the interchange of traffic with Port Trust Railways revealed outstanding dues of Rs.1342 lakhs recoverable on various accounts from Calcutta Port Trust (Rs.14.20 lakhs), Haldia Port Trust (Rs.476 lakhs), Paradeep Port Trust (Rs.108 lakhs) and Vishakhapatnam Port Trust (Rs.744 lakhs) due to Railway Administration's failure to operate the provisions of the working agreements with them and inadequate action to effect recovery.

(Para 4.1)

(ii) Non-implementation of rationalisation orders issued by the Ministry of Railways and non-observance of routing instructions on the Western, Southern, South Central and Central Railways resulted in loss of revenue of about Rs.4.19 crores.

(Para 4.2)

(iii) Delay in notification and implementation of the revised axle load limit by South Central Railway Administration resulted in loss of earnings of Rs.70.29 lakhs during the period from May 1983 to March 1987.

(Para 4.3)

(iv) Failure to levy and realise siding charges at double the rates for operation of two engines on the sidings resulted in loss of revenue of Rs.25.49 lakhs on Northern Railway.

(Para 4.4)

(v) Failure of Southern Railway Administration to work out costs periodically and to prefer claims regularly for working Workmen Special Trains run resulted in loss of Rs.17.03 lakhs towards arrear charges besides loss of the services

with an annual revenue potential of over Rs. 10 lakhs.

(Para 4.5)

(vi) Non-revision of rates for recovery of siding charges led to irrecoverable short recovery of siding charges for Rs.15.83 lakhs on Western Railway.

(Para 4.6)

(vii) Non-revision of the minimum weight condition for booking of timber logs and ballies on South Central Railway resulted in loss of revenue of Rs. 13.47 lakhs.

(Para 4.7)

(viii) Failure to visualise, while issuing notification, possibilities of avoidance of special surcharge on Naphtha booked from Mathura Refinery through rebooking resulted in loss of revenue of Rs.9.58 lakhs on the Western Railway.

(Para 4.8)

CHAPTER I

RAILWAYS FINANCIAL MANAGEMENT AND AUDIT

Financial Results

1.1.1 The financial results of Railways for the year 1987-88 showed a surplus of Rs.84.29 crores exceeding by 22 percent the surplus of Rs. 69 crores anticipated at Budget stage. The actual revenues exceeded the budgeted receipts by Rs.261.85 crores, while the rise in expenditure above the budgeted level was Rs.259.70 crores.

1.1.2 The Ministry of Railways had budgeted for transportation of 287 million tonnes of originating revenue earning goods and 3735 million passenger traffic. Keeping in view the traffic that materialised during April to December 1987, they reassessed the originating goods and passenger traffic at 292 million tonnes and 3722.84 million passengers respectively at the Revised Budget Estimate stage. The actual materialisation of goods traffic was to the extent of 290.20 million tonnes and 3807.93 million passengers. There was a levy of surcharge of 10 percent on Air-Conditioned class (including Rajdhani), First class and First class season ticket (suburban and non-suburban) fares with effect from 1.11.87. The anticipated revenue accruing from this surcharge for the period from 1.11.87 to the end of 1987-88 was assessed at Rs. 9 crores. The actual Revenue receipts exceeded the Budget Estimates by Rs. 261.85 crores but fell short of the Revised Budget Estimate by Rs. 29.54 crores.

1.1.3 The Budget Estimate of revenue expenditure was Rs.7696.61 crores and the Revised Estimate was Rs.8000.00 crores. Increased provision of Rs. 303.39 crores (representing 3.94 per cent of Budget Estimate) was made at the Revised Estimates stage mainly for payment of outstanding arrears on account of recommendations of the Fourth Pay Commission, payment of Dearness Allowance, increased level of Productivity Linked Bonus, increase in the rates of kilometrage and Travelling Allowance and impact of Coal and Steel price increase. The actual expenditure (Rs.7956.31 crores) was, however, less than the Revised Estimates by Rs.43.69 crores. There was thus an over estimation of funds required at the Revised Estimates stage.

1.1.4 Dividend of Rs.638.86 crores paid to General Revenues by the Railways during the year was less than Rs.652 crores provided at the Budget stage. This formed four percent return on Capital-at-charge of Rs.11622.22 crores after taking into account subsidy of Rs.173.56 crores obtained from General Revenues.

1.1.5 Pending submission of detailed memoranda by the Ministry of Railways, the Railway Convention Committee (1985) recommended in February 1986 that the existing rates of dividend of six percent on the adjusted Capital invested in the Railways upto 31 March 1980 and 6.5 percent on Capital invested thereafter may be adopted provisionally for 1985-86 and 1986-87. Based on an interim memorandum submitted by the Ministry of Railways

on 2 January 1987 the Committee in its report dated 24 February 1987, permitted, provisionally, the Railways to compute the dividend payable for 1987-88 in the same manner as adopted for earlier two financial years. In July 1987 the Ministry of Railways submitted two separate memoranda containing proposals for payment of Dividend to the General Revenues for the entire quinquennium 1985-90. The accepted recommendations of the Committee thereon, when announced, will have to be applied to the years 1985-86 to 1987-88 the accounts of which have already been closed and certified by the Comptroller and Auditor General of India.

Indebtedness of Railways

1.2.1 The Railways have not been able to discharge, in full, their liability for payment of Dividend to General Revenues and have accumulated a deferred liability to pay the shortfalls. This liability upto end of 1987-88 decreased to Rs.488.69 crores from Rs.489.11 crores outstanding at the end of 1986-87. This is because of liquidation of one item relating to North Eastern Railway.

1.2.2 The Railways have also not been able to contribute adequately to the Development Fund from which unremunerative works, amenities to Railway users and labour welfare works are financed. During the year under Report, the Railways obtained a loan of Rs.53.79 crores for financing the fund. The indebtedness of Railways on this account stood at Rs.401.96 crores at the end of March 1988.

1.2.3 The total indebtedness of the Railways at the end of March 1988 amounting to Rs.890.65 crores is outside the accounts (including Balance Sheet) maintained by the Railways.

Comparative position

1.3 The surplus of Rs.84.29 crores for 1987-88 is less than the surplus of Rs.101.99 crores and Rs.178.83 crores for 1986-87 and 1985-86 respectively. In the two years preceding the last two years, the Railways incurred losses. More details including salient indicators of Financial Results for the five years from 1983-84 onwards are given in Annexure I.

In fact, the Financial Results show a shortfall. Inspite of the Railway Convention Committee's frequent recommendations to match the liability by making sufficient appropriation to Pension Fund, keeping in view the increasing number of Railway pensioners and likely withdrawals, the contribution for the current year was Rs.450 crores. The actual withdrawals from this fund for the year amounted to Rs.711.04 crores. The true commercial state of financial health of the Railways has not been reflected by not suitably stepping up the contribution to Pension Fund. Pensionary liabilities for the current year have been met by depleting the balance of Pension Fund by Rs.155.87 crores. If the actual liabilities on this account for the current year are charged to Revenue, the shortfall for this year would work out to Rs. 71.58 crores.

Railway Funds

1.4.1 Development Fund

This fund is financed by appropriation

from surplus and/or loans from General Revenues. The corpus is utilised to meet expenditure on works relating to amenities for all users of railway transport, labour welfare works and unremunerative operating improvement works and also for paying interest on loans credited to the Fund . During 1987-88, out of Rs.138.08 crores withdrawn from the fund, the component for financing development works was only Rs.103.50 crores and the balance, or 25 percent of the expenditure from the fund, was used for interest payment. The balance in the fund as on 31 March 1988 was Rs.0.03 lakh. No repayment of loans to General Revenues has been made in the last 20 years, ever since the first loan was taken in 1967-68.

1.4.2 Depreciation Reserve Fund

The appropriation from Revenue to this fund was stepped up from Rs.1250 crores in 1986-87 to Rs.1350 crores in 1987-88. The total withdrawals from the fund during the year was Rs.1172.27 crores consisting of Rs.238.26 crores for replacement/renewal of rolling stock and the balance for replacement of other assets. The fund closed with a balance of Rs.452.04 crores at the end of March 1988. The balance in the fund constituted 2.98 percent of the value of Block assets of Rs. 15,177.55 crores and represented about 39 percent of the replacement expenditure during 1987-88.

1.4.3 Pension Fund

The fund constituted in 1964 for meeting expenditure on pensionary benefits of retiring railway employees was to be financed on the basis of actuarial calculations so that the fund has adequate balances to meet the precisely estimated liability on this account. However, after 1974, there has been no actuarial calculations and the annual contribution to the fund continued to be with reference to the trend of actual withdrawals from the fund. Due to substantial liberalisation of pension scheme in recent years, the withdrawals from the fund had been more than accruals to the fund in the last three years.

There was net depletion of Rs.155.87 crores in the fund balance during 1987-88 as the Railways did not match the liabilities by sufficient appropriations. The balance in this fund as on 31 March 1988 was Rs.208.02 crores, equivalent to 29.25 per cent of the expenditure of Rs.711.04 crores on this account during 1987-88.

1.4.4 Accident Compensation, Safety and Passenger Amenities Fund

The fund was set up on 1 April 1974 to meet the payment necessitated by Accident Compensation and expenditure on works of passenger amenities and operational improvements connected with safety of travel. During 1987-88 withdrawals from the fund were Rs.43.96 crores as compared to Rs.35.54 crores during 1986-87 indicating increased expenditure on safety and passenger amenities works. The fund closed with a balance of Rs.33.79 crores at the end of 1987-88. This balance as on 31 March 1988 is equivalent to 76.86 per cent of the expenditure during the year.

Passenger Earnings

1.5.1 The Budget for 1987-88 envisaged a growth of 3 per cent in

other traffic including coaching traffic in terms of passenger's luggage and parcel over the previous year. For drought relief, Railways imposed a levy of 10 per cent surcharge on the fares for Air Conditioned class (including fares for Rajdhani Express), First class and First class season tickets (Suburban and non-suburban) with effect from 1.11.87.

1.5.2. The anticipated additional revenue from the levy of 10 per cent surcharge imposed on certain classes from 1.11.87 to end of 1987-88 was assessed at Rs.9.00 crores. Even though the actuals from Passenger earnings exceeded the Budget Estimate by Rs.87.06 crores (4.41 per cent) the actuals in respect of "Other Coaching" earnings fell short of the Budget Estimate by Rs.16.29 crores (6.01 per cent).

1.5.3 Even though the growth in passenger traffic exceeded 5 per cent (all Railways) over the previous year, Northeast Frontier and Southern Railways recorded a fall of 2.7 and 4.8 per cent respectively. Further details are given in Table 1.

TABLE 1

Railway	Passenger Traffic in Millions 1986-87	1987-88	Percentage variation
Central	888.81	956.30	7.6
Eastern	494.44	531.81	7.5
Northern	374.18	392.14	4.8
North Eastern	168.11	180.42	7.3
North-east Frontier	31.06	30.22	(-) 2.7
Southern	322.33	306.92	(-) 4.8
South-Central	145.41	158.06	8.7
South-Eastern	173.95	188.27	8.2
Western	1005.97	1048.01	4.2
Total	3604.26	3792.5	5.2

Goods Earnings

1.6.1 The Budget Estimates for 1987-88 targeted originating revenue earning traffic at 287 million tonnes (Rs.5819.00 crores). This was revised to 292 million tonnes (Rs.6060 crores) in the Revised Estimates. Though the actuals exceeded the Budget Estimates, they fell short of the targets fixed for the Revised Estimates by 1.8 million tonnes (Rs.78.05 crores).

The net increase of 3.20 million tonnes in originating traffic was mainly under coal (3.77 million tonnes) and foodgrains (3.26 million tonnes) the movements of which were sponsored by Coal India Limited and Food Corporation of India. Food grains being a commodity of low freight class, the increase in its traffic would not lead to higher profitability.

The quantum of originating traffic (35.08 million tonnes) under 'Other Goods', which cover mostly high rated goods moving in wagon loads, smalls and in containers, was less than that budgeted by 1.92 million tonnes. The target (37 million tonnes) as well as the actuals were much below the level of 43.26 million tonnes loaded in 1981-82.

To sum up, the movement

of low rated commodities increased while traffic in high rated commodities has not shown the increase necessary to compensate the deficit attributable to the movement of the former.

1.6.2 During the year the originating loading of total traffic (Revenue Earning) had improved on all the Railways except South Central and Western Railways whose loading performance remained at the level attained in the previous year. However, the loading of 'other goods' which yields high profit margin, declined during the year, reflecting poorer performance on all the Railways except Eastern and North Eastern Railways. More details are given in Table 2.

Table 2 (In thousand tonnes)

Railway	Total Traffic		'Other Goods'	
	1986-87	1987-88	1986-87	1987-88
Central	25858	27775	4567	4108
Eastern	59873	63003	4522	4842
Northern	26774	27811	5096	4732
North Eastern	4305	4352	2308	2612
Northeast Frontier	5091	5418	1237	1135
Southern	13910	14176	2383	2301
South-Central	27749	27785	2972	2661
South Eastern	89559	95310	5891	5468
Western	24634	24573	8456	7224
Total	277753	290203	37432	35083

1.6.3 The unrealised Railway earnings of all types rose from Rs.226.63 crores at the end of March 1987 to Rs.250.70 crores at the end of March 1988. Freight outstanding (including that on consignments yet to be received and delivered) rose by Rs. 36.27 crores during the year. Major portion of the freight of Rs.179.03 crores related to Central (Rs.43.14 crores), Eastern (Rs.24.41 crores), Northern (Rs.33.10 crores) and Western (Rs.34.85 crores) Railways. Factors such as large scale diversion of coal wagons to stations or power stations other than those originally mentioned in the invoices, non-payment of freight by parties due to disputes relating to lesser weight of coal in wagons, payment of freight at train-load-rates instead of wagon load rates claimed by the Railways etc. mainly contributed to these outstandings.

1.6.4 Out of Rs.220.93 crores of demurrage/wharfage charges due, the Railways recovered Rs.104.31 crores and waived Rs. 82.06 crores leaving a balance of Rs.34.56 crores at the end of 1987-88.

Revenue Expenditure

1.7 The increase in Revenue Expenditure to Rs.7956.31 crores in 1987-88 from Rs.7002.24 crores in the previous year was mainly due to increase in appropriation to Railway Funds viz. Depreciation Reserve Fund (Rs.100 crores), Pension Fund (Rs.100 crores), Miscellaneous Expenditure including contribution to Accident Compensation Safety and Passenger Amenities Fund (Rs.51.68 crores) and more expenditure (Rs.702.39 crores) on Ordinary Working Expenses. The increase in working expenses was due to increase in salaries and allowances including payment of arrears arising out of IV Pay Commission's recommendations as well as increase in the traffic output, increase in electricity tariff, etc. These working expenses have risen by 13 to 14 per cent per annum just in two years as detailed in Table 3.

Table 3

Grant	(Rs. in crores) 1985-86	1986-87	1987-88	(Percentage increase) 1986-87	1987-88
1	2	3	4	5	6
3. General Superintendence and Services.	257.71	312.74	363.40	21.35	16.20
4. Repairs and Maintenace of permanent way and works.	557.82	643.25	737.11	15.31	14.59
5. Repairs and Maintenance of Motive Power.	433.36	506.53	553.44	16.88	9.26
6. Repairs and Maintenace of Carriage and Wagons	571.32	660.27	747.15	15.57	13.15
7. Repairs and Maintenance of Plant and Equipment	316.90	356.30	388.69	12.43	9.09
8. Operating Expenses-Rolling Stock and Equipment.	454.46	518.60	629.46	14.11	21.38
9. Operating Expenses-Traffic	536.59	630.31	774.81	17.47	22.93

1	2	3	4	5	6
10. Operating Expenses-Fuel	1065.81	1183.35	1238.57	11.03	4.67
11. Staff Welfare and Amenities	188.87	221.91	256.19	17.49	15.44
12. Working Expenses including Suspense excluding Accident compensation.	251.20	258.53	308.53	2.92	19.34
13. Provident Fund, Pension Fund and Other retirement benefits (Net)	9.10	8.77	5.60	(-) 3.63	(-)36.15
Total Ordinary Working Expenses (Grants No. 3 to 13 - including Suspense)	4643.14	5300.56	6002.95	14.16	13.25

Operating Ratio

1.8 The percentage of working expenses to earnings is the operating ratio worked out for each Railway. It is an index of profitability of railway operations and a ratio above one hundred indicates losses. The overall ratio deteriorated from 88.3 in 1982-83 to 92.5 in 1987-88 due to faster growth of revenue expenditure as compared to that of revenue receipts. Out of nine Railways, five showed profits, while others continuously incurred losses. The trend of last six years is given in Table 4.

Table 4

Railway	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88
1	2	3	4	5	6	7
Central	71.9	76.3	79.6	76.1	76.83	78.46
Eastern	109.9	114.3	119.0	101.1	105.9	110.3
Northern	83.0	89.0	92.9	86.6	83.63	82.45

1	2	3	4	5	6	7
North Eastern	148.7	174.4	187.4	166.9	171.76	167.99
Northeast Frontier	161.8	184.4	209.1	195.8	189.23	196.07
Southern	118.6	123.2	124.4	119.6	130.08	129.51
South Central	82.4	89.9	85.9	82.1	89.52	91.34
South Eastern	73.5	77.0	76.8	72.9	75.0	73.97
Western	77.2	78.5	82.7	79.6	80.75	79.1
All Railways	88.3	93.5	96.3	90.6	92.20	92.5

Plan (Capital) Expenditure

1.9.1 The year under review (1987-88) was the third year of the Seventh Five year Plan (1985-90) at the end of which the Railways were anticipated to develop requisite capacity to meet a projected traffic of 340 million tonnes of originating traffic. The Railways handled only 318.51 million tonnes by 1987-88.

1.9.2 During the year, the Plan (Capital) expenditure of Railways was Rs. 2698.88 crores as against the approved outlay of Rs.2680.00 crores provided in the Budget. An analysis of the expenditure showed that Railways spent more on acquisition of new assets out of borrowed Capital from General Revenues inspite of their obtaining a loan of Rs.770 crores from Indian Railway Finance Corporation for acquisition of rolling stock assets. The Railways spent less on renewals and replacements charged to Depreciation Reserve Fund. The details are given in Table 5.

Significant shortfalls occurred in Rolling Stocks for which only Rs.276.46 crores were spent as against the provision of Rs.651.44 crores. Out of Rs.770.00 crores of loan obtained from Indian Railway Finance Corporation Rolling Stock worth Rs.588.48 crores were identified and placed on line during 1987-88. The actual procurement of Rolling Stock viz. Locos - Diesel and Electric were 146 & 75 as against the target of 184 and 81 respectively. Similarly, the actual number of coaches viz. EMU/Metro/others were 1283 as against the target of 1458. The wagons procured totalled 15898 as against the target of 19000 in terms of four wheelers.

Provision of Rs.146.29 crores for new lines in the Budget was augmented by Rs. 36.24 crores through reappropriation. The actual expenditure, however, exceeded the final grant by Rs. 4.44 crores. The physical target achieved was 158 route kilometres

as against the target of 188 route kilometres for the year.

Under the Plan Heads Computerisation, Bridge works, Machinery and Plant, the actual expenditure was only Rs.49.65, 51.65 and 57.59 crores as against the provision of Rs.55.00, 61.05 and 70 crores respectively.

Table 5 (Rs. in crores)

Sources of finance	Budget Estimate 1987-88	Actual expenditure (1987-88)
1) Borrowed capital from General Revenues	1231.00	1349.03
2) Internal Resources		
i) Depreciation Reserve Fund	1285.00	1172.27
ii) Development Fund	90.00	103.50
iii)) Accident Compensation Safety and Passenger Amenities Fund	44.00	43.03
iv) Open Line Works Revenue	30.00	31.05
Total	1449.00	1349.85
Grand Total	2680.00	2698.88

Budgetary Control

1.10.1 The Grants and Appropriations approved by Parliament for Railway expenditure are for gross expenditure excluding recoveries which are adjusted in the accounts of revenue and capital expenditure.

1.10.2 The number of Demands voted during the year was sixteen and the number of charged Appropriations was twelve. The number of Supplementary demands voted was 14 and the number of Supplementary appropriations was seven.

1.10.3 During the year the total actual gross expenditure was less than the amount approved by the Parliament. The position of voted Grants and charged Appropriations of 1987-88 together with the Supplementary Grants/Appropriations obtained and expenditure incurred is given in Table 6.

Table 6 (Rupees in crores)

Particulars	(1986-87)		(1987-88)	
	Voted	Charged	Voted	Charged
1	2	3	4	5
1. Original Grants/ Appropriations	12869.72	16.63	14761.96	13.48

1		2	3	4	5
2.	Supplementary Grants/ Appropriations	968.97	0.32	483.55	3.99
3.	Total Grants/ Appropriations	13838.69	16.95	15245.51	17.47
4.	Total Disbursement	13845.62	7.63	15171.45	10.09
5.	Saving(-)/Excess (+)	6.93	(-)9.32	(-) 74.06	(-)7.38
6.	Percentage of Saving/ Excess	0.05	54.99	0.49	42.24

1.10.4 Excess Over Grants

The aggregate saving of Rs.74.06 crores in the voted grants during the year was the net result of excess of Rs.157.15 crores under 3 Grants and saving of Rs. 231.21 crores under 13 Grants. However, the excess requiring regularisation under Article 115 of the Constitution was Rs.157.15 crores. Grant-wise analysis of excess is given in the succeeding paragraphs:-

Grant no. 9 : Operating Expenses - Traffic

Original Grant	Rs.6 93,84,94,000
Supplementary Grant	Rs. 62,07,80,000
Final Grant	Rs. 755,92,74,000
Actual expenditure	Rs. 783,86,56,551
Excess	Rs. 27,93,82,551
Percentage	3.70

A Supplementary Grant for Rs.62.08 crores was obtained in March 1988 to meet mainly increased expenditure on higher rate of Kilometrage Allowance (Rs.11.36 crores), TA/DA (Rs.2.50 crores) as a result of Pay Commission's recommendations, Productivity Linked Bonus (Rs.11.75 crores), payment of lease charges to Indian Railway Finance Corporation for rolling stock (Rs.29.00 crores) offset by a decrease in other miscellaneous factors (Rs.11.74 crores). The Supplementary Grant proved inadequate to the extent of Rs.27.94 crores.

The excess of Rs.27.94 crores occured mainly under the sub-heads Other Miscellaneous Expenditure (Rs.24.81 crores), Train operations (Rs.4.00 crores), Station Operations (Rs.1.11 crores) offset by aggregate of savings and excesses under other sub-heads of the Grant (net Rs.1.98 crores). The excess of Rs.24.81 crores on Other Miscellaneous Expenditure was attributable to incorrect estimation of Hire and Penalty charges and irregular reappropriation of funds obtained for payment of lease charges to Indian Railway Finance Corporation. The excess mainly occurred on Eastern (Rs. 8.09 crores), Northeast Frontier (Rs.7.13 crores), North Eastern (Rs.5.87 crores), Central (Rs. 2.88 crores) Railways.

(ii) Grant no.13- Provident Fund, Pension and other retirement benefits.

Original Grant	Rs.463,50,63,000
Supplementary Grant	Rs.142,31,76,000
Final Grant	Rs.605,82,39,000
Actual Expenditure	Rs.715,83,74,229
Excess	Rs.110,01,35,229
Percentage	18.16

A Supplementary Grant of Rs.142.32 crores was obtained in March 1988 for enhanced Pensionary/Retirement payments to the Railway Pensioners on account of implementation of Pay Commission recommendations for central Government Pensioners. The Supplementary Grant proved to be grossly inadequate.

The excess of Rs.110.01 crores was mainly under the sub-heads (a) Superannuation and Retiring Pension (Rs.64.39 crores), (b) Commuted Pension (Rs.20.44 crores), (c) Family Pension (Rs.13.71 crores), (d) Death-cum-Retirement Gratuity (Rs.14.20 crores) partly offset by aggregate of excesses and savings under other sub-heads (Rs.2.73 crores).

The excess was attributed to more pension cases settled than anticipated, increase in pension cases, enhancement of minimum Pension.

North Eastern Railway accounted for the maximum excess (Rs.24.73 crores) under sub-heads (a) Superannuation and Retiring Pension - Rs.17.35 crores (208.5 per cent), (b) Commuted Pension-Rs.3.14 crores (39.25 percent) over their final allotment. Eastern Railway recorded excess (Rs.18.19 crores) under sub-heads Superannuation and Retiring Pension-Rs.16.57 crores (29.88 per cent) and Central Railway exceeded the provision (Rs.13.29 crores) under the sub-head Commuted Pension-Rs.5.62 crores (46.68 percent).

(iii) Grant No. 14 :- Appropriation to Funds

Original Grant	Rs.19 33,00,00,000
Supplementary Grant	Rs. 4,60,00,000
Final Grant	Rs.19 37,60,00,000
Actual Expenditure	Rs.19 56,79,58,105
Excess	Rs. 19,19,58,105
Percentage	0.99

Appropriation to funds was estimated in Budget at Rs.1933.00 crores. A Supplementary Grant of Rs.4.60 crores was obtained in March 1988 on account of increased appropriation to Accident Compensation, Safety and Passenger Amenities Fund based upon the latest estimates of the element of surcharge on passenger tickets (Rs.4.00 crores) and more appropriation from Revenue to Pension Fund (Rs.0.60 crores).

The actual appropriation was more by Rs.19.20 crores than final grant of Rs.1937.60 crores. It was more due to Appropriation to Development Fund (Rs.15.29 crores) as a result of the actual surplus turning out to be Rs.84.29 crores, far in

excess of Rs.69.00 crores anticipated at the Budget/Revised Estimate stage. The actual appropriation to Accident Compensation, Safety and Passenger Amenities exceeded the provision by Rs. 3.91 crores due to more number of originating passengers booked than anticipated.

1.10.5 **Excess Over Appropriations**

An excess of Rs. 26.50 lakhs attributable to more decretal payments requires regularisation under Article 115 of the Constitution, as detailed below:-

(i) Appropriation no.4-Repairs and Maintenance of Permanent Way and Works.

Final Appropriation	Rs.	6,88,000
Actual Expenditure	Rs.	27,66,280
Excess	Rs.	20,78,280
Percentage		302.08

(ii) Appropriation no. 8 - Operating Expenses -Rolling Stock and equipment.

Final Appropriation	Rs.	6,85,000
Actual expenditure	Rs.	7,07,869
Excess	Rs.	22,869
Percentage		3.34

(iii) Appropriation no. 16 - Assets - Acquisition, Construction and Replacement

Railway Funds

Final Appropriation	Rs.	11,50,000
Actual expenditure	Rs.	16,98,851
Excess	Rs.	5,48,851
Percentage		47.73

1.10.6 Savings

In 13 grants, the actual expenditure amounted to Rs.11714.95 crores against the provision of Rs.11946.16 crores leading to a saving of Rs.231.21 crores or 1.94 per cent of the final Provision as shown in Table 7

Table No.7

Statement showing savings in Grants,1987-88 (Rs. in crores)

Number and Name of the Grant	Original Grant	Supplementary Grant	Final Grant	Actual Expenditure	Savings	Percent
1	2	3	4	5	6	7
1. Railway Board	7.34	0.46	7.80	7.78	0.02	0.26
2. Miscellaneous Expenditure (General)	45.96	-	45.96	42.93	3.03	6.59

1		2	3	4	5	6	7
3.	General Superintendence and Services	340.95	29.55	370.50	365.24	5.26	1.42
4.	Repairs and Maintenance of Permanent Way and Works	705.79	52.78	758.57	746.86	11.71	1.54
5.	Repairs and Maintenance of Motive Power	589.64	8.07	597.71	573.55	24.16	4.04
6.	Repairs and Maintenance of Carriage & Wagons	776.88	8.28	785.16	778.66	6.50	0.83
7.	Repairs and Maintenance of Plant & Equipment	382.52	21.00	403.52	395.29	8.23	2.04
8.	Operating Expenses-Rolling Stock & Equipment	590.06	64.51	654 .57	653.93	0.64	0.09
10.	Operating Expenses-Fuel	1234.48	30.62	1265.10	1261.31	3.79	0.30
11.	Staff Welfare and Amenities	244.57	18.17	262.74	256.76	5.98	2.28
12.	Miscellaneous Working expenses	341.43	39.06	380.49	379.26	1.23	0.32
15.	Dividend to General Revenues; Repayment of loans taken from General Revenue & Amortisation of over capitalisation.	681.26	-	681.26	673.44	7.82	1.15

1	2	3	4	5	6	7
16. Assets, Acquisition, Construction and Replacement						
Capital	4134.53	0.0003	4134.53	4035.10	99.43	2.40
Funds	1566.20	0.0005	1566.20	1513.75	52.45	3.35
Revenue	29.99	2.06	32.05	31.07	0.98	3.06
Total (Grant no.16)	5730.72	2.06	5732.78	5579.92	152.86	2.67
Grand Total	11671.60	274.56	11946.16	11714.95	231.21	1.94

Unnecessary or Excessive Supplementary Grants

Supplementary Grants for eleven Grants proved unnecessary or excessive. Major savings occured in the following Grants.

i) Grant no.4 - Repairs and Maintenance of Way and Works.

A Supplementary Grant of Rs.52.78 crores was obtained in March 1988 on account of increased rate of Dearness Allowance (Rs.14.38 crores), increased level of Productivity Linked Bonus (Rs.14.33 crores), arrear payment of Travelling Allowance (Rs. 1.91 crores), Contractual Payments (Rs.16.43 crores) and other miscellaneous factors (Rs.5.73 crores). This Supplementary Grant proved excessive to the extent of Rs.11.71 crores.

The South Eastern Railway accounted for maximum saving of Rs.7.20 crores. On this Railway Supplementary Grant of Rs.5.05 crores obtained in March 1988 remained unutilised.

ii) Grant No. 5 - Repairs and Maintenance of Motive Power.

A Supplementary Grant for Rs.8.07 crores was obtained in March 1988 for meeting increase in Dearness Allowance (Rs.0.58 crores), increased level of Productivity Linked Bonus (Rs.4.13 crores), other miscellaneous factors including payment of arrears on account of Pay Commission recommendations (Rs.3.36 crores). The entire Supplementary Grant remained unutilised.

The saving under this Grant (Rs.24.16 crores) was mainly under sub-heads 'Diesel Loco' (Rs.16.52 crores), 'Rail-cum-Ferry steamers' (Rs.5.55 crores), 'Steam Loco' (Rs.2.24 crores) and was explained as due to less inter-railway adjustment (Rs.7.68 crores), less adjustment of debits on Periodical Overhaul

(Rs.5.50 crores), less adjustment of cost of materials (Rs.4.94 crores) and other miscellaneous factors (Rs.6.19 crores). The South Central Railway accounted for maximum saving under subhead 'Diesel Loco' (Rs.6.63 crores).

iii) Grant no. 6 - Repairs and Maintenance of Carriages and Wagons.

A Supplementary Grant for Rs.8.28 crores was obtained in March 1988 for meeting the increased expenditure on Dearness Allowance (Rs.1.71 crores), increased level of Productivity Linked Bonus (Rs.4.36 crores) and other miscellaneous factors (Rs.2.21 crores). The Supplementary Grant proved excessive to the extent of Rs.6.49 crores (78.38 per cent).

The saving was mainly under sub-head Miscellaneous Repairs and Maintenance Expenses (Rs.5.73 crores). This was explained as due to less expenditure under the head 'other expenses'. Central Railway accounted for the maximum saving (Rs.2.55 crores) followed by Western Railway (Rs. 1.66 crores) and South Eastern Railway (Rs.1.4 crores) under this sub-head.

(iv) Grant no.7 - Repairs and Maintenance of Plant and Equipment.

A Supplementary Grant of Rs.21.00 crores was obtained in March 1988 to meet higher rates of payment of TA/Daily Allowance (Rs.1.60 crores) due to Pay Commissions' recommendations, payment of Dearness Allowance (Rs.5.87 crores), increased level of Productivity Linked Bonus (Rs.5.54 crores) and increased repairand maintenance expenses in workshops (Rs.7.99 crores). The Supplementary Grant proved excessive to the extent of Rs.8.23 crores. The savings were mainly under the sub-heads "Rental to Post and Telegraph for Signal and Telecommunication Circuits" (Rs. 6.04 crores), "Plant and Equipment-Way and works"(Rs.1.90 crores), other Plant and Equipment-General and Traffic (Rs.1.47 crores), Plant and Equipment-Electrical (Rs. 0.81 crores), partly offset by more expenditure under the sub-head Plant and Equipment Signalling (Rs.1.99 crores).

South Eastern Railway accounted for the maximum saving (Rs.3.87 crores) under the head "Rental to Post and Telegraph" for' Signal and Telecommunications' circuit. The entire amount obtained by this Railway at Final Modification stage (Rs.1.53 crores) and 88 per cent of the Original Grant remained unutilised. The saving on Central Railway under this head was Rs. 1.34 crores.

(v) Grant no. 15 - Dividend to General Revenues-Repayment of Loans taken from General Revenues and Amortisation of Over-Capitalisation.

The Grant comprises four sub-heads viz., Dividend to General Revenues, repayment of loans and interest thereon, payment of deferred dividend and Payment towards amortisation of over-capitalisation.

While calculating the dividend payable to General Revenues, the Capital relating to COOIS amounting to Rs. 10.30 crores transferred to Northern Railway in July 1987 was not taken into consideration, which has resulted in short payment of

dividend by Rs. 66.92 lakhs. Had this amount of Rs. 66.92 lakhs been accounted for, the saving under the sub-head Dividend to General Revenues would have been Rs. 0.47 crores.

(VI) Grant no.16 - Assets-Acquisition Construction and Replacement

The Original Grant, Supplementary Grant and actual expenditure are as shown in Table 7 above.

Supplementary Grant of Rs.2.06 crores was obtained in March 1988 mainly for "progressing" certain on going works under 'Open Line Works Revenue'.

The overall saving under this Grant is Rs. 152.86 crores (Capital Rs.99.43 crores, Funds Rs.52.45 crores and Revenue Rs.0.98 crores).

An analysis of the savings in some of the components offset by excess in the others is given below:

a) Injudicious Surrender

Railway Board did not assess the requirements under each sub-head of 'Capital' realistically in the final estimates and surrendered in March 1988 Rs. 113.68 crores in the final estimates. However, this proved injudicious as the actual expenditure was more than the anticipation mainly under the head 'New Lines' (Rs. 4.44 crores), Gauge Conversion (Rs.2.31 crores), Doubling (Rs. 7.40 crores), Traffic facilities-Yard remodelling and others (Rs.5.07 crores), Workshop Manufacture Suspense (Rs. 39.99 crores), Miscellaneous Advances (Rs.9.02 crores) and other Electrical Works (Rs. 1.49 crores).

b) Track Renewals (Excess Rs.71.13 crores)

The excess of Rs.71.13 crores is attributed to more expenditure on procurement of track materials and increase in the performance in Track Renewal Works. South Eastern Railway recorded the maximum excess (Rs.27.70 crores) followed by Western (Rs.17.40 crores), Central (Rs.9.90 crores), North Eastern (Rs. 6.06 crores) and South Central (Rs. 4.73 crores) Railways.

On Northeast Frontier Railway, an amount of Rs. 9.12 crores pertaining to 'Track Renewal' was not adjusted in the accounts for 1987-88. This Railway retained this amount under a suspense head at the end of the year without transferring it to the final heads and including it in the expenditure discussed above. If this payment is taken into account, the excess under this sub-head and the savings in this Grant would have been Rs.80.25 crores and Rs. 143.74 crores respectively.

c) (i) Rolling Stock-Capital(Excess Rs.1.96 crores)

Against the budget allotment of Rs.198.97 crores, the Railway Board surrendered Rs. 223.70 crores at the final modification stage. The excess of Rs. 1.96 crores was caused due to surrender of more funds at final estimation.

(ii) Rolling Stock - DRF (Saving Rs.65.74 crores)

The saving of Rs.65.74 crores was

caused mainly due to less adjustment of debits in respect of bulk order items of rolling stock and spares procured under the contracts finalised by the Railway Board centrally mainly due to non-assessment, realistically, of debits anticipated to be adjusted against the Railways.

d) Stores Suspense (Saving Rs.56.16 crores)

The saving was attributed to less purchase of Stores including coal, coke, high speed diesel (H.S.D.) oil, etc. and more issues within the Demand to 'Workshop Manufacture Suspense'. The largest saving occured on Chittaranjan Locomotive Works (Rs. 16.29 crores) followed by South-Eastern (Rs.15.11 crores), North Eastern (Rs. 10.90 crores), Eastern (Rs.8.69 crores) and Northeast Frontier (Rs. 7.85 crores) Railways.

Other topics

1.11.1 Outstanding Audit Objections

Financial irregularities and defects noticed during central and local audits are included in the Test Audit Notes/Inspection Reports/Special Letters issued to the Departmental Officers for necessary action. The Financial Adviser and Chief Accounts Officers to whom copies of such communications are endorsed watch the expeditious settlement of these audit objections. Settlement of 3579 audit objections issued upto 31 March 1988 was pending on 31 August 1988. The money value of the objections was Rs. 421.63 crores. The details are given in Annexure II. Objections pending settlement for over three years as on 31 August 1988 were 848 with a money value of Rs. 129.46 crores. Some of the objections were outstanding since 1971-72.

1.11.2 Recoveries at the instance of Audit

During the year 1987-88, Rs. 9.07 crores were recovered or agreed to be recovered at the instance of Audit. Further, an amount of Rs.1.20 crores was also recovered as a result of review made by the Railway Administration on the basis of audit objections.

1.11.3 Profit and Loss Account of Catering Department - Sales Tax.

Sales Tax collected from the passengers on the sale of food items and that paid to the respective State Governments is to be exhibited in the credit and debit sides of Profit and Loss Account of Catering Department.

A review of the position obtaining in this regard on three Railways for a period of three years indicates that the actual amounts realised were less than those paid to the respective State Governments. The details are given in Table :8

Table 8

S.No.	Railway	1985-86		1986-87		1987-88	
		Amount realised	Amount paid	Amount realised	Amount paid	Amount realised	Amount paid
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1.	Eastern	2,91,513	7,63,940	3,75,386	15,33,145	7,03,280	16,26,481
2.	South Central	18,07,589	18,07,589	22,21,929	22,99,839	26,12,637	26,62,469
3.	South Eastern	4,41,631	9,08,324	7,82,431	7,82,431	4.90,469	11,43,338

The main reasons contributing to such large variations on Eastern and South Eastern Railways were non-observance of State Government's instructions in realising sales tax from the passengers at the rates revised from time to time, failure in availing 2 percent rebate allowed by State Governments, payment of interest of 2 percent per month for non-submission of the prescribed returns of Sales, and non-adherence to the time schedule for paying the taxes to the State Governments. The avoidable expenditure incurred in this regard has not been segregated and exhibited in the Account separately.

1.11.4 Unsanctioned expenditure

All items of irregular expenditure incurred by the Railways, such as expenditure incurred in excess of estimate sanctioned, expenditure incurred without detailed estimates and miscellaneous over payments, etc. are noted in objection books by the Financial Adviser and Chief Accounts Officers pending regularisation. At the end of 1987-88, Rs. 2359.26 crores were thus held under objection. It comprised Rs. 1614.55 crores for want of estimates, Rs. 670.12 crores for expenditure incurred in excess of sanctioned estimate and Rs. 74.59 crores in respect of miscellaneous objections.

Bulk of the unsanctioned expenditure for want of estimates viz., Rs.1188.27 crores, was on account of adjustment of debits for rolling stock by the Railways without preparation of estimates. The oldest outstanding pertain to March 1954 on the Central Railway, April 1963 on the Northeast Frontier Railway, March 1968 on the Eastern Railway, March 1979 on the South Eastern Railway and September 1979 on the Western Railway. Delays in settlement of objections raised in internal check by the Accounts Department of the Railways have resulted in large accumulation of unsanctioned expenditure.

1.11.5 Irregular Re-appropriation of Rs. 33.35 lakhs from Plan Head.

On Northeast-Frontier Railway an amount of Rs. 33.35 lakhs (approximately) was sanctioned in 1987-88 for purchase of Maruti-Vans for use in Headquarters Offices, construction of Seminar Centre-cum-Marriage Hall, provision of two colour televisions, video cassettee recorders, intercom - telephones for Personnel

Office, furniture for offices, auditorium and transit accommodation at Headquarters, either by utilising funds (Rs. 2.57 lakhs) from Track Renewal/Line Capacity Works or Rs. 30.78 lakhs from the Contingencies provided in the estimates connected therewith.

Contingencies provided in the estimates are meant for meeting unforeseen expenditure. Diversion of such contingencies to other works is irregular. A Maruti van was purchased even though no provision existed for it in the estimate. Railway Board's sanction was also not obtained for regularising this expenditure. Utilisation of funds from Plan to Non-Plan expenditure amounts to irregular reappropriation.

1.11.6 Purchase Suspense

Whenever payments are made in advance (before the stores are received in the stores Depots) they are debited to 'Purchase Account'. These debits are cleared either by debit to 'Stores' on receipt of stores in the Depot or to "Traffic Department" in the event of the stores being lost in transit. Normally, in 'Purchase Account' no debit balance, except for advance payments made, should continue. A review of the balances in 'Purchase Account' indicated that debit balances were increasing year after year except during 1987-88 as detailed in Table 9.

Table 9

(Rs. in crores)

Balances as on	31.3.83	31.3.84	31.3.85	31.3.86	31.3.87	31.3.88
Amount	420.87	424.07	509.56	562.00	656.16	600.53

An analysis of the debit balance for 1987-88 indicates that out of Rs. 600.53 crores, Rs. 112.83 crores is outstanding for more than 2 years. Of this, Rs. 53.10 crores, Rs. 47.12 crores and Rs.11.89 crores are attributable to failures in linking the corresponding credits, missing/diverted/unlinked coal wagons/oil tank wagons and miscellaneous factors. Advance payments amounting to Rs.71.72 lakhs made by North Eastern (Rs. 37.27 lakhs) and Northeast Frontier (Rs. 34.45 lakhs) Railways are outstanding for more than two years.

CHAPTER II

APPRAISALS

2.1 Procurement and utilisation of computers on Indian Railways

1. Introduction

Indian Railways have been using 'Punched Card' data processing equipment for statistical purposes since 1930s. In 1964, unit record equipments were provided for internal check of traffic earnings. In 1966, IBM 1401 computers were introduced due to increase in the volume of transactions following increase in traffic and the need for promptness and accuracy in calculations. The computers on the Railways were used for internal check of fares and freight, passenger and goods revenue, fuel accounting, operating statistics, inventory control, pay sheets and provident fund work of staff other than line staff. In the Production Units scheduling, machine loading, incentive bonus bills preparation and job costing were computerised in stages. The computer in the Railway Board dealt with interchange transactions of coaching and goods stock of four selected yards and movement of special type of wagons on BG. The computer at Mughalsarai was used to keep record of marshalling order of trains. In 1987, the IBM computers were replaced by advanced computers.

2. Scope

The IBM computers were outdated and needed replacement in 1981. The Railway Board, however, purchased in 1978 the machines which were on hire basis with them when IBM wound up their business in India. They were in use till September 1987 when they were replaced by advanced computers. The applications achieved on IBM computers and the progress in replacement and utilisation of the advanced computers so far commissioned were reviewed in Audit.

3. Organisation

There is an Executive Director (OIS) functioning under Member (Traffic), Railway Board. The finance wing has also an Executive Director (Finance) functioning under Financial Commissioner for Railways. All Electronic Data Processing Centres in the Zonal Railways and Production Units are headed by Electronic Data Processing Managers, most of whom are in the Junior Administrative Grade and report to Financial Adviser and Chief Accounts Officer.

4. Highlights

- **In 1977 a Task Force set up by the Railway Board recommended replacement of old IBM 1401 computers by advanced system because of their limitations to meet the requirements of Railways. Instead of replacement of these IBM 1401 machines, the Railway Board purchased these machines at a cost of Rs.23.62 lakhs and incurred avoidable maintenance charges of Rs.35.89 lakhs upto the month of their replacement. Uptime perfor-**

mance of these machines was very low and no savings were achieved in man power, production or as operational improvements.

- The Department of Electronics, after technical evaluation and price negotiations, had recommended in April 1981 the purchase of ICL 2950 computer system for Integral Coach Factory (ICF) whose requirements were immediate. However, the Railway Board placed the order only in May 1983. Orders for two units for Diesel Locomotive Works (DLW) and Chittaranjan Locomotive Works (CLW) were placed in May 1986. Delay in placing orders involved extra expenditure of Rs.2.78 crores mainly due to cost escalation.

- CLW Administration procured 'uninterrupted power supply-cum-frequency voltage stabiliser' in 1983 for uninterrupted power supply to computer. The equipment procured at a cost of Rs. 30.41 lakhs remained idle from May 1983 to November 1988.

Bench Mark tests conducted by System Development Group in January 1985 for selection of advanced computer systems for Railways indicated PCS 1000 system as the fastest on the basis of CPU time while on the basis of elapsed time ICIM 6060 system was the fastest. The Railway Board, however, opted for five ECIL 332 systems which had no future upgradability and which had already suffered from serious hardware and software problems on South Central Railway. New ECIL 332 systems acquired also suffered from hardware and software problems. The purchase of

- 5 ECIL 332 systems at a cost of Rs.2.07 crores was injudicious and against the interest of Railways.

- Delay in site preparation work for advanced computer system resulted in avoidable expenditure of Rs.3.03 crores.

- The System Development Group (SDG) set up in June 1978 to develop integrated information systems on a data base approach at the three production units failed to adhere to the time schedule. Non-completion of first phase of software application by SDG in ICF resulted in avoidable expenditure of Rs.13.55 lakhs.

- Uptime efficiency of advanced computer system was far below the norms. Loss suffered by Railway on account of down time had not been assessed.

- Passenger Reservation System for Delhi area was justified on the basis of an additional revenue of Rs.2.70 crores. This could not be achieved due to high cost overrun on account of change in original specification of hardware and software systems and inclusion of additional items necessitating revision of the original estimate from Rs.8 crores to Rs.17.98 crores.

- For development of Freight Operation Information Systems (FOIS) the Railway Board set up multiple organisations like Central Organisation of Freight Operations Information System (COIFOIS) and Centre for Railway Information System (CRIS). The CRIS

project was estimated to cost Rs. 520 crores in 1982 and result in anticipated savings of Rs.61.71 crores. The original estimate of Rs.520 crores was revised to Rs.1297 crores and is under examination of the Railway Board. However, expenditure of Rs.2.90 crores was incurred on CRIS upto August 1988 without firming up the scope of the project and the need for each application.

- **The Railways spent Rs.6.13 crores on procurement of Mini Computers/ Microprocessors. Review in Aduit revealed that the procurement of Microprocessors was generally not justified on the basis of actual workload and they were grossly underutilised without any financial savings or improvement in efficiency.**

5. IBM Computers

Fourteen IBM 1401 computers with model II type tape drives and 12 K memory were hired by Production Units ano Railways between April 1966 and December 1968 at a monthly rent of Rs.60,382. In March 1978 these computers were purchased at Rs.23.62 lakhs and their maintenance was entrusted to M/s Computer Maintenance Corporation (CMC) in June 1978. Monthly maintenance charges per computer varied between Rs.21,541 and Rs.22,380.

The IBM 1401 computers were of limited capability. Manual systems were also continued side by side on the Railways and Production Units as there was neither reliability from source documents nor outputs were available in time to facilitate operational and technical control. A task force set up in January 1977 recommended replacement by advanced systems. A committee set up in 1978 to review computerisation in the Production Units also pointed out the limitations of the existing outdated IBM 1401 computers.

The Railway Board decided in 1978 to replace the IBM 1401 computers by advanced computers. A SDG was also set up in June 1978 mainly to develop Integrated Information System (IIS) on a data base approach for the Production Units and Railways.

In the light of adverse reports on the IBM computers their purchase at a cost of Rs.23.62 lakhs in 1978 was not judicious. No savings were also achieved as a result of use of IBM computers in manpower, production or operational improvements. The payment of maintenance charges of Rs.33.60 lakhs per annum from June 1978 was also not justified.

The Railway Board stated (December 1978) that as the proposal to replace 1401 computers was awaiting the clearance of Department of Electronics, and till such time the machines were replaced, the Railways had to continue using them to maintain normal functioning. The Railway Board added that the purchase of these machines at a total cost of Rs.23.62 lakhs was based on necessity as IBM wound up its operations in June 1978. The Railway Board has admitted that savings in manpower, production or operational improvements were not the considerations at the time of purchase of these machines.

6. Procurement of Advanced Computers

6.1 For Production Units

The Railway Board decided to re-

place existing IBM 1401 computers in Production Units with advanced computer system in 1978 and approved provision of Rs.4.20 crores in the Budget Estimates for 1978-79 and 1979-80. Tender for supply of computers was opened in 1979 and 17 offers involving 18 systems were received. The SDG formed by the Railway Board examined the offers and four offers were shortlisted. The evaluation report of four offers was sent in December 1979 to Department of Electronics who after price negotiations recommended in April 1981 the purchase of ICL 2950 computer system for ICF which unit was ready to install the system almost immediately, besides approving negotiations with CMC/Robotron for CLW and DLW units. The Railway Board, however, placed the order only in May 1983 for ICF at Rs.33.18 lakhs. The computer received in January 1984 was installed in October 1984. Delay in placement of order after approval by Department of Electronics resulted in extra expenditure of Rs. 13.97 lakhs due to increase in customs duty. As buildings and other facilities had also been completed by January 1982 assets worth Rs. 56.24 lakhs were lying idle till January 1984.

As regards CLW and DLW the Railway Board again invited another open tender in April 1984 for procurement of advanced computer system. Orders were placed in May 1986 after a delay of nearly two years and the total value of the two systems was Rs.1.10 crores. Computers were installed at DLW in January 1987 and at CLW in February 1987.

While selecting computer configuration for DLW, proper assessment of requirement was not made by the Railway Board. Before the mainframe computer was proved on actual workload on all possible software applications, DLW Administration placed another order in February 1988 for additional 46 terminals and 21 microprocessors with necessary media at a cost of Rs.51.12 lakhs without even conducting technical evaluation of the system and proper sanction of the competent authority. The enlarged system would now require additional disk drive worth Rs.9 lakhs. Proper utilisation of the whole system is yet to be evaluated.

In May 1983 CLW Administration procured "Uninterrupted Power Supply-cum-Frequency Voltage Stabliser" (UPS) at a cost of Rs. 30.41 lakhs for supply of power to advanced computer. The UPS system remained idle upto November 1988 though advanced computer was installed in February 1987. UPS system was commissioned only in December 1988 after repair and modification at Rs. 8 lakhs.

For supply of a computer system for Wheel and Axle Plant (WAP), Bangalore, the Railway Board invited a tender in May 1983. After conducting necessasry Bench Mark test, the offer of firm 'A' was accepted at Rs.37.67 lakhs and order was placed in August 1984. The computer was due for delivery in February 1985 but delivery had to be deferred at the request of WAP as the site was not ready. The computer received in September 1985 was installed in December 1985.

Delay in inviting and finalisation of tenders resulted in escalation of Rs.2.78 crores towards cost of Civil Engineering and Electrical Works upto 1987-88.

6.2 For Railways

In April 1984, Ministry of Railways invited open tenders for procurement

of advanced computers for Railways. Based on a preliminary scrutiny of various offers received, seven firms whose offers conformed to tender specifications were shortlisted and Bench Mark tests were conducted in January 1985 at the installation of the vendors. This indicated that on the basis of CPU time the fastest system was PCS 1000 while on the basis of elapsed time ICIM 6060 system was the fastest. The Tender Committee confined its choice only to PCS, ECIL and ICIM systems on grounds of:

(i) availability of back up support;

(ii) assured maintenance and software support;

(iii) easy transportability of systems already developed; and

(iv) future growth in terms of system upgradability.

The Tender Committee recommended 2 units of ICIM 6060, 5 units of ECIL 332 at a cost of Rs.2.84 crores. The Railway Board accepted the recommendations of the Tender Committee in June 1985 and the Railways were asked to finalise agreements with the vendors.

The SDG, which conducted the Bench Mark test, had observed in January 1985 that ECIL system suffered from shortcomings and had no growth path in future upgradability. Serious hardware problems with this system were also brought to the notice of the Railway Board in December 1984 by South Central Railway which had an ECIL system in use. After installation, all the Railways reported hardware problems with ECIL system, such as system hanging frequently, disappearance of files suddenly, frequent malfunctioning of systems and its inability to read IBM 1401 systems. On Eastern, South Eastern and Northern Railways loss of 65 computer hours per month on an average was reported causing serious dislocation. On South Central Railway during the period September 1984 to December 1985 the computer was shut down for a total duration of about 330 hours. Again, during August 1987 to August 1988, the computer was shut down on account of hardware/software problems for a total duration of 386 hours. The financial implication of loss of 716 computer hours was Rs.7.16 lakhs on South Central Railway (Rs.1000 for one computer hour). Though the Railway Board addressed ECIL in June 1987 to replace the systems by proven ones the firm had not responded. The purchase of five ECIL units at a cost of Rs. 2.07 crores despite adverse reports was injudicious.

The Railway Board stated (December 1988) that they had viewed the problems of the ECIL system very seriously and that the matter had been taken up at the highest level. It also added that M/s. ECIL had been asked by the Department of Electronics and by Cabinet Secretariat to set right the problems faced by Railways.

7. Delay in installation of advanced computer

Ministry of Railways (Railway Board) decided in July 1985 that advanced computer system should be installed in all the Railways and Production Units by April 1986 and IBM 1401 computers be given up in phases. It was decided that the three shift working of IBM 1401 computers be reduced to one shift by September 1986 and the system should be used only upto March 1987. The Railway Board entrusted the turn-key site pre-

paration work to M/s CMC in July 1985 for installation of advanced computer systems on seven Railways and one Production Unit (CLW) in addition to the work in Central Railway already undertaken by CMC. The scope of the work included Civil Engineering portion, Electrical portion, fire alarm system and computer centre furniture. The work was required to be completed within four months from the date of the final order or execution of agreement, whichever was earlier. Draft agreements were also sent to the seven Zonal Railways and the Production Unit (CLW) for entering into agreements with CMC. Site preparation works for the remaining one Zonal Railway (South Central) and three Production Units (ICF, DLW and WAP) were, however, entrusted to individual contractors.

A review of the performance of site preparation works on Railways and the Production Units revealed delays on the part of the Railway Administration in entering into agreements and failure on the part of CMC and other agencies to complete the site preparation works in time, vide Annexure-III. As a result, installation of advanced computers was badly delayed, resulting in avoidable extra expenditure of Rs. 303.64 lakhs due to cost escalation in labour and material, idling of assets, offloading of jobs to outside agencies,etc.

There were also delays ranging upto 13 months in the various Railways in the withdrawal of IBM 1401 system resulting in avoidable payment of maintenance charges of Rs.35.89 lakhs to CMC.

8. System Development Groups on Railways

In December 1981 the Railway Board constituted System Development Groups on Eastern, Central and South Central Railways for undertaking studies on the existing computer applications on Railways, existing pattern of documentation, report on the Perspective Plan for EDP systems on Railways, etc. and for formulating uniform computer based integrated management system on Railways. The Groups were constituted by drawing officers and staff from various disciplines and were based at Calcutta, Bombay and Hyderabad.

The Groups were in charge of all the preparatory work including system design, programming and the initial implementation of each of the subsystem till the programmes were error free under actual conditions.

Delay in receipt of new computer systems and preparation of sites affected the work of System Development Work on Railways and resulted in avoidable expenditure on maintaining SDGs. Though SDGs were wound up in December 1987, one post of Senior Scale/Junior Administrative Grade Officer in each group and all non-gazetted posts are being continued on Railways. Avoidable expenditure on SDGs on South Central and Central Railways was Rs.2.44 lakhs for the period from January 1988 to August 1988. Systems developed by SDGs are yet to be transported free of cost by the vendors as per the agreement to other Railways.

In ICF, SDG was set up in June 1978. It had completed only the first phase of transfer of items already on IBM which should have been done by March 1986. Delay resulted in avoidable expenditure of Rs.13.55 lakhs on SDG staff for the period April 1986 to March 1988. The second phase involving new applications was scheduled for completion

in 1990.

The Railway Board explained (December 1988) that an accurate assessment of the time required for completion of all the activities could not be made since the work was entirely a new kind of activity. The targets fixed were ambitious and the SDG had performed many additional duties which were not envisaged in the original terms of reference. The Railway Board admitted the failure to adhere to target schedules but stated that the failure did not detract from the performance of SDG as a whole.

There was no significant progress in the SDG formed on South Central Railway to redesign the existing systems and to design new ones in COBOL language, viz., Financial and Personnel Management Information Systems (FMIS) and (PMIS) and the work was entrusted to the vendor of ECIL computer for providing necessary software assistance.

The vendor, however, failed to develop software systems for South Central Railway. There was considerable delay in redesigning/development of these systems by vendors. Consequently, even as late as August 1988 (4 years after the installation of new computers) the South Central Railway Administration was forced to adopt simulator for about 40 per cent of the jobs.

Execution of jobs in simulator mode led to waste of 25 per cent computer time (1900 hours - Rs.19 lakhs) for the period September 1984 to August 1988. There would be a recurring loss of Rs.50,000 per month (50 computer hours) till the systems are redesigned/developed.

The Railway Board admitted (December 1988) that the expectation that about 40 per cent of the jobs would be done adopting simulator mode and the balance 60 per cent would be covered by COBOL based programme did not, however, materialise due to non-availability of suitable complete and error free programmes in COBOL with the result that the simulator mode had to be adopted for more than 70 per cent of the jobs. The percentage of simulator mode jobs had been reduced to 25 in November 1988.

9. Utilisation of Computers

(i) Uptime Efficiency

Uptime is defined as the productive and error free use of the computer equipment and software. According to the agreement with vendors, minimum uptime efficiency of 90 per cent per month was assured failing which warranty period was to be extended correspondingly. If during the warranty period the monthly uptime performance fell below this norm for three consecutive months, the vendors were bound to replace the defective system by a proven system at no extra cost. The uptime efficiency of ECIL system was far below the norm on Northern, Eastern, South Eastern, North Eastern and South Central Railways and ranged between 60.7 per cent and 82.9 per cent. The defective systems were not replaced by the vendors with proven systems though requested by Railway Board to do so in June 1987. Loss suffered by Railways on account

of down time had not also been assessed.

The Railway Board stated (December 1988) that though the uptime efficiency of ECIL system was not satisfactory for a considerable length of time, the idea of replacing the system was not very seriously considered at any stage since this would further complicate things and cause further delays in development/implementation of software.

(ii) System Development and Implementation

In July 1985 seven systems were given priority for implementation and transportation by vendors; out of which only four applications had so far (August 1988) been implemented and transported by vendors. This resulted in gross under utilisation of the costly advanced computer systems.

The Railway Board, while admitting (December 1988) that the original time schedule for the development and implementation had not been adhered to, stated that considerable amount of money for hardware and technical services components had not been released to the firm as yet.

(iii) Direct Data Entry System

Utilisation of computers on Central, Southern, Western, CLW and DLW was badly affected by defects in Data Entry Machines supplied by an indigenous firm. D-10 MA system supplied by the firm used 5¼" floppies while ICIM 6060 system could read only 8" floppies. Non-supply of utility for tape conversion both for ICL 9 track and IBM BCD 9 track kept the computers idle. Delay in supply of Data Entry Machine on Southern Railway resulted in avoidable expenditure of Rs.1.81 lakhs towards payment of additional maintenance charges for IBM computers.

The Railway Board stated (December 1988) that though Uptron machines have 5¼" floppies and ICIM could read 8" floppies, the problem had been overcome by use of a convertor and through utility programme developed by the firm.

(iv) Irregular operation of work charged establishment

In April 1986 DLW Administration approached the Railway Board for increase in the number of posts from 50 to 67. The Railway Board did not accept the proposal as the new computer was in replacement of an existing one. The Railway Board also instructed that requirement of civil and electrical departments should also be met from the existing infrastructure for maintenance purposes.

Despite this clear instruction DLW operated 60 posts in EDP centre (44 regular and 16 work-charged), i.e., 10 posts above 50 sanctioned posts. The cost of 16 work-charged posts was Rs. 16.80 lakhs. No systematic records were also maintained to show the details of work done by work-charged establishment.

The Railway Board stated (December 1988) that the IBM computer system had to be switched off positively by September 1987. To complete the huge task of transferring data

from IBM 1401 to ICIM 6060 and development of programme in the new system, DLW created the necessary work-charged establishment. The contention of the Railway Board is not tenable as no other production unit created work charged establishment for this purpose.

10. Electronic Data Processing Centre (EDP)

The following instances of irregularities were noticed in Audit in the working of EDP Centres on Railways:-

a) No separate register was maintained to watch the movements of records kept in the library. The back up records were also kept in the library alongwith other records thereby defeating the purpose of back up records.

The Railway Board has noted (December 1988) the Audit suggestion for compliance.

b) Calender of returns of sections in EDP did not show actual dates of despatch of various reports and statements.

c) Progress Reports on computer indicating achievements in terms of productivity and savings were not sent to the Railway Board regularly.

d) Discrepancies were noticed in computer outputs for different applications on South Eastern and Central Railways. Erroneous balances were allowed to remain since 1982.

11. Passenger Reservation System in Delhi Area

Passenger Reservation System on Railways suffered from several draw - backs and was prone to malpractices. With a view to eliminating these drawbacks a Parliamentary Committee was appointed in July 1972 to examine the various aspects connected with reservation of berths/seats and to recommend suitable measures to remove lacunae in the existing system. The Committee recommended introduction of computer based reservation at important cities to make it more scientific to lower the cost of service, improve customer relations and ensure better utilisation of assets.

The Ministry of Railways accepted the recommendations of the Committee in January 1975 and constituted a Study Team to study the feasibility of the Project. The Study Team examined the feasibility of computerisation of passenger reservation system in Delhi as a Pilot Project and submitted its report in April 1982. The Railway Board approved the Project and sanctioned an estimate for Rs. 8 crores in April 1982. An urgency certificate was also given in June 1984 for Rs. 3.20 crores.

The Railway Board submitted a proposal to the Department of Electronics in July 1982 recommending the systems offered by two firms including CMC. CMC's offer was accepted by the Department of Electronics in July 1983 subject to certain conditions.

A memorandum of understanding was signed by the representatives of Department of Electronics, Northern Railway and CMC in February 1984

indicating the rates and conditions.

In January 1985, Northern Railway submitted detailed estimate for Rs. 11.87 crores involving an excess of Rs. 3.87 crores over the original estimate. The Railway Board approved the detailed estimate in January 1985. The cost of the Project was charged to Development Fund (III) - and the Railway Board anticipated an additional annual revenue of Rs.2.70 crores.

A Revised Estimate for Rs.17.98 crores excluding credits for released materials submitted in May 1986 was sanctioned by Railway Board in October 1986. Excess of Rs.6.11 crores was mainly due to:

(i)	Increase in Hardware	Rs.125 lakhs
(ii)	Increase in Software development and training	Rs. 20 lakhs
(iii)	Software cost	Rs. 60 lakhs
(iv)	Civil Engineering cost	Rs. 88 lakhs
(v)	Electrical Engineering cost	Rs.135 lakhs
(vi)	Telecommunication cost	Rs.182 lakhs

The Project was completed in May 1987, but no Completion Report had been prepared.

Review of implementation of the Project revealed the following:-

(i) Though the Parliamentary Committee recommended in July 1972 introduction of computer based procedure for passenger reservation system on Railways, a Study Team was appointed only in 1982 after ten years. A proposal containing detailed computer configuration sent to Department of Electronics in July 1982 was cleared only in July 1983. Delay in clearance of the proposal resulted in cost escalation of Rs.36.28 lakhs for computer hardware. Though the Railway Board approved the commencement of work under urgency certificate the allocation of funds during 1982-83 and 1983-84 was meagre to meet the requirement of the Project. Allocation during the years 1982-83 and 1983-84 were Rs.50 lakhs and Rs. 3.20 lakhs respectively against the original estimate of Rs.8 crores.

The Ministry of Railways (Railway Board) stated (December 1988) that Railways has their own priorities and norms of justifications of new projects, irrespective of recommendations of any Committee, and the delay was not related to mismanagement on the part of Administration, but related to one of assignment of priorities. This is hardly convincing especially when the computer reservation was recommended by the Committee and accepted by the Railway Board to make reservation scientific, lower the cost of service, improve customer relations and ensure better utilisation of assets.

(ii) Review of detailed estimate and revised estimate revealed that there were substantial variations between the two resulting in cost overrun of Rs.9.67 crores.

Variations were mainly due to:-

(a)	Increase due to cost escalation	Rs. 22.46 lakhs
(b)	Increase in scope of work	Rs.436.48 lakhs
(c)	Increase due to change in specification	Rs.158.30 lakhs
(d)	Increase in enhanced customs duty	Rs.332.00 lakhs
(e)	Increase due to hike in dollars value	Rs. 7.15 lakhs
(f)	Increase due to increase in establishment	Rs. 11.01 lakhs
		Rs.967.40 lakhs

Variation indicated defects in planning, estimating, omissions of important items and frequent changes in specification. They are as under:-

(a) Increase in the scope of work

Detailed estimate provided for 148 terminals and 118 ticket printers which were increased to 223 terminals and 225 ticket printers to provide two more locations at Delhi Shahdara and Delhi University which were not included in the original estimate and detailed estimate. This resulted in increase of Rs. 15.19 lakhs. Message handling system was not included in the detailed estimate resulting in an increase of Rs. 28 lakhs. Display system, though a must for any reservation system to be effective, was not provided in the detailed estimate resulting in increase of Rs.10 lakhs.

At the time of preparation of estimate Master Station for adequate power supply to the system was planned at Indian Railway Conference Association building. Later on it was found technically unsuitable due to tall buildings in Connaught Place area and had to be shifted to Pachkuian Road. This resulted in an increase of Rs.50.59 lakhs. The Railway Board stated (December 1988) that this technical hurdle could not be avoided.

Post and Telegraph Department expressed their inability to lease their Post and Telegraph line for Hazarat Nizamuddin station resulting in Railway's laying their own telecommunication cable at a cost of Rs.15.86 lakhs.

Testing equipments and documentation were not included in the detailed estimate. The import of these equipments resulted in increase of Rs. 10.20 lakhs.

No provision was made for the site preparation in the detailed estimate. New Computer Complex built at a cost of Rs.88 lakhs was also not originally thought of.

(b) Increase due to change in specification of hardware and other connected works

Proper feasibility study and system study were not undertaken by CMC before selection of the

system. CMC initially advised that VAX 750 system would meet the requirement of Phase I of the Project and VAX 780 system could be added later to cater to the additional requirements of the Project without major changes in the specifications in Electrical, Communication and Civil Engineering Works. But the system offered by CMC could not meet the requirement of the Project and VAX 750 system had to be withdrawn from operation. The Railway Board formed a negotiating Committee to go into the requirement of the Railways afresh and the Negotiating Committee recommended VAX 8600 system for the project. The earlier VAX 750 system was transferred to Southern Railway. The new system required major changes in specifications of Civil, Electrical and Communication network costing Rs.158.30 lakhs.

The Railway Board failed to assess the specification of modules and multiplexers which were essential equipments for connecting terminals with mainframe. At the time of preparation of estimates, the data transmission speed was planned at 9600 bps without considering the workable speed of 4800 bps of Post and Telegraph leased line. The changes resulted in avoidable expenditure of Rs. 37.70 lakhs besides escalation in cost.

The rates for modules and multiplexers imported by CMC increased from $ 2447 and $ 956 in 1986 to $ 2890 and $ 1800 respectively in 1987. Had the Railway Board procured the modules and multiplexers in 1986, saving of Rs.22.44 lakhs could have been achieved.

(c) New Items of Work

Though the Railway Board specifically mentioned that no new items of work should be included in the Revised Estimate, the following items of works were included in the revised estimates:

(i) Setting up of computer complex at Vikas Marg at a cost of Rs. 73.59 lakhs. No justification for this work was given in the revised estimate.

(ii) Provision of UHF equipment system at out location to give uninterrupted power supply to terminals at a cost of Rs. 45 lakhs.

(d) Delay in completion of the Project

Delay in completion of the Project and subsequent changes in the specification of works resulted in cost overrun of Rs.3.32 crores due to increase in customs duty and variation in exchange rates.

The Railway Board stated (December 1988) that when the Project was conceived, enough knowledge was not available not only within Railways but also within the country as a whole. The cost difference was mainly due to:

(i) implementation in phases and consequent revision in costs;

(ii) updating of cost estimate necessitated by inadequate cost

details compounded by inexperience.

The Railway Board, however, maintained that such large scale variations over detailed estimates were not likely to occur in respect of subsequent Projects viz. Calcutta, Bombay, Madras and Secunderabad.

CMC was to provide training in system operation and know-how transfer so that the Railway Administration could achieve self reliance on system operation, application software maintenance and future modification. An amount of Rs. 27 lakhs was to be paid to CMC for this purpose. Northern Railway reported to the Railway Board that the Railway Team had not been given enough training in software and there had been no effort to transfer the know-how. No action was taken by the Railway Board. In November 1986 Northern Railway formed a team to start learning all the modules of integrated multi terminal systems so that software maintenance could be taken over from CMC by the middle of 1987. As CMC had not imparted required training to Railway personnel, the Railway Board had to incur an additional expenditure of Rs.20 lakhs in system development and training. The maintenance was taken over only in April 1988.

Railway Board explained that it was not possible to fully digest the impress programme which ran into pages and developed by another Agency within a short time. Thorough understanding of impress programme would take additional 2-3 years. The contention is not tenable as this does not mitigate the responsibility of the Consultant to provide necessary training according to agreement.

The Project anticipated a revenue of Rs.2.70 crores but due to heavy cost overrun this anticipated revenue did not materialise. The Railway proposed that additional reservation fee be charged to justify the transfer of the Project from Development Fund to Capital. The Railway Board did not agree to this proposal.

The Railway Board explained that it was only a suggestion under consideration to impose a surcharge on computerised ticket which would have yielded Rs.2.7 crores per annum by way of resource generation. The suggestion was not accepted by the Railway Board.

The Railway Board in May 1987 directed that a review of staff strength be conducted so that surplus staff could be utilised and shown as direct saving as against the extra staff and cost of computer maintenance and operation. Accordingly the Northern Railway worked out saving of Rs. 43.06 lakhs on notional basis but this was not accepted by the Accounts Department. The Project was thus conceived and executed without proper financial assessment.

The Railway Board further explained (December 1988) that Projects of this nature could not be expected to generate return on investment and Railways had finally taken up the Project as an unremunerative investment on operational improvement like better customer satisfaction, saving in time on account of shorter queue lengths, etc.

12. Freight Operation Information System

A task force set up in January 1978 reported after studies abroad in 1979 that a Freight Operation Information System be set up to deal with

wagon scheduling, yard management, empty wagon distribution and enquiry, motive power and transportation information management.

In May 1982, a Committee of Secretaries constituted to go into the need for the system, opined that control of wagons locomotives and train movements, routing of traffic should be done centrally and for this Indian Railways should adopt a proven foreign system along with consultancy support while other functions should be done at the regional or zonal level with indigenous technical expertise involving minimum foreign support.

Accrodingly, the Central Organisation for freight Operation Information System (FOIS) project was sanctioned in 1982 at a cost estimate of Rs.520 crores. An agreement was also signed with CANAC consultants for purchase of TRACS software for central system and their consultancy in project execution. Simultaneously, a separate organisation called Central Organisation for Operation Information System was also set up in 1982 for preparing a detailed project estimate and further development and implementation of the Project on Indian Railways.

In August 1985, the Ministry of Railways submitted a proposal to the Committee of Secretaries for setting up a Centre for Railway Information Systems (CRIS), a society, to undertake computerisation on a time bound schedule.

On submission of revised proposals by the Ministry of Railways the Committee of Secretaries agreed in October 1985 that CRIS be established as a Society. The proposal was approved by the Cabinet in May 1986 and CRIS was registered in July 1986. A team of 45 officers of the CRIS was sent to Canada and Germany for training in June 1986. In August 1987, CRIS revised the cost of the project from Rs.520 crores to Rs. 1297 crores with a return of 20 per cent on the investment. The total saving to be achieved by the System in reducing wagon detention, empty haulage and improved engine utilisation was worked out at Rs. 61.71 crores per annum.

Review of the Project in Audit revealed the following points:-

(i) Though the Society was constituted in May 1986 to take over entire work on design and development of Freight Operation Information System, another organisation set up on Northern Railway COFOIS, however, continued to exist ostensibly for the same purpose. The cost of the organisations was Rs.10.17 crores upto 1986-87 apart from Rs.1.37 lakhs and Rs.93.18 lakhs incurred on CRIS for 1986-87 and 1987-88 respectively.

Ministry of Railways (Railway Board) stated (December 1988) that though the Society was registered on 1 July 1986, a full fledged organisation could be set up only on 1 July 1987 on which date the COFOIS was wound up. The Railway Board has, however, not explained the reasons for delay in winding up of COFOIS.

(ii) Detailed estimate for the Project is yet to be approved by the Railway Board. However,

CANAC's offer for supply of software and consultancy services had been accepted in May 1985 though formalities were yet to be completed (August 1988).

(iii) The expenditure incurred by CRIS upto August 1988 was Rs.2.90 crores. Only a token provision of Rs.10 lakhs was made in the budget of 1988-89 for this Project and according to CRIS this would affect its progress adversely.

The Railway Board stated that an additional amount of Rs. 17.2 crores had been allotted for the purpose of setting up of Development and Simulation Centre in consultation with Planning Commission. Further allotment would be made after the Project was fully cleared by the Planning Commission. The progress of the Project is very slow in view of the meagre allotment compared to the total cost of the Project, viz., Rs.1287 crores.

(iv) Though order for main computer system is yet to be placed and necessary funds allocated to the Project by the Planning Commission, the Railway Board deputed 45 officers to Canada in June 1986 for training. Officers after necessasry training are attending to works not directly related to System Development or implementation. Total cost of training abroad was Rs.58.51 lakhs. The qualifications of the officers trained and effectiveness of the training received and the duties assigned called for are awaited (August 1988).

The Railway Board explained (December 1988) that the system proposed to be implemented was totally new to Indian Railways and training of officers was inescapable. The contention of the Railway Board is not acceptable as no software from CANAC has been accepted by the Railway Board and the training imparted to officers in CANAC system may be of little use. The Railway Board has not furnished details of training received by these officers in CANAC.

(v) The total expenditure incurred on the Project (including cost of training abroad) upto August 1988 was as under:-

(a) Project Management	Rs. 97.51 lakhs
(b) Consultancy CANAC	Rs. 78.66 lakhs
(c) Implementation	- -
(d) Software	Rs. 1.49 lakhs
(e) Hardware	Rs. 14.50 lakhs
(f) Training	Rs. 58.86 lakhs
(g) Civil Engineering	Rs. 28.84 lakhs
(h) Electrical	Rs. 10.34 lakhs
Total:	Rs.290.20 lakhs

The expenditure of Rs.2.90 crores was incurred without sanction to the detailed estimate and without firming

up applications to be processed and the management needs to be served.

The Railway Board stated (December 1988) that the expenditure was being incurred under the authority of urgency certificate and the overall scope of the Project and applications had been approved in the Abstract Estimate sanctioned recently.

13. Microprocessors and Personal Computers

Upto August 1982, Railways were required to obtain approval of the Railway Board to all proposals for procurement of Microprocessors and Personal Computers. The Railway Board in September 1982 authorised the Railways to procure Microprocessors Personal Computers upto Rs.2 lakhs each for non-conventional applications not covered by existing mainframe computers subject to the condition that the proposal had distinct financial advantage and the total cost including software did not exceed Rs. 5 lakhs. The system was to be user based and compatible with the mainframe proposed to be installed.

The number of Microprocessors/ Personal Computers purchased by the Railways so far is indicated below:-

Name of the Railway	Number of MP/PC procured	Cost (Rupees in lakhs)	Annual running cost (Rupees in lakhs)
1. Western	10	25.00	14.25
2. North Eastern	5	72.34	10.96
3. Southern	8	84.85	7.34
4. Northern	19	49.79	16.00
5. Central	25	57.00	34.20
6. Northeast Frontier	6	33.37	2.25 (For four only)
7. South Eastern	2	14.17	3.12
8. South Central	19	203.12	8.78
9. Eastern	19	67.11	9.18 (For 14 only)
10. Railway Production Units	23	6.75	1.81
11. Railway Board	--	--	--
Total:	136	613.50	107.89

While verifying the utilisation of PCs/MPs the following points were noticed:-

(i) Compatibility of MPs/PCs procured with the mainframe was not ensured;

(ii) Financial advantages were not worked out and kept on record and were not sent to the Railway Board for appreciation though desired by it;

(iii) Microprocessors covered mostly conventional areas;

(iv) A review conducted by Railway Board revealed that MPs/PCs were grossly underutilised on the Railways and no attempts had been made to explore the possibility of sharing them within the Railways.

Instances of irregular procurement and utilisation noticed in Audit are as under:

(a) Northern Railway

(i) One Microprocessor was installed in the office of the Chief Commercial Superintendent in Novber 1985 to computerise the receipt, placement, unloading and delivery of coal wagons to Power Houses and National Fertilizer Limited units. However, no feasibility study was conducted before installation. The software was supplied by the vendor only in April 1987. Out of three terminals supplied with Microprocessor, two terminals remained unused. No log book was also maintained to assess the extent of its use.

(ii) In order to monitor the movement of passenger coaches on Northern Railway a microprocessor was installed in October 1985. The computer could not be utilised for want of trained staff and software package till July 1986. No log book was maintained to verify the uptime. Chronological record of introduction of programmes, their amendments, documentations, etc., was not maintained and no backup arrangement also existed resulting in the system becoming unreliable.

The Railway Board stated (December 1988) that log books had since been maintained.

(iii) With a view to monitoring the personal records of employees a Microprocessor was installed in November 1986,. The Software package for service records and leave accounts was not completed (August 1988).

The Railway Board admitted (December 1988) that the vendor took time in developing and supplying the software.

(iv) A Microprocessor procured for the Engineering Department in August 1983 was expected to save Rs.2.9 lakhs per year on the basis of total tonnage of steel structures being fabricated in two bridge workshops at Jalandhar and Lucknow but was not achieved (December 1987) as the software support could not be developed.

The Railway Board stated (December 1988) that the programme required for the diff-

erent purposes was developed in house by staff that were trained for the purpose and payment of Rs.13,000 towards upgradation of technology had not been released on this account.

(v) A Microprocessor to handle a number of jobs connected with personnel management for a total of about 13,000 staff was installed in Jaipur Division. Microprocessor could take pay roll of only 7500 staff and pay roll for running staff could not be computerised.

(vi) A Microprocessor was installed in Delhi Division in January 1986 to computerise the system of storage and retrieval of information for level crossings, way diagrams, alignment of curves, bio-data of Permanent Way Inspectors, etc. Feasibility of this system was not studied. The Senior EDP Manager observed in September 1987 that the unit was 'much underutilised'.

The Railway Board stated (December 1988) that utilisation of the computer had since picked up.

(vii) A Microprocessor to design and plan structures, buildings, Works Registers and Materials-at-site Accounts, etc. and to prepare pay roll of 10000 employees was installed during November 1986 in the office of Chief Engineer (Construction) but was partly used for training purposes for want of software support from the vendor. The expenditure of Rs.15.25 lakhs did not bring any financial benefit and is yet to be regularised by sanction of the Railway Board.

The Railway Board stated (December 1988 that the vendor withdrew software support midway and the contract was terminated at the risk and cost of the vendor. The Railways released only part payment for the hardware.

(b) South Eastern Railway

(i) A mini computer for computerisation of pay rolls, fuel accounting, electric loco failures, energy bills, etc. was procured at a cost of Rs.12.50 lakhs for use at Bilaspur Division in March 1987. The computer was lying idle for seven months and was installed only in October 1987. Delay in installation resulted in avoidable expenditure of Rs.8.75 lakhs towards running cost and pay and allowances of EDP staff. The installaion of mini computer at Diesel Loco Shed, Waltair is still in an infant stage and only a few applications have been taken up.

(ii) A Microprocessor for inventory management, fuel accounting, cost control, etc. procured in July 1986 was idle for five months and was installed in January 1987. Though software for the processor was required to be developed by the vendor, South Eastern Railway Administration spent Rs.0.50 lakh for system development. Software developed was under trial even after a lapse of two years.

The Railway Board intimated (December 1988) that the process of debugging the software supplied by the firm in March 1988 was on. In the interim period Railway staff were developing and running applications on the computer.

(c) North Eastern Railway

Three Microprocessors were installed at Gorakhpur during the period from August 1983 to April 1987 at a cost of Rs. 17.10 lakhs.

Running cost of these microprocessors was Rs. four lakhs including expenditure on staff. These computers were grossly underutilised for want of sufficient work load. One Microprocessor costing Rs. 10 lakhs was being utilised only for maintenance of work order file for more than one year while the second one costing Rs.4.12 lakhs was used for recording daily operating position of freight and coaching stock and the third was used for processing etc. of data relating to Civil Engineering Works. The maintenance cost of the second machine was Rs.2.42 lakhs while maintenance cost of other two machines was only Rs.1.58 lakhs. As all the works were centralised at Gorakhpur and applications were few, one Microprocessor was sufficient to meet the requirements.

(d) South Central Railway

The South Central Railway Administration procured eight Microprocessors of three different makes at a cost of Rs.24.40 lakhs as against the policy of the Government of India to procure mini computers of the same make uniformly for all departments for smooth interchange of data. The actual utilisation of these Microprocessors ranged from 60 to 120 hours against 170 hours available per month. A mini computer procured at cost of Rs.4.12 lakhs and installed in January 1987 in the Railway Recruitment Board Office remained unutilised for want of trained personnel, inadequacy of the computer capacity to handle large volume of data involved in finalising the recruitment by Railway Recruitment Board.

2.2 Utilisation of BFR/BRH Wagons

1. Introduction

Railways are the nation's principal and energy efficient mode of inland transport. They carry 67 percent of originating tonnage and 82 percent of tonne kilometres of the total inter-regional freight traffic in the country. About two third of rail earnings are derived from the freight traffic.

The rail transport requirements are assessed by the Ministry of Railways (Railway Board) in consultation with the Planning Commission and the main users. The unit of rail transport for freight traffic is wagon. The requirements of wagons are assessed taking into account the anticipated traffic under major commodities, the turn round time of the wagons i.e. the interval between two successive loadings, the average lead and the likely future developments. Railway's assessment for the terminal years of the Sixth and Seventh Five Year Plans (1980-81 to 1984-85 and 1985-86 to 1989-90) indicated originating traffic of 309 and 350 million tonnes with average leads of 710 and 680 kilometres giving overall transport demands of 220 and 238 billion net tonne kilometre respectively. Production capacity of the wagon manufacturing units in the country (including the Railway Production Units) being limited to only 25000 wagons per annum, production programmes were drawn up for manufacturing 1,10,000 and 1,54,000 wagons in the Sixth and Seventh Five Year Plans respectively. Increase, if any, in the originating traffic on M.G. was expected to be neutralised by the conversion of some important sections into B.G.

The requirements thus worked out are categorised under three categories viz. Covered, Open and Tank and the same included in the Rolling Stock Programme (Budget). After Parliament approving the Railway Budget, orders are placed on the wagon builders each year by the Railway Board.

Bulky articles occupying more space, both in vertical and horizontal directions like transformers, machinery, boiler components, etc. and lengthy articles like steel girders, rails and other iron and steel items are normally loaded in special types of wagons like Bogie Rail Wagon (BFR)/ Bogie Rail Wagon Heavy (BRH). The carrying capacity of BRH wagons ranges from 52 to 57 tonnes while that of BFR from 42 to 48 tonnes. The articles loaded in these types of wagons are generally high rated ones resulting in higher earnings to the Railways. A BFR/BRH wagon is considered equivalent to $2\frac{1}{2}$ units of 4 wheeler wagons and their yearly requirements are included in the category of "Open" wagons mentioned above.

2. Scope

The present review is confined to the Railways' holding of BFR/BRH wagons, their further procurement and their actual utilisation.

3. Highlights

- **Even though the special stocks of BFR/BRH wagons held exceeded the requirements, the Railways procured a total of 1695 units of BRH wagons during the period 1980-81 to 1985-86 incurring an expenditure of Rs.72.89 crores (estimated). The requirements for 1985-86 and 1986-87 were inflated by increasing the norms fixed for 'Turn Round' and Periodical Over Haul (P.O.H) and avoidable provision was made for procuring 1600 units at an estimated cost of Rs.93.36 crores.**

The estimated traffic (finished products of steel plants and concrete sleepers) lifted by BFR/BRH wagons ranged between 4.34 to 5.56 million tonnes during the period 1982-83 to 1987-88 against the capacity available for lifting 7.82 to 8.57 million tonnes. The under utilisation of the capacity available ranged between 35 per cent to 71.7 per cent.

As the Railways were not able to meet the transport needs of the Steel plants in particular, the 'piece meal movement' and the 'rake load movement' were causing congestion in the stock yards. M/s SAIL is developing an alternate means of transport (by 1989-90) using road and coastal shipping services. These special stocks would ultimately be rendered surplus.

For these special stocks the target fixed for the 'Turn Round' on Indian Railways is 21.80 days. The actual 'Turn Round' achieved during the last six years ranged between 35.66 and 45.25 days. The loss in earning capacity worked out to Rs.610.82 crores.

The percentage of wagons remaining ineffective ranged between 6.3 and 8.1 percent during the period 1982-83 to 1987-88 against the norm of 4 percent fixed by Railway Board. The loss in the earning capacity worked out to Rs.49.79 crores.

The percentage of the stocks stabled for want of traffic during the

8 months from April 1986 to November 1986 ranged between 5 and 6.75 percent. The deterioration was high on Eastern Railway where the same ranged between 1 percent and 33 percent during that period. The financial implications have not yet been assessed.

- In a large number of cases the BFR/BRH wagons were underloaded with Railway materials resulting in under utilisation of the capacity available. On a test check it was noticed that the loss in earning capacity on one Railway (Central) amounted to Rs.6.35 lakhs.

- Inspite of the Railway Reforms Committee suggesting that the Railways should examine and identify the reasons for detentions at terminal points, marshalling yards, etc. the detentions continued to persist.

- The loss in the earning capacity for the detentions caused at Steel plants (Bhilai, Bokaro and Rourkela) on account of delay in forming rakes worked out to Rs.1.90 crores.

- A number of BFR/BRH wagons were detained at concrete sleeper loading points. The loss in earning capacity amounted to Rs.1.76 crores.

- A tesk check carried out on Central, Northern, Southern, South Central and Western Railways indicated heavy detentions at terminals/ marshalling yards and in sick lines. The loss in the earning capacity worked out to Rs.7.34 crores.

- On Western Railway, these stocks were loaded with salt, a low rated commodity, on the return journey. In this loading the wagons suffered heavy detentions and the loss in earning capacity worked out to Rs.29.61 lakhs.

- Without ascertaining the views of the users the Railway Board directed the Zonal Railways in November 1981 to carryout certain modifications on BFR/BRH wagons. When the users resorted to 'gas cut' the stanchions for unloading the steel consignments, these orders were reversed in July 1983. The expenditure incurred in carrying out these modifications and reverting back to the old design in respect of 866 units worked out to Rs.46 lakhs.

- In July 1982, Railway Board directed two Zonal Railways to modify 80 BKI wagons (converted from BFR) into versatile type. In August 1984, they decided not to carryout these modifications. By that time 12 units were modified at a cost of Rs.7.78 lakhs.

- On one Railway as many as 504 containers were hauled by passenger trains (instead of by goods trains) for ensuring timely arrival at their ports of despatch. The loss on this account worked out to Rs.20.45 lakhs.

- In the absence of lashing chains the provision of which was dispensed with in November 1981 the siding authorities resorted to unauthorised structural alterations. A test check on one Railway indicated a loss of Rs.3 lakhs on this account. A census taken on another Railway in August 1983 indicated 40 percent deficiency in lashing chains. The value of the fittings (lashing chains and stanchion rods) found deficient in respect of the stocks placed in 4 steel plants by that Railway worked out to Rs.5.49 crores.

- Claims for infringement charges amounting to Rs.44.10 lakhs were preferred after 5 to 9 years of transporting the consignments.

Even though Railway Board agreed to waive 50 percent of these charges, the said charges have not so far been paid by the party concerned.

- **A test check of the utilisation of M.G. BFR/BFT wagons on one Railway indicated excess holding of stocks. The actual 'Turn Round' for the period 1985-86 to 1987-88 ranged between 73.1 and 109.5 days against the target of 7 days fixed by Railway Board in 1980. The loss in earning capacity for the said period worked out to Rs.18.16 crores.**

4. Procurement

The originating traffic actually lifted in the terminal year of the sixth plan was only 236.4 million tonnes as against 309 million tonnes assessed. The actual transport materialised was only 172.6 billion net tonne kilometres against 220 billion net tonne kilometres. In the seventh plan the originating traffic lifted in the second year was only 277.7 million tonnes. The actual transport materialised was 214.1 billion net tonne kilometres.

The Lok Sabha Secretariat suggested that the yearly Rolling Stock Programme (Budget) should indicate typewise requirements, but no attempt was made to assess the deficiency or excess typewise. No clear indication of the requirement of this special type stocks (BFR/BRH/BRN) was available with the Railways upto 1982-83.

During the VI plan period, the requirement of this special type was assessed only twice i.e. while finalising the Rolling Stock Programmes for 1983-84 and 1984-85 (likely to be placed on line in 1985-86 and 1986-87). The requirements were worked out taking into account the anticipated production of the Steel plants, the turn round, the allowances prescribed for P.O.H. and Surge. Against the anticipated deficiency of 6017 and 1381 wagons for 1985-86 and 1986-87 provision was made for procuring 3600 wagons (1440 units) and 400 wagons (160 units) in the Rolling Stock Programmes for 1983-84 and 1984-85 respectively.

The assessment of these wagons was not made on an analytical method as suggested by Railway Reforms Committee.

The finished products from the Steel plants for the years 1985-86 and 1986-87 were anticipated at 11.5 and 11 million tonnes respectively. Out of this the proportion that was expected to be moved in BFR/BRH wagons was only 50 percent. The requirement of BFR/BRH wagons for the years 1985-86 and 1986-87 as per the formula suggested by Railway Reforms Committee, worked out to 17457 (6983 units) and 17351 (6940 units) wagons respectively. But by increasing the 'Turn Round' to 35 days (against the norm of 21.8 days) and the allowance for P.O.H. to 6 to 8 percent (against the norm of 4 percent), the requirement of BFR/BRH wagons for 1985-86 and 1986-87 were inflated to 27,984 (11,194 units) and 27,848 (11,139 units) wagons respectively. The actual holding as on 31 March 1982 and 31 March 1983 being far in excess of the requirement, viz. 21967 (8787 units) and 22177 (8871 units) there was hardly any need for providing further stocks in the Rolling Stock Programme (R.S.P) for 1983-84 and 1984-85. But provision was made for 3600 (1440 units) and 400 (160 units) wagons in the R.S.Ps for 1983-84 and 1984-85 respectively.

The actual number of BRH wagons procured by Indian Railways and the total stocks (BFR/BRH) held by the Indian Railways since 1980-81

are detailed below:

Year	No. of BRH wagons procured	Total holding of BFR and BRH wagons (in units)*
1980-81	38	9417
1981-82	510	9638
1982-83	146	9803
1983-84	400	10176
1984-85	487	10610
1985-86	114	10739
1986-87	NIL	10783
1987-88	NIL	10751
	1695	

*Wagons condemned in the respective years are not shown separately.

The resources being scarce and the competing demands being many, there was hardly any justification in procuring 1695 units during the period 1980-81 to 1985-86 incurring an expenditure of Rs.72.89 crores (estimated). Similarly, there is no justification for further provision of 1600 units in the R.S.Ps for 1983-84 and 1984-85 at an estimated cost of Rs. 93.36 crores.

5. Excess holding

From the Statistical Statements compiled by Railway Board it is seen that the actual originating traffic lifted from the steel mills (pig iron and finished steel) was 8.36, 7.79, 8.22, 8.80, 9.48 and 9.85 (Prov) million tonnes during the years 1982-83, 1983-84, 1984-85, 1985-86, 1986-87 and 1987-88 respectively, out of which BFR and BRH wagons were anticipated to carry 50 percent i.e. 4.18, 3.90, 4.11, 4.40, 4.75 and 4.92 (Provisional) million tonnes during the respective years. In addition, the Railways carried concrete sleepers for Departmental use to the extent of 0.16, 0.29, 0.35, 0.41, 0.53 and 0.64 million tonnes during these years. Thus the total tonnage of originating traffic lifted by BFR/BRH wagons worked out to 4.34, 4.19, 4.46, 4.81, 5.28 and 5.56 million tonnes during the period from 1982-83 to 1987-88 respectively.

On the basis of the targeted turn round of 21.8 days fixed by Railway Board and taking the average carrying capacity of a BFR and BRH wagon as 50 tonnes, the total originating traffic that could be lifted by these wagons (in million tonnes) worked out to 7.82 in 1982-83, 8.08 in 1983-84, 8.41 in 1984-85, 15.95 in 1985-86, 8.66 in 1986-87 and 8.57 in 1987-88. Thus these stocks were under utilised to the extent of 3.48 (44.5 percent), 3.89 (48.1 percent) 3.95 (46.9 percent), 11.34 (71.7 percent), 3.38 (39 percent) and 3 (35 percent) in the respective years. This is indicative of excess holding of these stocks by Indian Railways.

6. Alternate means of transport by Steel plants

Even though the Railways held excess stocks of BFR/BRH wagons they were not in a position to meet the transport needs of the Steel Plants, in particular, 'the piece meal' movement in wagon loads (decline from 24 per cent to 15 percent in 1985-86). Further, the rake load movement was causing congestion in the stock yards/steel plants. Therefore, SAIL decided to develop alternate means of

transport and avoid dependence on Railway system. The main features of the alternative means of transport are:

(i) Development of Central Shipping Bays at all steel plants by 1989-90.

(ii) Development of nodal stock yards to effect road despatches.

(iii) Development of coastal shipping services in collaboration with the shipping companies for the despatch of Iron and Steel products through ports.

When once the Steel plants complete their projects, the decline in the utilisastion of these surplus stocks (meant for high rated traffic) will be greater.

7. Turn Round of wagons

Turn round represents the average time taken between two successive loadings of a wagon. The average turn round achieved each year for BFR/BRH wagons held by Indian Railways, and the target fixed are as under;

Year	Targeted turn round	Average turn round achieved
1982-83	21.80	39.16
1983-84	21.80	23.45
1984-85	21.80	43.50
1985-86	21.80	40.24
1986-87	21.80	43.00
1987-88	21.80	13.86

The deterioration is comparatively high on Central, Eastern, Northeast Frontier, Southern, South Eastern and Western Railways. The deterioration that ranged between 13.86 days and 23.45 days during the period 1982-83 to 1987-88 had its adverse effect on the loading performance as shown below:

Period	Total loading achieved(wagons)	Total loading with turnround of 21.80 days if maintained (wagons)	Difference in loading i.e. (less nos. of wagons)
1982-83	85310	1,53,245	67,935
1983-84	73000	1,51,525	78,525
1984-85	81030	1,61,688	80,658
1985-86	88330	1,63,046	74,716
1986-87	78475	1,54,790	76,315
1987-88	97820	1,60,012	62,192
			4,40,341

Thus, 4.4 lakh nos. of BFR/BRH wagons were loaded less during the period 1982-83 to 1987-88 due to non-adherence to the targeted turn round fixed by Railway Board. Quicker turn round can be achived by avoiding detentions en-route. Loss in the earning capacity due to the continuance of higher turn-round for the last 6 years worked out to Rs. 610.82 crores vide Annexure-IV. The higher 'Turn Round' was attributed by Railway Board to the excess holding of BFR/BRH Stocks.

8. Ineffective wagons

The monthly average ownership, the effective holding, the percentage of ineffective holding of BFR/BRH wagons from 1982-83 on Indian Railways are detailed below:

Year	Average ownership per month	Average effective wagons per month	No. of ineffective wagons per month	Percentage of the ineffective wagons	
				Admissible	Actual
1982-83	9719	9104	615	4	6.3
1983-84	9940	9279	661	4	6.6
1984-85	10396	9689	707	4	6.8
1985-86	10739	9953	786	4	7.3
1986-87	10783	9986	797	4	7.4
1987-88	10751	9876	875	4	8.1

Against the average ownership ranging between 9719 and 10783, the effective holding ranged between 9104 and 9986 (91 to 93 percent) during the period 1982-83 to 1987-88. Against the norm of 4 percent fixed by Railway Board, the actual percentage of ineffective wagons ranged between 6.3 and 8.1 percent.

An analysis of the wagons remaining ineffective revealed that they were detained for long periods in the workshops, sick lines, transhipment sheds, etc. for want of components and the raw materials needed for the repairs. Continuance of high percentage of ineffective wagons for years over the norm of 4 percent fixed by Railway Board suggests that this problem has never been tackled with due care.

The loss of earning capacity due to high percentage of ineffective holding for the period 1982-83 to 1987-88 works out to Rs.49.79 crores vide Annexure-V.

9. Wagons stabled for want of traffic

The percentage of BFR/BRH wagons stabled for want of traffic on the Indian Railways during the year 1985-86 was 0.2 percent. Out of an average number of 10739 of effective holding, average of only 20 remained stabled for want of load or traffic. The position deteriorated in the year 1986-87 so much that, during the first 8 months, out of the average effective holding of 9974 as many as 336 (3.4 percent) remained stabled

for want of load/traffic. The worst affected months being July, August and October 1986 during which 664 (6.7 percent), 627 (6.3 percent) and 491 (5 percent) wagons remained stabled, in the respective months.

An analysis of the position obtaining in the Zonal Railways showed that the deterioration was highest on Eastern Railway where the percentage ranged between 1 percent to 33 percent during the first 8 months of the year 1986-87. The position improved during the first 3 months of 1987-88. It is evident that the surplus stocks of one zone are not transferred to the other zones, where the traffic is high. Non-distribution of stocks to the Zonal Railways according to their actual requirement results in unprofitable utilisation of these high rated wagons. The financial implications on account of this large scale stabling is yet to be quantified by the Railways.

10. Under loading of BFR/BRH wagons

On a test check conducted at a few major loading points viz. Kalyan, Manmad and Chalisgaon in Central Railway it was noticed that in a large number of cases, BFR/BRH wagons were underloaded with Railway material consignments, resulting in under utilisation of the capacity available. The number of under loaded wagons increased from 122 in 1982-83 to 581 in 1985-86, marginally decreased to 451 in 1986-87 and 438 in 1987-88 (upto January 1988). The average load carried by these underloaded wagons during the period from 1982-83 to 1987-88 varied from 21.5 tonnes to 32.8 tonnes in each wagon against the average carrying capacity of 50 tonnes. No specific reasons have been recorded by the Railway Administration for such a large scale underloading. It is evident that the number of BFR/BRH wagons placed at these major loading points were not correlated with the actual needs/demands of the consignees. This has resulted in the loss of earning capacity to the extent of Rs.6.35 lakhs over the years.

11. Detentions

11.1 At Steel Plants

In their 126 Report 1973-74 the PAC was greatly concerned about the hold up of wagons at Steel Plants, etc. The position of loading of BFR/BRH wagons allotted to the Steel Plants, viz. Bhilai Steel Plant, Bokaro Steel Plant (BSP) and Rourkela Steel Plant (RSP) by South Eastern Railway has revealed that these wagons suffered heavy detention at these plants.

11.1.1 BHILAI STEEL PLANT

During the years 1983-84 to 1986-87 as many as 38,127 BFR/BRH wagons suffered detention for about 5,95,439 hours i.e. on an average of 15.6 hours per wagon equivalent to 24,810 wagon days (in terms of 4 wheelers). But full amount of demurrage charges were neither levied nor recovered from the Steel Plant. During this period, a sum of Rs. 30.81 lakhs (Rs. 80.80 per wagon - 50 to 60 percent of the assessed amounts) due from the plant as demurrage was waived. Due to their remaining inside the plant's premises, these wagons could not be utilised otherwise to boost Railways earnings. The loss of earning capacity worked out to Rs. 1.76 crores for 24810 wagon days lost.

11.1.2 BOKARO STEEL PLANT

During the years 1985-86, 1986-87 and 1987-88 (upto 10 March 1988) as many as 31,984 BFR/BRH wagons suffered detention for 34,232 hours. The total loss of wagon days and earning capacity are 1426 and Rs.11.35 lakhs respectively.

11.1.3 ROURKELA STEEL PLANT

In this plant also 13,123 BFR/BRH wagons were detained for about 8916 hours during the years 1985-86, 1986-87 and 1987-88 (Upto 10 March 1988), resulting in loss of 371 wagon days and loss of earning capacity to the extent of Rs.2.96 lakhs. Though the period of detention noticed came down during the year 1987-88, the number of wagons detained during the said period i.e. 5936 was more than double the number of BFR/BRH wagons detained by this Steel Plant during the year 1985-86 (2844).

11.2 At concrete Sleeper loading points/ factory sidings

In a large number of cases detentions of wagons for unduly long periods were caused to BFR/BRH wagons at concrete sleeper loading points/ factory sidings on different zonal railways. They were as under:

Central Railway

A number of cases of rejections (of wagons) after allotment for concrete sleeper loading at Karari was noticed. The main reason for rejection was stated to be allotment of endless BFR wagons which were unsuitable for sleeper loading in concrete sleeper manufacturing firms. The detentions varied from 1 to 55 cases and the number of loss of wagon days ranged from 2 to 597 during the period 1982-83 to 1987-88. Railway Administration suffered loss of earning capacity to the extent of Rs. 6.77 lakhs during the last 6 years.

Southern Railway

Prestressed concrete sleepers are manufactured by private factories located at three places, viz. Ambattur, Bommiddi and Tiruvalam on Southern Railway. Records maintained by the respective Station Masters for the period from 1982-83 to 1987-88 (Upto September 1987) indicated that BFR/BRH wagons placed at the factory sidings of these plants suffered heavy detentions ranging from 48 to 1031 hours for want of locomotives which were not supplied by Operating Branch after completion of loading by factory owners. The loss in earning capacity due to detention beyond 24 hours has been assessed at Rs.11.2 lakhs.

South Central Railway

BFR/BRH wagons are being utilised by the South Central Railway Administration mostly for departmental use for transporting concrete sleepers from sleeper manufacturing factories at Hafizpet, Kondapalli, Timmanacherla and Manthralayam Road stations to the various work spots/sleeper depots. A test check of the utilisation of these wagons for the period September 1986 to August 1987 indicated that these wagons suffered heavy detentions at the sleeper factories mostly due to the Administration's failure in arranging power (locomotives) for prompt placement/removal of the wagons. Out of 1181 wagons test checked 264 wagons were handled within 2 days but remaining 917 wagons suffered detentions ranging from more than 2 days to 45 days. The total detentions to the wagons (in excess of 48 hours) in these cases worked out to 11,560 wagon

days (in terms of 4 wheeler). The earning per wagon day (in terms of 4 wheeler) being Rs.336, the loss of earning capacity for the detention to the extent of 11560 wagon days works out to Rs. 38.84 lakhs.

Because of avoidable detentions, the Railway Administration was facing shortage in availability of the wagons during the same period leading to delays ranging from 5 to 100 days in complying with the indents for supply for loading. The delay exceeded 30 days in 73.5 percent of the cases.

South Eastern Railway

Over South Eastern Railway concrete sleepers manufactured at the factories at Raipur, Jarsuguda, Kalumna and Pendurti are generally loaded in BFR/BRH wagons at the loading points near factory sites and despatched to different destination stations. A review of two selected factory loading points, viz. Raipur and Jarsuguda indicated considerable detentions to BFR/BRH wagons.

Raipur

Period	No. of wagons involved	Detentions in Hours
1985-86 (November to March)	46	896.35
1986-87	141	1490.30
1987-88 (Upto September 1987)	157	1798.20

The detentions were attributed to operational problems. The loss in earning capacity resulting from these detentions works out to Rs.1.41 lakhs.

Jharsuguda

Period	Total No. of BFR/BRH loaded	Detention beyond 24 hours permissible HRS.
1984-85	223	19346
1985-86	293	27469
1986-87	276	34672
1987-88	27	2936

(April and May)

The reasons attributed for such detentions were (i) shortage of accommodation (ii) wagons being placed piece meal at loading points and drawn out in parts (iii) want of suitable power for their drawal.

No demurrage charges were levied on the firm for the detentions caused at their plants. The loss in earning capacity for 4 years works out to Rs. 25.72 lakhs.

Western Railway

BFR/BRH wagons materialising piece meal are worked to Kharsalia and formed into rakes for loading concrete sleepers. The detention suffered by these wagons due to stabling at kharsalia during the years 1985, 1986 and 1987 (upto August) were as under:

year	No. of wagons involved in detention	Total detention in HRS	Wagon days lost
1985	716	87,827	3659
1986	775	87,204	3633
1987	604	87,808	3658
	Wagons days lost in actual units		10950

The loss in earning capacity works out to Rs. 91.98 lakhs.

11.3 At Marshalling yards and terminals

Detentions at marshalling yards require to be examined in order to identify the reasons for the detentions and to take effective steps for containing the same. A review of the position in various Railways of detentions to BFR/BRH wagons at marshalling yards and terminals for selected periods revealed that there were heavy detentions at the marshalling yards and at terminals resulting in loss of earning capacity of these special wagons.

Central Railway

The detentions at major loading points for BFR/BRH wagons on this Railway, viz. Wadibunder, Chalisgaon, Manmad, Karari, Faridabad, Banmore, Butihori and Warrora indicated that loaded BFR/BRH wagons were detained (between 4 to 18 days) for want of (i) ODC sanctions, (ii) for TXR examination, (iii) Shunting engines, (iv) material trains and (v) CBC couplings etc. Evenafter excluding the first 4 days of detention, the loss in earning capacity works out to Rs. 5.53 crores.

Southern Railway

Heavy detentions were caused to BFR/BRH wagons at Jolarpettai, Erode, Tondiarpeattai marshalling yards and Cochin harbour terminus station during April 1983 to September 1987 and at Tiruchchirappalli Marshalling yard from April 1986 to September 1987. The detentions ranged between 50 hours to 1720 hours against the targets of 18 to 60 hours fixed for these points. The reasons attributed for such heavy detentions were (i) non-materialisation of loads, (ii) load adjustment, (iii) wagons becoming sick and (iv) wagons requiring mechanical attention etc. The loss in the earning capacity resulted from the detentions beyond the permissible limit works out to Rs. 60.47 lakhs.

BFR/BRH wagons received from BHEL's siding at Penmalai suffered heavy detentions at Jolarpettai marshalling yard during 1983 to 1986. Though, Railway Board had increased the target for detention to the wagons at Jolarpettai from 25 to 35 hours in December 1983, the actual detention exceeded this higher revised targets. The loss in earning capacity on this account was assessed at Rs.7.67 lakhs. The reasons attributed for these detentions were non-materialisation of full quantum of load, non-compliance of packing conditions and movement of over dimensional consignments.

South Central Railway

BFR/BRH wagons loaded with bulky and over dimensional consignments of BHEL suffered detentions in the siding/serving station at Lingampalli. In addition to the prescribed period

of 24 hours, the detention ranged from 59 to 636 hours during January 1987 to June 1987 (a selected period) under pilot to pilot system. In other words the total detention for the first six months of 1987 was 1559 wagon days (in terms of 4 wheeler) and the loss in earning capacity worked out to Rs. 5.23 lakhs.

The wagons received at Maula Ali station with Iron and Steel consignments also suffered detentions in the yards/ serving stations. This ranged between 60 to 253 hours excluding the permissible period of 24 hours. The total detention caused was 2368 wagon days (in terms of 4 wheeler) and the loss in the earning capacity worked out to Rs. 7.95 lakhs (for a period of six months only)

Western Railway

(i) The detention to BFR/BRH wagons (with empty and loaded) stabled in yard at Gandhidham ranged from 57 to 564 hours during April 1986 to January 1987. The loss in earning capacity in respect of such a detention is Rs3.35 lakhs.

(ii) BFR/BRH rakes were loaded on their return journey with salt, a low rated commodity. In such cases heavy detention was noticed. The total detention on this account for the period 1983-84 to 1986-87 was 1,00,120 hours, the reasons attributed being

a) Short supply of wagons to form a full rake.

b) Delay in supply of power.

c) Poor breaking power ranging from 40 percent to 70 percent.

The wagons loaded with salt also got corroded resulting in gear part pins, push rods, vaccum cylinders break shafts etc. getting jammed. The loss in earning capacity for the above detention worked out to Rs. 29.61 lakhs (Rs.710/- per wagon day).

11.4 Detentions at sick lines

The running repairs of BFR/BRH wagons are carried out by Carriage and Wagon Department on sick lines provided for. A test check of the position obtaining in the various Railways revealed cases of detentions for long periods in sick lines for want of materials required for repairs. Details of such detentions are indicated below:

Central Railway

In Bombay and at Jhansi only 14 (BFK) and 7 (BFKI) wagons respectively were detained in sick lines for about 30 days during 1986 and 1987 while in Bhusawal 19 (BFR/ BRH/BKH/BFK) wagons were detained for 30 days during 1984 to 1987 resulting in a loss of earning capacity of Rs. 9.34 lakhs due to such detentions on sick-lines.

Western Railway

The detentions caused to the stocks waiting for repairs on sick lines during 1986-87 ranged from 41 hours 15 minutes to 584 hours (on Baroda

Division) and 6978 hours (on AJMER Division). The main reason for such detention appeared to be non-availability of spare parts and other related materials. The total detention accrued during the year 1986-87 worked out to 46166 hours equivalent to 1921.5 wagon days in respect of 195 wagons. The loss of earning capacity for one year only worked out to Rs. 16.14 lakhs.

Northern Railway

Rails are received from Bhilai Steel Plant in Flash Butt Welding Plant, Meerut for welding of rail joints. The BFR/BRH wagons suffered heavy detentions due to inadequate unloading facilities at the plant premises during the period from March 1986 to June 1987. The detention to these wagons during this period ranged from 2 to 169 hours. The total detentions to these wagons during this representative period works out to 1,04,554 hours (excluding free time allowed) in terms of 4 wheelers which is equivalent to 4356 wagon days resulting in loss of earning capacity to the extent of Rs. 14.64 lakhs.

Considerable detentions were also caused in placement and removal of BFR/BRH wagons from the sidings on ' arrival' and before 'despatch' respectively at Tughlakabad and Kanpur Marshalling yards, Hazrat Nizammuddin and Haridwar Stations. The reasons contributing to the detention of BFR/BRH wagons were (i) non-availability of pilots, (ii) less handling capacity in the sidings, (iii) capacity to work limited wagons due to grade etc., (iv) location of sidings in densely populated area, (v) only day working permitted in most of the sidings, (vi) late materialisation of stock in yard/sidings, (vii) bunched receipts due to unavoidable circumstances, i.e. Accident, Breach etc. and (viii) accidents in yard/sidings.

The abnormal detentions indicate that the Railway Administration/Railway Board did not take effective steps to arrest the trend.

The total detentions for 8294 (in terms of 4 wheeler) wagons during a representative period from April 1986 to August 1987 (17 months) accounted for a loss of 16832 wagon days (in terms of four wheelers) and loss of earning capacity works out to Rs. 56.56 lakhs.

12. MODIFICATIONS CARRIED OUT TO BFR/BRH WAGONS

To contain the incidence of theft of the stanchions, Railway Board suggested for providing fixed stanchions and reducing their height from 1129 mm to 450 mm. Research, Designs and Standards Organisation suggested that before ordering modifications on all the wagons, the reaction of the users should be ascertained by modifying only a few wagons. Accordingly, South Eastern Railway was directed in November 1981 to modify only 15 wagons in the first instance and intimate the reaction of the users. However, without waiting for a report from South Eastern Railway, Railway Board directed (in December 1981) five Zonal Railways (including South Eastern Railway) to carry out the above modifications on all the BRH wagons passing through their zones on priority.

Even though Railway Board was

aware that fixed stanchion would require lifting the consignment upto 450 mm at the time of unloading, either manually or through mechanical handling, no attempt was made to know the users' reaction. As lifting of consignments required cranes in a large number of cases, the consignees resorted to 'gas cut' the stanchions at the unloading points. The position so deteriorated that at the end of each doing, they had to be refurbished. No attempt was made to identify the consignees and recover the cost.

The Railway Board ultimately decided in July 1983 to revert to the collapsible stanchions. Accordingly, the Zonal Railways were advised not to carry out the orders issued earlier (December 1981) by them. In February 1984, they were advised to change the short fixed stanchions fitted on the above wagons to the original design of stanchion of 1129 mm height. Even though the total number of BRH wagons provided with fixed type stanchion of 450 mm height by the five Zonal Railways could not be ascertained, it is seen that a total of 866 wagons were changed to the original collapsible design.

The details of the actual expenditure incurred towards these modifications are not available as they were charged to Revenue standing work orders. However, it is seen that the estimated cost of fixing short fixed stanchions on one Railway's Rate Fixing Shop worked out to Rs.2,656 per wagon. Assuming that the cost of reverting back to the original design would be the same, the cost of modifying the above stanchions and reverting back to the original design worked out to Rs. 46 lakhs. The loss of earnings suffered in reducing the carrying capacity by decreasing the height of the stanchions from 1129 mm to 450 mm has not been assessed. The expenditure incurred in replacing the stanchions cut by the consignees has also not been assessed.

13. CONVERSION INTO BKI WAGONS

80 numbers of BFRs were converted (40 numbers in Perambur and 40 numbers in Jhansi workshops) into BKI wagons to carry International Standards Organisation (I.S.O) containers. Since the anticipated traffic of I.S.O. container service had not picked up, the Railway Board directed the Southern and Central Railways, in July 1982 to modify these wagons into versatile type so as to enable their utilisation for domestic container service as well. Vital materials required for this work were procured from trade and the other stores were manufactured in Perambur workshop itself. 1,696 numbers (960 Southern Railway and 736 Central Railway) of anchorage locks, a vital item required for this modification were procured from Trade by Southern and Central Railways at a cost of Rs. 11.60 lakhs. In fact all the materials required were procured by both the Railways. The Railway Board decided in August 1984 on a reference from Central Railway not to undertake these modifications as I.S.O. container service by that time had picked up. Meanwhile the modification work was completed on Southern Railway in resepct of 12 numbers of BKI wagons, during the period August 1983 to June 1984 at a cost of Rs. 7.78 lakhs. On Central Railway 640 anchorage locks valuing Rs. 4 lakhs were declared surplus and the same were offered in April 1986 to Southern Railway, but there was no response from it.

On Southern Railway, the balance 672 anchorage locks were stated to have been used up for normal P.O.H.

14. Southern - I.S.O. Containers movement

Southern Railway Administration had notified from time to time, the rates for movement of Containers to various ports from different booking points These rates had been fixed for carriage by goods trains. A review of the utilisation of flats (for movement of I.S.O. Containers) from the records maintained at the container terminals of Bangalore Cantonment and Coimbatore revealed that on many occasions containers were moved by passenger trains to the ports at Madras and Cochin as indicated below:

Year	Bangalore Cantonment to Madras	Bangalore Cantonment to Cochin Harbour Terminus	Coimbatore to Madras Harbour	Coimbatore to Cochin Harbour Terminus
1985	23	3	-	-
1986	237	32	-	-
1987	138	21	14	36
	398	56	14	36

Total = 504

These flats were stated to have been hauled by passenger trains for ensuring timely arrival of containers at their ports of despatch.

The movement of containers by passenger trains would require levy of freight charges at higher rates as detailed below:

Particulars	Bangalore Cantonment to Madras Harbour	Bangalore Cantonment to Cochin Harbour Terminus	Coimbatore to Madras Harbour	Coimbatore to Cochin Harbour Terminus
1	2	3	4	5
Rates for movement by goods train	Rs. 1300	Rs. 2100	Rs. 1550	Rs. 875

1	2	3	4	5
Rates for movement by passenger trains at scale General Parcel A rate (GPA)	Rs. 6496	Rs. 9744	Rs.8120	Rs. 4776
Rates for movement by passenger trains at scale Concessional Parcel I rate (CPI)	Rs. 5196	Rs. 7796	Rs. 6496	Rs. 3820

The total amount of freight collected less on this account worked out to Rs. 20.45 lakhs (adopting the scale CPI)

15. Provision of lashing chains

In January 1981, Chairman, Railway Board/Member Mechanical reiterated that BFRs and BRHs should be made complete with lashing chains so that they could be loaded with steel consignments and their loading with salt stopped forthwith. A census taken in August 1983 on one Railway (Eastern), however, showed that there was enormous deficiency (about 40 percent) of lashing chains on BFR/BRH wagons.

On one division (Madras of a Zonal Railway (Southern Railway) it was observed in November 1983 that the loss on account of unauthorised structural alterations made by the siding authorities at their premises in respect of lashing chains removed, alone worked out to approximately Rs. 3 lakhs. Even though the agreements executed with the siding owners provided for recovery of the damages caused to the stocks placed at their sidings for loading, no recovery could be effected for want of records.

South Eastern Railway

Large scale deficiencies in lashing chains and stanchion rods were also noticed, in a few selected periods test checked by Audit, in respect of BFR/BRH wagons placed in Steel plants for loading and unloading purposes.

The value of the fittings found deficient worked out to Rs. 5.49 crores vide the details given below:

(Rs. in lakhs)

Steel plant	Period	Railway to Steel plants				Steel Plants to Railway			
		Lashing Chains		Stanchion Rods		Lashing Chains		Stanchion Rods	
		No.	Cost Rs.	No.	Cost Rs.	No.	Cost Rs.	No.	Cost Rs.
TISCO	Feb.'86 to Dec,'87	93668	174.69	58796	110.24	7391	13.78	5188	9.73
HSL/ Bhilai	Nov.'84 to June'87	-	-	-	-	5252	8.99	4104	7.50
HSL/ Rourkela	Jan.'86 to Dec.'87	45448	155.66	30908	57.95	1746	5.98	1328	2.49
BSL/ BKSC	Oct.'85 to Oct.'87	589	1.10	345	0.65	104	0.19	143	0.27
	Total	139705	331.45	90049	168.84	14493	28.94	10673	20.02

The Railway is yet to adopt an effective procedure to contain the incidence of damage/deficiency in the stanchion rods/lashing chains.

16. Non recovery of Infrigement Charges

South Eastern Railway

Bulky articles exceeding the maximum moving dimensions, when accepted for carriage under special arrangements, are subjected to levy of infringement and associated charges as prescribed in the Tariff. Movement of rails 18 to 25 metres long, in rakes of BFR/BRH wagons (wagon length being 13.716 metres) for export required escorting by the carriage and wagon staff enroute, speed restrictions and fitment of additional bolsters with clamps etc. But no infringement charges were initially levied by the Railway Administration on the Steel Plant Authorities. At a meeting held in November 1975 between Steel Plant Authorities and South Eastern Railway Administration, it was decided that movement of this traffic would be classified as over dimensional consignments on which infringement charges would be payable. Movement of long rails (18 to 25 metres) from Bhilai Steel Plant to Vishakapatnam Port, for export in rakes of 27 BRH/ BFR wagons started from December 1975 continued upto August 1976. A bill for payment of infringement charges amounting to Rs. 50.08 lakhs for the period from 3 December 1975 to 25 August 1976 was preferred by South

Eastern Railway Administration to the Bhilai Steel Plant in October 1976, out of which an amount of Rs. 50.07 lakhs has been paid.

Subsequently, the South Eastern Railway Administration decided to levy infringement charges on long rail traffic lifted during the period from January 1969 to December 1973 aggregating to a sum of Rs. 44.10 lakhs. The Steel Authority of India did not agree to pay the infringement charges on such consignments on the plea that in 1969, the Railways had themselves taken long rails from Bhilai Steel Plant on payment of normal freight. When the Railway declared these consignments as Over Dimensional Consignments, M/s. Steel Authority of India Limited suggested referring the claims relating to earlier years (1969 to 1973) for Arbitration. Railway Board ultimately made an offer (to the Department of Steel) to waive 50 percent of the amount due from Bhilai Steel Plant. Even then the claim remained unsettled.

Because of the delay on the part of Railway Administration to declare such consignments booked from 1969 to 1973 as over dimensional and the failure in intimating (Steel Plants) the freight charges then fixed as provisional, Railways had to waive 50 percent of the infringement charges. Yet the claim remained unsettled.

17. Utilisation of M.G. Wagons

A test check of the utilisation of BFR and BFT wagons on M.G. on one Railway (Northeast Frontier) for the years 1985-86 to 1987-88 indicated that against average daily holding of 741.2, 621.6 and 565.6 units the average daily loading was only 8.3, 7.3 and 8.3 units respectively.

The average turn round of these wagons during last 3 years were as follows against target of 7 days fixed for this Railway by Railway Board in May 1980.

Year	Average turn round achieved for each wagon (in days)
1985-86	109.5
1986-87	88.2
1987-88	73.1

The higher turn round led to a loss of Rs. 18.16 crores in earning capacity vide Annexure-VI.

It is interesting to note that instead of transferring the excess stocks to other Railways, where there was demand, the average holding ranged between 565.6 to 741.2 units against the ownership authorised between 459 to 367 units.

2.3 Consumption of Energy - Coal, Diesel and Electricity

1. Introduction

The Railways depend mainly on coal, High Speed Diesel (HSD) Oil and electricity as fuel for their operative requirements. As on 31 March 1987, the Indian Railways had a motive power fleet of 9498 locomotives (locos) comprising 4950 steam, 3182 diesel

and 1366 electric locos. Fuel consumption by locos during the year 1986-87 was of the order of 72,71,067 tonnes of coal, 15,36,499 kilolitres of diesel oil and 2,52,08,62 thousand kwh of electricity. In financial terms, the cost of energy consumed decreased from 22.5 per cent of the working expenses in 1982-83 to 20.3 per cent of the working expenses in 1986-87.

2. Scope of Review

Though the net tonne kilometres for steam locomotives decreased by nearly 50 per cent on the Broad Gauge (BG) and 33.33 per cent on the Metre Gauge (MG), the cost of coal consumed increased by over 30 per cent during the years 1982-83 to 1986-87. An attempt was, therefore, made to review matters affecting coal consumption as also consumption of energy by Diesel and Electric locos with a view to highlighting the areas requiring attention.

3. Organisation

Policy instructions on various matters, including those connected with the consumption of coal, diesel and electricity are issued by the Railway Board for implementation by the Railways. The Chief Mining Adviser (Railway Board), Dhanbad supervises various operations concerning the supply of coal to the Railways. Each Railway Administration has prescribed procedures to monitor and control the consumption of energy at the head quarters level, the divisional level and at the loco shed level. In Divisions, there are posts of Senior Fuel Inspectors supported by lower formations to look after the aspects connected with consumption of fuel. While the Mechanical Department looks after the consumption of coal and diesel oil, the Electrical Department takes care of consumption of electricity.

4. Highlights

- **Consumption of coal per 1000 GTKM had increased mainly due to non-condemnation of overaged steam locos.**

- **Saving of Rs.483 lakhs was not achieved due to non-condemnation of 69 overaged locos.**

- **Less production of diesel and electric locos than the installed capacity of Diesel Locomotive Works (DLW) and Chittaranjan Locomotive Works (CLW) resulted in less replacement of steam locos thus resulting in extra operational costs on steam locos to the extent of Rs.8.75 crores.**

- **Inadequate inspections of coal supplies by the organisation of the Chief Mining Adviser (Railway Board) resulted in poor quality of coal being supplied to the Railways and short levy of penalties on the coal suppliers to the extent of Rs.3.01 crores and Rs.2.93 crores during 1985-86 and 1986-87 respectively.**

- **Test check in Audit revealed excess coal consumed over the trip rations to the tune of Rs.42.27 lakhs.**

- **Non-reduction of fire grate area of steam locos used in light services resulted in excess consumption of fuel valued at Rs.42.62 lakhs.**

- **Excessive issue of HSD oil over the trip ration noticed on some Railways resulted in extra expenditure of Rs.314.95 lakhs between April 1982 and February 1988.**

- **Keeping ineffective diesel locos in excess of the prescribed percentage resulted in excess operation costs to the tune of Rs.567 lakhs during 1986-87 alone.**

- **Delay in setting up of Diesel Engine Design and Development Organisation resulted in blocking up of capital of about Rs.715 lakhs and non-development of improved fuel efficient engines.**

- **Railways paid to State Electricity Boards penalties amounting to Rs. 1041.76 lakhs for not providing shunt capacitors to arrest fall in power factor, unsatisfactory performance of capacitors, Maximum Demand being exceeded and for consumption below the Minimum Demand. This resulted in increase in cost of energy consumed.**

- **Southern Railway paid penalty of Rs.33.02 lakhs to the Tamil Nadu Electricity Board due to non-availing of the 33 KV supply.**

5. Steam Locomotives

5.1 Delay in phasing out overaged locos

Up to the mid-fifties almost the entire traffic was hauled by steam locos. Thereafter, Diesel and Electric traction was introduced in a big way. Manufacture of steam locos was completely stopped around 1971-72. The locomotives held as at the end of 1965-66 and 1986-87 were as under:-

Category	Number of locos	
	1965-66	1986-87
Steam locos	10613	4950
Diesel locos	727	3182
Electric locos	403	1366

Comparative position of percentage reduction in locomotives and percentage increase/decrease in the Gross Tonne Kilometres (GTKM) earned by locos in steam traction is shown in the table below:-

Year	Borad Gauge				Metre Gauge			
	Percentages		Consumption of coal in kgs. per 1000 GTKM		Percentages		Consumption of coal in kgs. per 1000 GTKM	
	Reduction in locos with reference to previous year	Increase (+) Decrease (-) in GTKMs with reference to previous year	Passenger	Goods	Reduction in locos with reference to previous year	Increase(+) Decrease(-) in GTKMs with reference to previous year	Passenger	Goods
1	2	3	4	5	6	7	8	9
1982-83	-	-	75.90	94.6	-	-	80.1	91.4
1983-84	0.65	(-) 7.86	69.80	96.9	2.34	(-) 2.97	85.2	96.1

1	2	3	4	5	6	7	8	9
1984-85	5.74	(+) 0.41	78.00	96.4	1.22	(-) 4.69	86.1	92.4
1985-86	8.37	(+) 4.86	78.60	102.2	4.47	(+) 3.56	83.6	92.8
1986-87	14.03	(+) 9.64	78.10	100.9	7.26	(+) 1.87	82.1	103.3

Comparing the position of the years 1982-83 and 1986-87 it is seen that the consumption of coal per 1000 GTKM had increased by 2.2 kgs. on the BG and 2.0 kgs. on the MG in respect of passenger services while the increases were 6.3 and 11.9 kgs. in the Goods services. This was mainly due to retention of aged steam locos. Cost of maintenance, repairs, replacement of wornout parts and fuel consumption in respect of such aged locomotives increase with age. Number of Steam locos on line of two age groups as at the end of 1986-87 on Indian Railways was as under:

Total Steam locos		Between 30-40 years old		Above 40 years old	
BG	MG	BG	MG	BG	MG
2599	2081	1010	847	9	60

As many as 69 locos were overaged as at the end of 1986-87. As per the assessment made in June 1985 by Rail India Technical and Economic Services Limited (RITES), a Ministry of Railways undertaking, the saving per steam loco replaced was Rs.7 to 10 lakhs per annum on account of expenditure on fuel, staff and other maintenance charges. On this basis, the savings not achieved due to non-condemnation of the 69 overaged locos amounted to Rs. 483.00 lakhs.

Against the installed capacity for production of Diesel and Electric locos at DLW (700 diesel locos) and CLW (180 diesel locos and 310 electric locos) during the five years from 1982-83 to 1986-87, the actual production was only 642 diesel locos at DLW and 148 diesel locos and 275 electric locos at CLW. Thus actual production of locos at DLW and CLW fell short of installed capacity to the extent of 58 diesel locos at DLW and 32 diesel locos and 35 electric locos at CLW. Had the installed capacity for production of diesel and electric locos been fully utilised, the Railways could have replaced more steam locos and saved operational costs on the costlier steam traction to the extent of Rs. 8.75 crores by replacement of atleast 125 steam locos.

5.2 **Quality of Coal**

One of the main factors for high consumption of coal is its poor quality which also causes loco failures. Extensive trials by Railways had established that higher percentage of ash results in excess consumption of coal to the extent of 2 to 2.5 per cent for every one per cent increase in ash content. Consumption of coal would also increase

with the increase in percentage of slack. Coal with more than 15 per cent slack is categorised as inferior.

(i) Samples of coal supplies drawn at the loading points by the organisation of the Chief Mining Adviser (Railway Board) revealed that the percentages of inferior coal varied between 34.9 and 47.9 of the total supplies during the five years ending 1986-87. During the two years 1985-86 and 1986-87, inspections of 85.4 per cent and 87.6 per cent respectively of loaded wagons were conducted and as a result payments on the reclassified coal to the collieries were recommended by the Chief Mining Adviser. Besides this, in disputed cases, samples representing 2,47,643 out of 3,84,527 loaded wagons (i.e. 64.4 per cent) during 1985-86 and 2,16,370 out of 3,33,535 loaded wagons (i.e. 64.9 per cent) during 1986-87 were subjected to test and penalties amounting to Rs.5.45 crores and Rs. 5.41 crores respectively were levied. Had samples representing all the wagons been taken and tested, the penalties for the two years would have been Rs. 8.46 crores and Rs.8.34 crores respectively on probability basis. The shortfall in recoveries of penalty was thus Rs.3.01 crores and Rs.2.93 crores during 1985-86 and 1986-87 respectively.

(ii) The results of analysis of samples sent to laboratory were not available promptly as indicated by the following data:

	1982-83	1983-84	1984-85	1985-86
Number of samples sent for analysis	12,774	16,606	18,408	19,701
Number of results available	10,098	15,242	18,257	18,899

(iii) The percentage of wagons subjected to sampling was 52, 56.2, 64.4 and 64.9 of the total wagons of coal supplied during the years 1983-84 to 1986-87. The inspections were not intensified though the number of wagons of coal supplied decreased from 4.43 lakhs in 1983-84 to 3.34 lakhs in 1986-87.

(iv) Railways provided also for inspection of coal at the unloading points. In a large number of cases, quality of coal received was far below the quality specified in the relevant documents. Percentage of inferior coal received and the loss assessed in respect of certain Railways is indicated below:

Railway	Period	Percentage of inferior coal (ranging between)	Loss assessed (in Rs. lakhs)	Remarks
1	2	3	4	5
Central	1983-84 to 1985-86	55.30 and 68.00	808.00	

1	2	3	4	5
Western	1985-86 and 1986-87	81.40 and 84.40	Not available	For one Division only
	1986 and 1987	Not available	12.27	For another Division
Northern	1982-83 to 1986-87	46.70 and 58.40	Not available	
Northeast Frontier	1985-86 and 1986-87	63.95 and 82.22	21.90	
South Eastern	1982-83 to 1986-87	45.63 and 59.98	Not available	
Southern	1983-84 to 1985-86	39.00 and 70.00	Not available	

In the agreement entered into with Coal India Limited, there was no provision of penalising the collieries on the basis of checks exercised by the Railways at the receiving end. Therefore, the check at the loading points should have been more stringent. The percentage of inferior loading detected in visual inspection at the loading points during the period 1982-83 to 1986-87 ranged only between 2.6 in 1986-87 and 10.9 in 1982-83.

5.3 Excess consumption of coal due to non-fixation or non-revision of trip rations

Trip rations are fixed with a view to keeping surveillance on the coal consumed by a locomotive during run and to take appropriate corrective action for excess consumption due to locomotive defects, traffic detentions, engineering restrictions and thefts of coal from locomotive tender. The Railway Board issued instructions to the Railways in April 1968 to undertake trip ration trials twice a year for fixing trip rations for new trains introduced as well as for re-checking the existing trip rations. Test check in Audit revealed excess consumption of 12228 tonnes of coal valued at Rs.42.27 lakhs in the cases indicated in the table below:

Railway	Division/ Train	Period	Excess coal consumed		Remarks
			Tonnes	Value (Rs. in lakhs)	
1	2	3	4	5	6
Northeast Frontier	Alipurduar	1984 (9 months)	461.70	1.58	Due to delay in implementing revised trip ration.

1	2	3	4	5	6
Southern	Tiruchchi-rappalli	1987	222	0.89	- -
South Central	All Divisions	1986-87	10376	35.80	- -
South Eastern	331/332 and 333 Up Trains	1986-87	1168	4.00	Trip ration not fixed.
	Total:		12227.70	Rs. 42.27 lakhs	
			Say, 12228		

5.4 Transit and handling losses

The target for transit loss of coal was fixed at 1.5 per cent and for handling the coal in the loco sheds at 0.5 per cent. The Railways were not able to contain the losses within the limit of two per cent. The losses ranged between 2.1 and 7.87 per cent (except on South Central Railway) during the year 1986-87. Main reasons for such losses were generally underloading and overinvoicing at pitheads, pilferage en route, storage losses and handling losses while loading into locos. On the South Eastern Railway, short loading of coal to the extent of 19,609.1 tonnes valued at Rs. 65.69 lakhs was reported during 1986. On Bhusawal Division of Central Railway coal received during the quarter ending September 1986 was found short to the extent of 375.3 tonnes costing about Rs. 1.26 lakhs. Loco coal rakes were not found escorted by the Railway Protection Force (RPF) staff on the South Eastern Railway inspite of instructions issued by the Railway Board resulting in loss of 44,357 tonnes of coal in 1985-86 valued at about Rs. 134.40 lakhs.

The loss in terms of money on account of transit and handling losses was Rs. 15.03 crores on six Railways during 1984-85, Rs.12.5 crores on seven Railways during 1985-86 and Rs. 9.96 crores on seven Railways during 1986-87 as per Annexure-VII.

5.5 Measures to reduce coal consumption

(i) Tests conducted by the Research, Designs and Standards Organisation (RDSO) revealed (March 1972) that economy in coal consumption of the order of three to five per cent could be achieved under light working conditions such as shunting services, by blocking two rows of firebars in the front of the grate of a locomotive. The Railway Board issued instructions to the Railways in April 1972 to effect reduction of 20 per cent in fire grate area on steam locos working on light services. The number of steam locos (BG and MG) deployed on shunting services on Central, North Eastern, Northeast Frontier, South Central and South Eastern Railways during 1986-87 were 135, 70, 57, 89 and 104 respectively. Even if in 50 per cent of such locos fire grate area had been

reduced excess consumption of coal at 3 per cent of the total coal consumed on shunting services during 1986-87 assessed at 12,723 tonnes valued at Rs. 42.62 lakhs could have been avoided.

(ii) On the Northeast Frontier Railway it was decided, in January 1981, to use Assam Coal in BG steam locos in place of Bihar/Bengal coal and for this switch-over, the change of the fire grates of those locos was considered necessary. Accordingly Hulson Grate components worth about Rs. 10.12 lakhs were procured from trade by the Northeast Frontier Railway Administration. However, subsequently, due to non-availability of the requisite quantity of Assam Coal the fire grates of most of the locos could not be converted into Hulson type. Components worth Rs.10.12 lakhs procured in May-July 1981 and stocked in Store Depot, New Jalpaiguri were ordered (July 1983) to be liquidated by transfer to various sheds with instructions to return the same to the appropriate Stores Depot as unserviceable stores as prospects of using these components were very bleak. Non-availability of sufficient quantity of Assam Coal was not properly considered before taking a decision to procure the material. The object of reducing the coal consumption had not been achieved.

5.6 Use of higher grade coal for inferior services

Normally 'A' grade coal is used for passenger trains and 'B' and 'C' grades for goods and other inferior services. Use of 'A' grade coal on inferior services on Jaipur Division of Western Railway on account of the non-availability of the required grade of coal resulted in extra expenditure of Rs. 4.55 lakhs during the period from November 1982 to December 1984.

5.7 Training of loco crew

For efficient operation of locos, it is important that the loco crew are well-trained in respect of the latest driving/fuelling techniques. For this purpose, Railways have set up various training schools/institutions for imparting suitable training and giving refresher courses to the staff concerned.

Facilities created for training were not fully utilised on the South Eastern Railway. There was a shortfall in imparting training to 639 personnel between 1985 and 1987 in respect of Training course for Electric loco Drivers at Tatanagar Training School and to 1642 steam loco Drivers in respect of courses during 1986-87 at System Technical School, Kharagpur. On the Eastern Railway, training had been imparted only to 411 trainees at the Diesel Training School, Burdwan established in 1979 for imparting training in conversion courses from steam to diesel and also for conducting refresher courses as against the capacity to train 1680 employees till the end of 1987. There was also a backlog of imparting training to 319 Drivers on the Western Railway.

6. Diesel Locomotives

6.1 Consumption of HSD oil in excess of the trip ration

Trip rations are fixed with a view to keeping proper control over the

consumption of fuel. Review in Audit indicated the following instances of excess consumption:

Railway	Division/ Shed	Period	Excess consumption (Kilolitres)	Extra expenditure (Rs. in lakhs)
Central	Bhusawal	1982-83 to 1984-85	34.426	0.87
Southern	Tiruchchirappalli Shed	1987	49.992	1.78
South Central	Hyderabad (MG) and Hubli Divisions	7 months and 5 months respectively of 1986-87	215.320	6.18
South Eastern	All Divisions	1986-87 and 1987-88 (Up to February 1988)	8957.960	306.12
	Total:		9257.698	314.95

The very purpose of fixing trip rations for controlling the consumption of fuel was not achieved.

6.2 Maintenance/Periodical overhaul of Diesel locos

Efficient maintenance of locos is a pre-requisite not only to availability of locos but also to economy in fuel consumption. Review in Audit revealed that the ineffectiveness of BG diesel locos ranged between 17.96 and 18.84 per cent during 1982-83 to 1985-86 as against the prescribed 10 per cent. The ineffective percentage, however, declined to 12.06 during 1986-87. Diesel locos which were overdue POH but still on line were 3.3, 3.9, 5.6 and 5 per cent of the BG Diesel locos held as at the end of March 1983, 1984, 1985 and 1986 respectively. On the South Eastern Railway, the average number of diesel locos overdue POH were 28.58 and 38.83 during 1984-85 and 1985-86 respectively. On the Southern Railway, Diesel locos with worn-out parts were put on line on account of non-availability of vital spare parts during 1987 and earlier periods. The excess consumption of fuel on this account could not be assessed due to want of relevant data.

However, had the ineffective percentage been maintained at 10 during 1986-87 additional diesel locos available for use would have been 48 (equivalent to 81 steam locos) on BG alone. The extra cost in operation, etc. of 81 BG steam locos at Rs. 7.0 lakh per loco amounted to Rs. 567.0 lakhs.

The Railway Board stated (December 1988) that the method of computation of ineffective percentage

introduced from 1 April 1981 had been revised with effect from 1 April 1986 and that the ineffective percentage for the BG diesel electric during 1986-87 and 1987-88 were 11.14 and 10.51 respectively. It may be stated in this connection that the figures adopted by Audit include engines in transit also as shown in Statement No. 22 of the Indian Railways Annual Statistical Statements 1986-87.

6.3 Diesel Engine Design and Development Organisation

The RDSO submitted a proposal in January 1973 for setting up basic Research and Design facilities with ultimate goal of achieving self-sufficiency in the field of Diesel Engine Design and Development. The Railway Board approved the work being taken up in 1978-79. However, the detailed estimate for Rs.949.19 lakhs was sanctioned by the Director General, RDSO as late as in February 1984.

This project of RDSO for the provision of product improvement facilities for Diesel Engines was formulated and included in Development Credit Agreement (Railway Modernisation and Maintenance Project) between India and the International Development Association in June 1978 with closing date as 31 December 1984. While reviewing the progress of this work in January-February 1983, the World Bank commented that the direction and goals of programmes were not clear. The Railway Board decided in 1984 to delink this Project from World Bank Aid. The construction of the building, etc. was started in May/June 1983 and was completed in March 1987. The equipments including imported items procured through the Central Organisation for Modernisation of Workshops at a total cost of Rs.2.23 crores between April 1985 and December 1986 had largely remained unutilised till commissioning of test beds 2 and 3 in April 1987. The slow progress of the Project was attributed to lack of manpower input despite expenditure of Rs.715.00 lakhs incurred upto March 1988 against the detailed estimated cost of Rs.949.19 lakhs and original estimated cost of Rs.128.5 lakhs. No fuel efficient engines had been developed so far by the organisation.

7. Electric Locomotives

7.1 Specific fuel consumption

(i) The total electric energy consumed on Broad Gauge Goods and Proportion of Mixed Services and the consumption of electric energy per thousand Gross Tonne Kilometres over various Railways for three years is indicated below:

Railway	1984-85		1985-86		1986-87	
	Electric energy consumed (000 kwh)	Consumption per 1000 GTKM (kwh)	Electric energy consumed (000 kwh)	Consumption per 1000 GTKM (kwh)	Electric energy consumed (000 kwh)	Consumption per 1000 GTKM (kwh)
1	2	3	4	5	6	7
Central	118563	15.5	119592	14.3	100525	11.0
Eastern	298442	11.8	323472	10.1	381918	10.7

1	2	3	4	5	6	7
Northern	276918	8.26	348866	8.91	407249	10.4
South Central	103534	9.48	137835	9.95	171910	10.3
South Eastern	432730	13.4	449301	13.9	473503	12.4
Western	61288	9.95	76073	9.30	96808	9.0
All Railways	1291475	11.2	1455139	11.1	1631913	10.9

The performance of Northern and South Central Railways had deteriorated. The Railways had not fixed targets for consumption sectionwise nor monitored the consumption. No reasons for wide variations within a Railway and between Railways were also available. No norms for assessment of load requirements had been prescribed by the Railway Board.

(ii) Factors which affected the fuel consumption per 1000 GTKMs-Goods noticed in Audit such as avoidable payment of penalties on account of fall in power factor, incorrect fixation of Maximum and Minimum demands resulting in increased energy costs etc. are discussed below:

(a) Avoidable payment of Low Power Factor Surcharge

To arrest fall in power factor which results in levy of penalty by the State Electricity Boards (SEBs) concerned, consumers have to install shunt capacitors. Owing to delayed provision/unsatisfactory performance of shunt capacitors, penalties amounting to Rs. 462.93 lakhs were paid by Northern (177.96), Southern (134.21), South Central (89.23) and South Eastern (61.53) Railways during various periods from 1984-85 to 1987-88.

On the Northern Railway, four shunt capacitors installed at a cost of Rs. 41.08 lakhs between July 1986 and January 1987 were not functioning satisfactorily resulting in payment of penalties for low power factor even after commissioning. The manufacturers, Bharat Heavy Electricals (BHEL) disowned their liability as these were stated to have been manufactured to the Railway's designs and specifications.

On the Southern Railway, Rs. 134.21 lakhs due to low power factor surcharge was paid from January 1985 to November 1987 owing to delayed installation of shunt capacitors. The South Central Railway paid Rs. 89.23 lakhs for the period from January 1985 to December 1987 due to non-provision of shunt capacitors for want of funds to the extent of only Rs. 9.65 lakhs. Though the funds were reappropriated in June 1986, the capacitors had not been provided up to December 1987. On the South Eastern Railway, owing to unsatisfactory performance of shunt capacitors, the Railway had to make avoidable

payment of Rs. 24.19 lakhs between May 1986 and February 1988 towards power factor surcharge. Further, the Railway paid penalty of Rs.37.34 lakhs due to non-provision of shunt capacitors.

(b) Penalty for exceeding Maximum Demand and payment for not utilising Minimum Demand

As per the agreements entered into between the individual Railways and the SEBs concerned supplying power to the Railway, Maximum and Minimum Demands are fixed and penalties are levied by the SEBs for exceeding the Maximum Demand and payments made for not utilising the Minimum Demand. Test check in Audit revealed that the Central, Northern, South Central, South Eastern and Western Railways paid penalties totalling Rs. 439.72 lakhs for exceeding the Maximum Demand during various periods falling between August 1980 and December 1987. The Central, Southern, South Eastern and Western Railways made payments amounting to Rs. 139.11 lakhs for not utilising the Minimum Demand during the periods falling between August 1980 and December 1987 indicating incorrect assessment of demand. Some of these cases are brought out below:

On the South Eastern Railway, power failures on Rourkela Grid sub-station ranging from 30 to 40 times a month had necessitated feed extensions from Rajgangpur or Goilkera sub-stations, resulting in a higher Maximum Demand at these two sub-stations. Though this was due to the failure attributable to the SEB, yet the SEB levied penalty for the higher Maximum Demand at the adjacent sub-stations and the penalty of Rs.51.01 lakhs was paid by the Railway. Levy of penalty in such cases was stopped only with effect from August 1987. The South Eastern Railway had not taken action for getting the refund of Rs. 51.01 lakhs irregularly paid to the SEB.

The South Eastern Railway paid a penalty of Rs. 32.76 lakhs without actual drawal/utilisation of power from July to October 1984, when two transformers installed at Bilaspur sub-station failed. This necessitated feed extension through the adjacent Champa sub-station for which the Railway had to pay penalty of Rs.15.49 lakhs (Rs.6.96 lakhs for exceeding the Maximum Demand + Rs.8.53 lakhs for utilising excess energy). Payments could have been avoided by provision of stand-by transformers.

7.2 Non-commissioning of sub-stations

Bhandai sub-station constructed on Central Railway at a cost of Rs.1.42 crores was ready by December 1984 for commissioning but had been commissioned only in August 1987 thus blocking huge capital for over three years.

Further, Tatanagar sub-station on South Eastern Railway completed on single tender basis by October 1986 due to urgency against the target date of December 1985 was commissioned only in April 1988 without finalising tariff with the Bihar State Electricity Board resulting in exceeding Maximum Demand at the adjacent sub-station at Manikui. Extra expenditure had not been assessed. The actual expenditure including departmental stores booked for the work upto March 1988 was Rs.127 lakhs against Detailed Estimate of Rs.117.90 lakhs.

Delays in completion of sub-

stations at Dilimili and Amagura in South Eastern Railway resulted in payment of Rs. 43.23 lakhs for non-utilisation of energy.

7.3 Loss due to non-availing of the 33 KV supply in the main receiving station at Villivakkam

Government of Tamil Nadu issued orders in December 1983 that all High Tension consumers availing more than 5 MVA load should changeover the incoming supply from 11 KV to 33 KV within a period of six months failing which penalty would be imposed. An estimate amounting to Rs.47.8 lakhs was sanctioned in 1984-85 to complete certain works to switchover from 11 KV to 33 KV in the main receiving station at Villivakkam wherein the existing Tamil Nadu Electricity Board (TNEB) sub-station was situated on Railway land. The Railway Administration requested TNEB to vacate the Railway land to establish the Railway's 33 KV system. The TNEB desired that the Railway Administration should agree to bear the cost of shifting the TNEB's existing arrangements. The Railway failed to resolve its dispute about vacation of Railway land by the TNEB and consequently paid penalty of Rs. 17.90 lakhs from September 1985 to April 1987 for not switching over to 33 KV supply.

The Railway Administration stated (September 1988) that the TNEB authorities had released a part of the land in February 1988, and the question of refund of penalty paid was under consideration of the Chairman, TNEB. The Administration added that a revised estimate of the work amounting to Rs.95.76 lakhs had been sent in August 1988 to the Railway Board for sanction. The work is yet to be taken up and, in the meanwhile, the amount of penalty paid had gone up to Rs.33.02 lakhs up to August 1988.

8. Other Topics of Interest

8.1 Loss due to contamination of lubricating oil in Diesel Locos

On the Central Railway, samples of lubricating oil drawn from the locos and tested in laboratory revealed that on many occasions the lubricating oil was found mixed with fuel oil (HSD oil) or was having water contamination necessitating draining out of the lubricating oil and refilling the locos with fresh lubricating oil. This was stated to be due to some inbuilt defects which were not detected during normal maintenance schedules resulting in a loss of Rs.32.66 lakhs during the years from 1983 to 1987.

8.2 Additional expenditure owing to failure of circuit breaker

The RDSO advised in November 1983, to provide interlocking arrangements on 132 KV and 25 KV circuit breakers. On South Eastern Railway, it was revealed that the interlocking arrangement of 132 KV and 25 KV circuit breakers had not been provided on some sub-stations thereby resulting in frequent failures. The Railway Administration incurred an additional expenditure of Rs. 12.11 lakhs towards the cost of power due to tripping, defect and shut-down of circuit breakers at Rourkela, etc. sub-stations maintained by the Orissa State Electricity Board during the period from January 1986 to December 1986.

8.3 Maintenance of sub-stations

As per the agreement executed on 30 March 1984 with the Uttar Pradesh State Electricity Board (UPSEB) for the supply of power at Mathura sub-station, cost of installation of lines, etc. amounting to Rs.54.16 lakhs was paid by the Central Railway but the ownership of property remained with UPSEB. The maintenance of service lines was to be done by the UPSEB on a monthly charge of Rs. 50,000 which did not include the cost of major repairs, replacements or renewals.

In March 1985, the Railway Administration calculated that the Railways could maintain the service lines of Mathura sub-station at an annual cost of about Rs.83,600. The posts for maintenance of service lines of Mathura sub-station were sanctioned but were operated elsewhere and the maintenance work was taken over by the Railway only from September 1987, that too after the matter was taken up in Audit in May 1987. Thus, the Railway Administration incurred an avoidable expenditure of about Rs. 12.47 lakhs for the period from April 1985 to August 1987.

The Central Railway executed another agreement with UPSEB in September 1987 for maintenance of the sub-station at Lalitpur by the UPSEB at a monthly charge of Rs. 50,000 notwithstanding the fact that the maintenance of service lines of another sub-station (Mathura) was taken over by the Railway in the same month due to abnormal charges demanded by the UPSEB.

2.4 Modernisation of workshops on Indian Railways

1. Introduction

A survey carried out by the Railway Board in 1977 had revealed that 77 per cent of the plant and machinery installed in repair workshops on the Railways were overaged. The Ministry of Railways (Railway Board), therefore, (considering that 77 per cent of the plant and machinery in repair workshops on the Railways was overaged) decided in 1977 to undertake modernisation of Railway workshops on a selective basis. A plan was drawn up to upgrade maintenance facilities to reduce the cycle time of periodical overhaul (POH), effect economies in the cost of maintenance/ manufacture and improve performance and availability of assets. The plan envisaged investment of Rs.400 crores over a period of 10 years in three phases involving investment of Rs.95 crores during 1978-81, Rs.140 crores during 1981-84 and Rs. 165 crores during 1984-88. Replacement of plant and machinery alone was to cost Rs.300 crores.

2. Scope of Review

The Project provided for intensive modernisation of four major repair workshops at Matunga (Central Railway), Lower Parel (Western Railway), Kanchrapara (Eastern Railway), Kharagpur (South-Eastern Railway) and the Chittaranjan Locomotive Works (CLW). The remaining centres being the supporting units comprising 47 workshops and other repair sheds were to be provided

with minimum need based inputs so that there was atleast no back-sliding in maintenance capability and obsolescence level of machinery and plant. The review in Audit was mainly confined to implementation of the plan in respect of the four major workshops and the Production Unit (CLW).

3. Organisation

A Central Organisation for Modernisation of Workshops (COFMOW) was set up in November 1978 headed by a Chief Administrative Officer equivalent in rank to a General Manager of a Railway to undertake the responsibility of procurement of machinery and plant under the Project including preparation of specifications, evaluation of tenders, monitoring deliveries and installation of machineries and monitoring of the benefits anticipated.

4. Highlights

- **Delay in completion of the Civil Engineering and other works resulted in cost and time overrun and non-completion of the project as targeted.**

- **Delay in finalisation of specifications/indents, both by COFMOW and supporting units and non-finalisation of tenders/contracts led to escalation in cost of the plant and machinery. Consequently, against 1674 machines at a cost of Rs.45.57 crores for supporting units as envisaged in the Project Report, only 723 machines at a cost of Rs.76.77 crores could be procured excluding 258 machines at a cost of Rs.12.48 crores procured for five selected units.**

- **High Productivity machines were not being utilised to their rated capacity resulting in shortfall in outturn.**

- **Number of high productivity machines were commissioned after a delay of over six months. Delay in commissioning of 32 such high productivity machines/equipments alone resulted in blocking up of capital of Rs.6.33 crores.**

- **The reduction by the Railway Board in outturn of EMUs after necessary POH from 5.5 units to 3 units per day in respect of Matunga Workshop resulted in idling of facilities worth Rs.301.33 lakhs.**

- **The time taken for POH in respect of Passenger Coaching Vehicles and Electric Multiple Units on Central Railway did not improve after modernisation and fell short of target.**

- **Despite introduction of high value sophisticated machines, the allowed time for various jobs was not revised. Even where the timings were revised, the Administration failed to assess and surrender the surplus staff. The delay in conducting time study and implementing the revised time resulted in loss of manhours. On Western Railway alone the loss in manhours in terms of money value was assessed by the Railway Administration to be Rs.6.64 lakhs.**

5. Funding

The World Bank agreed in May/June 1978 to provide credit for modernisation of the four selected workshops and one production unit and need based requirements of support units

to the extent of US $ 88 million. This credit was to finance procurement of machinery and plant items and material handling equipments by March 1982. The procurement action, however, commenced in January 1980 only, thus contributing to delay in commencement of the project itself.

6. Cost of Operation

On the assumption of a project implementation period of 3½ years, the project report had anticipated an overall expenditure of Rs. 87.5 lakhs on the COFMOW and its field wing, as against Rs.3.95 crores incurred upto 31 March 1987. It procured 723 pieces of equipment for supporting units at a cost of Rs.76.77 crores as against 1674 pieces of equipment anticipated to be procured at a cost of Rs.45.57 crores excluding 258 pieces of equipments procured for selected units at a cost of Rs.12.48 crores. The average cost per plant and machinery procured was thus Rs.1062 thousands against Rs.272 thousands anticipated in respect of supporting units. However, the overall average cost per plant and machinery procured was Rs. 910 thousands. The individual Railways and Production Units had their own procurement organisations and hence creation of a separate organisation resulted in additional cost without any perceptible economies due to delays in procurement process as brought out in later paragraphs.

7. Delays in indenting and tendering

(i) Indents for plants and equipments with complete specifications were required to be submitted by the Railways to COFMOW without any loss of time; yet placement of indents was inordinately delayed. However, no record was maintained by COFMOW organisation indicating indents received yearwise. Out of 171 machinery and plant to be procured, Chittarajan Locomotive Works had placed indents upto 1981-82 for only 47 machinery and plant on COFMOW and 71 on Controller of Stores, CLW. Indents for as many as 53 M&P items were placed between 1982-83 and 1986-87 despite the fact that the project was scheduled to be completed by September 1982. Delayed submission of indents resulted in avoidable delay in invitation and finalisation of tenders.

(ii) Although the organisation was set up in November 1978, the first global tender against IDA credit was opened only in January 1980. In fact, more than 50 per cent of the machines were ordered after March 1981 as will be seen from the data given below:

Year	Number of machines ordered (cumulative)	(Rupees in crores) Actual disbursement of IDA credit	
		Planned	Actual (cumulative)
March 1980	Nil	10.00	-
March 1981	437	50.00	6.34
March 1982	840	89.25	22.74
March 1983	905	-	48.59
March 1984	945	-	62.99
March 1985	981	-	77.45
March 1986	-	-	87.71

(iii) A study of the procurement of plant and machinery by CLW

and COFMOW revealed that while the time taken from placement of indents to date of opening of tenders and from the opening of tenders to placement of purchase orders ranged approximately from 2 months to 22 months and one month to 39 months in case of CLW, the time taken by COFMOW organisation was 3 months to 12 months and 7 months to 14 months. The Administration explained in November 1988 that time taken by CLW for finalising the tenders and placing the purchase orders was more because while machines procured through COFMOW were standard, machines procured directly by CLW were special, non-standard or tooled up machines. According to Administration many of these machines entailed correspondence with tenderers regarding fixtures, timing, etc. before the tenders were finalised.

(iv) The CLW Administration attributed the slow progress in finalising the specifications to certain major changes in the product mix, such as dropping the proposal for the manufacture of 25 WDS/6 diesel shunters, projections given for converting the traction motors to Hitachi design and enhancement of electric loco production by tapering down the manufacture of diesel locos. As no special facilities for manufacture of WDS/6 diesel shunters were contemplated in the modernisation project report, the delay in the formulation of the specifications of the machines on this count may not be tenable. Moreover, the Railway Board had also observed in 1983 that progress was slow in formulation of technical specifications. The Board had noted that as in March 1983, the arrear was to the extent of 60 per cent.

8. Delays in installation and commissioning

There were delays in installation and commissioning of the machines procured in the five selected units reviewed in Audit. The delays ranged from 6 months to 28 months. As incidental works did not keep pace with the arrival of machines, a large number of machines were not commissioned soon after their arrival resulting in loss of production of critical components and the outturn of workshops. A few instances of machines which were not commissioned even after 6 months of their receipt are indicated in the Annexure - VIII. Thirty two machines/equipments worth Rs.6.33 crores were thus idle for varying periods affecting production and outturn of rolling stock.

Carriage workshop, Matunga of Central Railway undertakes periodical overhaul of passenger coaches and Electrical Multiple Units (EMUs). The modernisation of this workshop at a cost of Rs. 8.60 crores was sanctioned by the Railway Board in September 1979. The project was scheduled to be completed by 31 March 1982 (subsequently revised to 31 March 1985.) As the cost projections and facilities originally provided in the Project Report were found inadequate due to cost escalation, additional Civil Engineering works which were not thought of earlier had to be provided. Due to invalidation of the earlier assumptions, a revised estimate for Rs.20.97 crores was submitted to Railway Board in September 1982. The Railway Board conveyed sanction for Rs. 18 crores in November 1984. The actual expenditure booked was Rs.19.25 crores as on 30 September 1987 resulting in excess expenditure of

Rs.1.25 crores over the revised estimate of Rs. 18 crores.

The slow progress of Civil Engineering works, viz., 33.05 per cent as on 31 March 1984 against progress of 78.12 per cent recorded by Mechanical and other departments mainly contributed to delay in completion of the project. Besides, inadequate planning at the initial stage and the delay in deciding the final location of some of the machines were attributed as reasons for slow progress of works. The material modifications included in the revised estimate of January 1984 (cost Rs.220.88 lakhs) also necessitated changes in the scope of work resulting in delays in preparation of revised estimate and completion of project ($5\frac{1}{2}$ years).

The abstract estimate for modernisation of Kharagpur workshop of South Eastern Railway for Rs.6.82 crores was sanctioned by the Railway Board in May 1978. Subsequently, the scope of the work was enhanced requiring revision of the estimate to Rs.7.94 crores in September 1979. It was further revised to Rs.11.92 crores in March 1982 due to increase in prices of machines and equipments and minor changes in the Civil Engineering works and to Rs. 13.27 crores in December 1984 involving an increase of about 100 per cent on the original estimate. Out of the revised outlay of Rs. 13.27 crores, Rs.11.79 crores was for replacement of old plants and machineries chargeable to Depreciation Reserve Fund. Frequent revisions of the estimate indicated lack of adequate planning.

Modernisation of workshop at Lower Parel was sanctioned for Rs.3.79 crores in November 1979. The project was scheduled to be completed by 31 March 1982. Due to general escalation in prices, addition/deletion of some of the machinery and plant items and change in the scope of Civil Engineering works, a revised estimate for Rs. 5.42 crores (involving an increase of over 40 per cent) was sanctioned in September 1982. A second revised estimate had to be sanctioned for Rs.6.79 crores in July 1985 due to escalation in price of machinery. Though the project was to be completed by 31 March 1982, the physical progress on that date was only 25.75 per cent (Mechanical) and 55 per cent (Civil) and it was completed only in March 1987. The expenditure booked upto March 1987 was Rs.6.64 crores.

The overall delay in completion of the project (5 years) resulted in non-realisation of the benefits viz. increased outturn and saving in coach days. The shortfall in outturn during the period 1982-83 to 1984-85 was to the extent of 915 coaches (in terms of 4 wheelers).

Modernisation of Kanchrapara workshop was sanctioned by the Railway Board in November 1979 at a cost of Rs.7.6 crores with the date of completion as March 1982. The estimate was subsequently revised to Rs. 14.59 crores (91 per cent increase) in January 1984 due to cost escalation in Civil Engineering (174 per cent) and other items of work. The delay in completion of the Civil Engineering works was mainly due to shortage of building material (cement) as well as failure of the contractor leading to prolonged work stoppage. This resulted in cost and time overrun of the project. The expenditure incurred upto March 1987 was Rs. 10.99 crores. The target date had also to be revised from

March 1982 to March 1988.

9. Utilisation of machines

A test check in Audit of utilisation of machines procured revealed the following:

(i) On Central Railway, out of 61 machines procured through COFMOW, 7 machines (New Wheel lathe machines-two nos., Hydraulic Wheel press, Axle Journal Turning and Burnishing machine, Vertical Turrate lathe machine, CNC Axle Turning machine and Thread Rolling machine) procured at a cost of Rs.304.94 lakhs were having high productivity and rated capacity. The percentage of shifts lost to total shifts available in respect of Vertical Turrate lathe and CNC Axle Turning machine during the period October 1984 to September 1987 was on an average 42 per cent and 19.6 per cent respectively. Non-availability of load/operator or the machine remaining under repairs were attributed as the reasons. These factors were within the control of the Railway Administration and avoidable.

(ii) The Central, South Central and South Eastern Railways reported between February 1987 and November 1987 that the general performance of wheel lathe machines supplied by Heavy Engineering Corporation, Ranchi was far from satisfactory and though the major defects had been brought to notice no action had been taken by the supplier to effect improvements in later supplies. The after-sales service rendered by them was also reported to be not satisfactory besides refusal to give "back-up" guarantee from the Heavy Engineering Corporation's foreign principals for technical support for the machines supplied. The loss of the production and output suffered due to defaults by Heavy Engineering Corporation have not been assessed and recorded.

10. Under utilisation of capacity of machines

Training of the Railway workshop personnel in the modernisation programme was considered complementary to the development and upgradation of knowhow and skills. Accordingly, various training programmes were organised in India as well as abroad. A specific provision in the contracts for training free of cost of two railway employees per machine ordered on the foreign firms at the manufacturer's work was also made. This specialised training of 6 to 8 weeks was intended to cover maintenance aspects. Till April 1986 as many as 26 officers and 148 supervisors had received training abroad with various organisations such as German Federal Railway Workshops (May-June 1982), Canadian Pacific Consulting Services (October-December 1982), etc. Besides, training on maintenance aspects had also been organised in India with various machine tool manufacturers.

Despite these measures some of the costly machines procured under the modernisation programme had breakdowns frequently from the date of their commissioning resulting in loss of production and indicating inadequacy of training. The details of a few such machines are given below:

(a) A HEC C & W Wheel lathe machine

was procured in July 1982 at a cost of Rs.53.25 lakhs through COFMOW for Kharagpur workshop. Against the rated capacity of 1056 wheelsets per month, the actual outturn on an average per month during 1984, 1985, 1986 and 1987 was 508.25, 453.58, 430.83 and 375.33 respectively.

(b) The Hegen Cheidt Wheel lathe machine was procured in 1980 for Loco Wheel Shop of South Eastern Railway at a cost of Rs. 116.97 lakhs. Against the rated capacity of 528 loco wheelsets per month the actual average monthly outturn during the years 1984 to 1987 was 389.5, 407.71, 385.75 and 450.58 respectively.

(c) Rated capacity of a Hegen Cheidt Axle Journal Turning and Burnishing lathe machine procured at a cost of Rs. 54.15 lakhs for Loco Wheel Shop of South Eastern Railway was fixed at 616 pairs of wheels per month. But the actual outturn per month on an average during the period 1985 to 1987 was 281, 275.25 and 323.08 respectively. Irregular supply of material from the trade was stated to be one of the contributing factors for the poor outturn of this highly productive machine.

(d) Webstern Bennet CNC Vertical Turrate lathe machine procured at a cost of Rs. 48.45 lakhs commissioned on Western Railway in March 1983 had a rated capacity for centre boring of 24 wheel centres per 8 hour shift. The machine went out of order in May 1983 due to 'Sensor' failure. Thereafter till June 1987, the machine failed on 19 further occasions in a year on an average, the longest breakdown being for 123 days due to failure of ball screw and damage to Generator of Z Axis Servomotor. The average outturn per shift ranged between 3.5 in 1983 and 12.03 in 1986 indicating less than 50 per cent utilisation.

(e) C & W Wheel lathe (MG) West Germany: This wheel lathe procured at a cost of Rs.99.84 lakhs from West Germany by COFMOW and initially meant for Northern Railway was transferred to Bhavnagar Workshop of Western Railway in December 1983. It was received in Bhavnagar Workshop in January 1985 and commissioned in February 1986. The expenditure booked in respect of this machine upto October 1987 was Rs.1.07 crores. The machine had a rated capacity of 600 wheelsets per month in single shift working. The performance of the machine was not satisfactory because of voltage fluctuations. The Administration, therefore, procured in March 1987 one set of automatic voltage stabliser at a cost of Rs.1.50 lakhs. Despite this, against the rated capacity of 600 wheels per month, the outturn achieved was only 165 (March 1986 to March 1987) and 205 (April 1987 to December 1987).

Prior to the commissioning of the new machine, the outturn was 131 wheelsets per month on an average. The actual arisings on an average in the years 1985-86 to 1987-88 (upto December 1987) were only 131, 176 and 205 respectively.

Considering the low arisings and no prospect of any significant increase in the outturn, the provision for the imported wheel lathe at a cost of Rs. 1.07 crores was not justified.

(f) Hegen Cheidt Wheel lathe: This machine procured at a cost of

Rs.116.70 lakhs was commissioned on 2 November 1982 on Eastern Railway. The machine had a rated capacity of 4008 wheelsets per annum. The actual outturn during the years 1984-85 to 1986-87 was, however, 846, 1348 and 1399 wheelsets respectively. The shortfall in outturn during these years was 3162, 2660 and 2609 wheelsets indicating underutilisation of the machine to the extent of 78.89 per cent, 66.36 per cent and 65.09 per cent respectively.

(g) CNC Axle Journal Turning and Burnishing lathe: This lathe procured at a cost of Rs. 48.53 lakhs was commissioned on 29 February 1984 on Eastern Railway. The lathe had a rated capacity (as revised) of 2424 wheelsets per annum. The actual outturn during the years 1984-85 to 1986-87 was, however, far below the rated capacity, the outturn being 607, 904 and 970 respectively. The shortfall in outturn worked out to 1817, 1520 and 1454 wheelsets indicating underutilisation of this machine to the extent of 74.95, 62.70 and 59.98 per cent respectively during the years 1984-85 to 1986-87.

(h) MFD Wheel Press: This machine procured at a cost of Rs.47.18 lakhs and commissioned on 9 May 1984 on Eastern Railway had a rated capacity of 2592 (as revised) wheelsets per annum. The actual outturn during the years 1984-85 to 1986-87 was, however, only 674, 800 and 735 respectively. The shortfall in outturn during the above period was 1918, 1792 and 1857 wheelsets, indicating underutilisation of machine to the extent of 73.99, 69.13 and 71.64 per cent respectively.

(i) CNC Vertical Machine: This machine was procured through COFMOW at a cost of Rs.51.00 lakhs and was commissioned on Eastern Railway on 24 January 1984. The machine had a rated capacity (as revised) of 10,368 solid wheels (double shift) per annum. From 24 January 1984 to 31 December 1985 (708 days) the machine remained out of order for 343 days. Even after the machine was repaired, it worked far below the rated capacity, the actual outturn during the years 1984-85 to 1986-87 being nil, 173 and 1267 solid wheels respectively. The shortfall in outturn during these years was to the extent of 10368, 10195 and 9101 wheels respectively.

11. Non-revision of Allowed Time

The machines procured by COFMOW were highly sophisticated and possessed capacity for high productivity. The installation of these machines was expected to result in significant increase in productivity. The Railways were instructed by Railway Board in January 1986 to identify the repair activities for review of timings and to advise the manpower saved/financial savings on account of reduction in time allowed/saved. COFMOW also emphasised in February 1986 the need to fix/revise the timings for various machines with reference to the timings obtained by the suppliers during proving out tests and to advise the manpower saved/financial savings on account of reduction in timings. The large variation between the proved/allowed times and those fixed by the Railways resulted in underutilisation of rated capacity of the machines, low productivity, excess payments of incentive bonus to workers and in wastage of manpower. A few instances are discussed below:

(i) In Matunga workshop of Central Railway the delay in revising the allowed time in respect of seven high productivity machines ranged from minimum of 2 months to 23 months. Even after revision of the allowed time, the Railway Administration had not so far (August 1988) finally assessed the surplus staff, though in anticipation, the Administration has transferred 79 posts from the Wheel Shop, Machine Shop and Smithy Shop.

(ii) In the Chittaranjan Locomotive Works revision of allowed time was not undertaken for over an year for 3 machines and for over 22 months for another machine.

The Administration explained in November 1988 that time studies could not be undertaken due to these machines being frequently under breakdown conditions and that all efforts were being made to settling performance of the machines for making time study. The fact, however, remains that delay in conducting time studies resulted in loss to the Administration in the shape of higher incentive payments.

(iii) In Parel workshop of Western Railway there were delays ranging from 3 months to 15 months in conducting the time study and revising the allowed time. The loss of manpower in terms of money value on this account, according to Administration, for 11 machines during the period June 1981 to February 1986 was Rs. 6.64 lakhs.

12. Results of Modernisation

(a) Carriage workshop, Matunga - Central Railway: As against the target of 18 days for periodical overhaul of Passenger Coaching Vehicles (PCV), 34 days for Other Coaching Vehicles (OCV) and 20 days for EMU stock fixed in July 1978, the time taken for POH during 1986-87 was 18.8, 23.5 and 21.74 days respectively. While the targets for PCV and EMU are still to be achieved, the target for OCV was apparently fixed very high. Moreover, POH of OCVs involves comparatively less work than that in POH of carriages.

In December 1985, the Railway Board decided that the outturn target of 5.5 units of EMU per day after modernisation assumed in the Project Report be reduced to 3 units per day in 1986-87. Even during 1981-82 to 1984-85, the outturn achieved ranged between 2.4 to 2.8 units per day. Considering this, the reduction of target of 5.5 units to 3 units per day was not justified. The reduction thus resulted in the facilities worth Rs.301.33 lakhs (on prorata basis) created under the modernisation being rendered idle/redundant. The objective of bringing down the waiting time for POH had also not fructified.

The Administration stated in September 1988 that infrastructural facilities were available and the EMU outturn can be increased as and when the load arising increases and will increase to 5 units per day by 1990. It has further been contended that the facilities created did not remain unutilised because to offset the less outturn of EMUs, the outturn of conventional coaching stock had been increased and the total shop outturn was thus maintained above project level. This argument of the Administration may not, however, be tenable because the outturn of EMU was not commensurate with the facilities created.

The Project Report envisaged reduction of 5 per cent for PCVs/OCVs and 10 per cent for EMUs in the cost of repairs. The unit cost of repair to EMU had, however, gone up during 1986-87 to Rs. 55,875 per unit as against Rs. 42,888 per unit envisaged in the Project Report for 1984-85. The increase was 30 per cent. For PCVs and OCVs also cost of repair increased by 30 per cent and 24 per cent respectively. Thus, the anticipated annual recurring saving of Rs. 107.27 lakhs due to modernisation had not been realised.

According to Administration, the reduction in POH cost could not be achieved due to inflationary trend in labour and stores which were beyond the control of the workshop. Because of non-reduction of POH cost not only the anticipated annual recurring saving of Rs.107.27 lakhs could not be realised but extra expenditure is also being continued to be incurred every year on POH even after modernisation of the workshop.

(b) Kharagpur workshop-South Eastern Railway: While the Railway Administration could reduce the POH cycle days with effect from 1985-86 in respect of Diesel Electric Locos and Carriages to 14.46 and 16.17 against 15 days and 17 days respectively, there had been no improvement in respect of wagons. However, during 1986-87, the POH days for freight wagons was four days but during 1987-88 (upto October 1987) the time taken for POH increased to 4.08 days. Despite reduction in POH cycle time after modernisation, no marked improvement in the overall outturn was achieved as will be seen from the table below:-

Year	Carriages		Wagons		Diesel locos	
	Target	Actual	Target	Actual	Target	Actual
1977-78	2997.5	3000	13712	12660.5	66	66
1981-82	2959.0	2294	12105	11058.5	45	47
1986-87	2970.0	2913	12150	11401	96	96

The average unit cost of POH repair increased during 1986-87 by 109.5 per cent and 99.48 per cent over the cost in 1981-82 in respect of Diesel locos and freight wagons respectively.

(c) Chittaranjan Locomotive Works: An abstract estimate of Rs. 7.45 crores was sanctioned by the Railway Board in September 1979. This was updated to Rs.15.43 crores in 1982 and to Rs. 16.92 crores in 1985. The project was scheduled for completion by September 1982 but, according to Administration, the same could not be completed by March 1987, even after a delay of over 4 years, as some of the machines were yet (31 March 1987) to be purchased, installed and commissioned.

One of the objectives envisaged in the Project Report was to reduce the cycle time of manufacture of Diesel Hydraulics and Diesel Electric Locomotives by 15 per cent. The average time taken before modernisation from the first date of oxycutting till the first loco of a batch was despatched

was 309 days for Diesel locomotives and 368 days for Electric locomotives. There had been no improvement in the overall period of cycle time in 1986-87 which was 324 days for Diesel locos and 414 days for Electric locos. CLW stated in December 1985 that due to change in design of the underframe and introduction of dual brake system and dynamic brake system there had been increase in workload in manufacture of the new series of electric locos. According to them the Diesel loco activity had also undergone a major change in asmuch as instead of manufacturing one type of Diesel Hydraulic Shunter (WDS4) and power-packing of the two types of locomotives (WDS3 and ZDM2), CLW was manufacturing three types of locomotives (WDS4, YDM2 and ZDM4A) and undertaking POH of two types of locomotives. The fact remained that modernisation had not contributed to increase in production.

The Administration stated in November 1988 that the cycle time has been substantially reduced in the case of electric locomotives (239/245 calendar days) during 1987-88 and that the position in case of diesel locomotives has also slightly improved.

The target of increase in production of traction motors by 10 per cent had not been achieved as envisaged. The outturn of traction motors between 1981-82 and 1986-87 increased marginally from 435 in 1981-82 to 452 in 1986-87. The delay in increase in production of traction motors was attributed mainly to revision of the specifications of the critical machines and retendering in some cases to avail of better options available for special purpose machines.

In regard to the continuous fall in outturn of traction motors from 1981-82 and onwards till 1985-86, the Administration stated in November 1988 that the production of the traction motors was governed by the production plan made out taking into account the requirement of the Railways. According to them during 1984-85, the production target had to be reduced on account of severe budget constraints. Similarly, during 1985-86 also the production was reduced to match the reduced loco outturn. The Administration contended that these were conscious decisions and had nothing to do with modernisation project and the results thereof. These arguments of the Administration are, however, not tenable because the modernisation project had set a target of 10 per cent increase in the production of traction motors which, in fact, could not be achieved.

The manufacture of Cylinder Heads and Cylinder Liners as per the Project Report was to increase by 15 per cent. While during the years 1983-84 to 1985-86 the production of Cylinder Heads increased there had been a fall in production of Cylinder Liners due to less demand.

The project had aimed at reduction in direct workers, indirect manhours and idle time besides reducing replacement manhours. While there had been reduction in direct labour hours from 78,97,363 in 1979-80 to 68,15,086 in 1986-87, there has been steep increase in indirect manhours from 58,88,723 hours in 1979-80 to 62,31,948 in 1986-87. The idle time increased from 14,091 hours in 1979-80 to 79,980 in 1986-87. Thus, the anticipated savings had not been realised.

d) Parel workshop - Western Railway: The average number of repair days per coach after modernisation was to be brought down from 23 days to 19 days. The lowest figure so far achieved was 19.09 days in March 1987. The Railway Administration stated in June 1988 that the average number of repair days per coach has been brought down to 18.36 days for passenger carrying vehicles (average for 1986-87) but average number of repair days for PCV, OCV (Special Stock) plus AC coaches was still 19.45 days.

(e) Kancharapara workshop - Eastern Railway: While the target increase in POH capacity to 75 per year in respect of the electric locos was achieved, the yearly outturn of motor coaches was lagging behind during the period 1983-84 to 1985-86 the same being 93, 101 and 107 respectively against the target of 120. The outturn during 1986-87 was, however, 123.

The average monthly outturn of Trailer Coaches and Conventional Coaches fell short during the years 1983-84 to 1986-87. The average monthly outturn of trailer coaches being 20.8, 24.1, 25 and 25.2 respectively against the target of 28 and that of conventional coaches- 38.7, 31.3, 38.6 and 44.4 against 65 fixed. This was less than the monthly outturn of 45 conventional coaches fixed prior to modernisation project.

The time taken for POH of Electric locos and Motor and Trailer coaches during the years 1983-84 to 1986-87 was also on high side as shown below:-

Years	Electric locos (Target-30 days)	Motor coaches (Target - 28 days)	Trailer coaches (Target - 28 days)
1983-84	50.5	45.4	37.87
1984-85	42.5	42.1	39.28
1985-86	34	39.1	28.47

While the cycle days in respect of Electric Locos and Trailer Coaches were reduced to 27.5 and 20.32 days during 1986-87, the time taken for Motor coaches was still 35.7 days more than the target of 28 days.

The POH time taken for conventional coaches (1983-84 to 1985-86) was more than the target of 22 days, viz. 38.06, 57.09 and 40.67. During 1986-87, it was 19.15 days. similarly, the time taken for Armature motor rewinding during 1986-87 was on high side - (37.69 days) as compared to the target of 25 days. The POH time in 1980-81 prior to modernisation project was 39.65 days.

For reducing the cycle time from 35 days to 25 days for Motor armature rewinding the shop was provided with various sophisticated machines costing Rs.88.68 lakhs. But still the target of 25 days as envisaged in

the Project Report is yet to be achieved. The Administration has explained that the rewinding cycle time of traction motors could not be reduced on account of the change in working system, to ensure proper quality of work leading to higher service reliability.

2.5 Parcel Business on the Railways

1. Introduction

Parcels carried by the Railways are hard parcles and perishables like fresh fruits, vegetables, fish, etc. The parcel traffic is carried by brake vans and parcel vans of trains carrying passengers or in separate parcel trains run between pairs of stations. For seasonal demands of fruits and vegetables, etc. special trains are also run. The rates for carriage by rail of parcel traffic are generally higher than those for transport of goods traffic in goods trains as parcel services are supposed to provide a comparatively faster transit and involve less handling enroute.

2. Organisation

Member (Traffic) in the Railway Board deals with parcel traffic and is assisted by Director (Coaching). On the Railways, the General Manager of the Railway is assisted by the Chief Commercial Superintendent, Chief Marketing Superintendent and Chief Operating Superintendent in the relevant aspects of parcel traffic.

3. Scope of Review

There is considerable demand for movement of parcel traffic particularly between important stations and trade centres. As this traffic is carried by passenger trains, the transit time could be guaranteed and hence this service has a lot of potential. Steps taken to ensure growth of parcels traffic on the Railways and utilisation of the transport capacity available with the Railways was reviewed in Audit.

4. Highlights

Review of performance of parcel business conducted on the Railways revealed that

- **There was hardly any growth in parcel traffic during the years 1982-83 to 1986-87. The earnings from parcel business came down from 2.2. per cent of the Gross Traffic Receipts and 60 per cent of "other coaching earnings" in 1982-83 to 1.6 per cent and 40 per cent respectively in 1986-87. No adequate data of traffic was available and hence the element of surplus stock could not be assessed.**

- **Though the existing capacity available in parcel vans, brake vans, etc. remained underutilised to the extent of 70 per cent, additional rolling stock costing Rs.80.68 crores was acquired during 1981-82 to 1986-87.**

- **Surcharge on parcel traffic carried by Superfast/Mail/Express trains reduced in 1983-84 to attract traffic resulted in loss of earnings of Rs.2.13 crores without any growth of traffic.**

- **There was diversion of traffic from rail on account of higher rates and poor quality of service.**

- **Freight Forwarder Scheme introduced for boosting the traffic had failed.**

- **Transport of cars by air was cheaper than by rail. Introduction of station to station rates on Northern Railway for carriage of Maruti cars resulted in loss of earnings of Rs.2.18 crores.**

5. Growth of Traffic

According to the Corporate Plan (1985-2000) an adequate data base for parcel traffic on the Railways including commoditywise breakup, lead, etc. was not available.

The Gross Traffic Receipts, other coaching earnings (mainly parcel earnings) and earnings exclusively from parcels traffic during 1982-83 to 1986-87 were as under:-

(Rs. in Crores)

Year	Gross Traffic Receipts Rs.	Other Coaching Earnings Rs.	Earnings from Parcels Rs.	Percentage of Columns 4 to 2	Percentage of Columns 4 to 3	Originating Parcel Traffic (in million tonnes)
1	2	3	4	5	6	7
1982-83	4401.96	160.03	96.28	2.2	60	2.76
1983-84	4992.47	166.56	94.16	2.0	56	2.57
1984-85	5358.77	179.75	96.84	1.8	54	2.62
1985-86	6428.10	210.46	109.10	1.7	52	2.94
1986-87	7505.66	293.48	117.15	1.6	40	2.99

The overall growth in originating parcel traffic on the Railways was negligible. It will be seen from the details given in Annexure-IX that except on the Northern, Southern, South Eastern and South Central Railways, there was no growth of parcel traffic. Compared to the level obtained in 1982-83 the quantum of parcel traffic fell steeply on the Central Railway from 472 thousand tonnes in 1982-83 to 349 thousand tonnes during 1983-84 and 1984-85. While the traffic dwindled considerably over the Eastern and Northeast Frontier Railways, the level of traffic on the North Eastern Railway was low during 1983-84 to 1985-86 and on the South Eastern and Western Railways during 1983-84 and 1984-85. In the absence of commoditywise, routewise data any exercise to match demand with supply so as to withdraw the surplus capacity was not feasible although there was considerable mis-match between demand and the actual capacity available with the Railways.

6. Capacity Utilisation

Over 6000 passenger trains including suburban trains are run daily on the Railways. The total capacity for trnsport of parcels at the rate of 8 tonnes (one brake van) per train would give large transport capacity. The number of non-suburban trains run daily during

the years 1982-83 to 1986-87, the transport capacity available and the traffic actually carried are given in the table below:

Years	Number of non-suburban trains per day	Minimum transport capacity available per year (million tonnes)	Total parcel traffic actually carried (million tonnes)
1982-83	3,639	10.63	2.76
1983-84	3,773	11.02	2.57
1984-85	3,814	11.17	2.62
1985-86	3,902	11.39	2.93
1986-87	3,868	11.28	2.99

The shortfall was over 70 per cent indicating that the capacity available with the Railways was grossly underutilised.

For movement of parcels the Railways had 12912 four wheeler units on the BG and MG as on 31 March 1987 in the form of parcel vans, brake vans and covered wagons. The percentage of ineffective stock was 11.19 and 9.82 on the BG and 5.59 and 6.20 on the MG during 1985-86 and 1986-87 respectively. Even after allowing the high ineffective percentage on BG about sixty per cent of the stock was lying idle, the exact financial implications of which were not available.

The Railway Board observed in August 1984 that the main contributory factors leading to underutilisation of capacity was sealing of brake vans at the originating stations itself despite availability of space, refusal of guards/brakesmen to take charge of the parcels even when room was available in the brake van and overcarriage of parcels, etc. With a view to overcoming these problems, the Railway Board issued instructions in August 1984 to accord priority to proper planning of loading of parcels at stations which account for sizeable parcel earnings by rationalising the loading pattern and laying down a complete plan for loading of parcels at such stations. A list of 77 stations where parcel earnings were Rs. 14 lakhs and over per annum was also circulated to the Railways to concentrate attention on developing the traffic. It was emphasised that 75 per cent of the brake van accommodation in respect of super fast trains and 50 per cent of the brake van accommodation in respect of Mail/Express trains should be utilised at the starting station itself to ensure through clearance of long distance traffic by the fastest trains available. This was not achieved even by 1986-87.

Review in Audit of implementation of the above instructions of the Railway Board on certain Railways revealed the following:

(i) Sealing of Vans

(a) Southern Railway

A census of parcels/luggage loaded at the originating stations by superfast, mail/express and passenger trains taken by the Railway Administration during the period 15 September 1984 to 30 September 1984 in respect of seven Divisions of the Railway revealed that of the available capacity of 76.50 tonnes to 374.10 tonnes in respect of 15 to 51 trains, the average utilisation was to the extent of 15.50 to 110.21 tonnes only as detailed below:-

Sl. No.	Divisions	No. of trains	Total carrying capacity available (tonnes)	Average utilisation (tonnes)
1.	Madras Central	30	342.00	110.21
2.	Madras Egmore	15	76.50	15.50
3.	Palghat	51	374.10	62.72
4.	Trivandrum	32	319.50	23.74
5.	Bangalore	27	261.00	58.64
6.	Madurai	34	186.00	55.66
7.	Mysore	50	231.00	23.28

In a surprise check by the Railway on 8 January 1985 at Bangalore City, it was noticed that only two auto rickshaws and 17 paper bundles were loaded in one portion of the Guard Van of 86 Down and sealed through to Hyderabad. Similarly, only 33 packages were found loaded in brake van of 125 UP Kerala Express on 29 January 1985 though it was sealed from Palghat to New Delhi. The brake vans of 19 Down Trivandrum Mail ex-Madras Central were invariably sealed through to Trivandrum and Quilon at Madras itself during the period 1 August 1987 to 16 August 1987 resulting in utilisation of capacity enroute being rendered impossible.

(b) South Central Railway

At Vijayawada, additional parcel vans were released for carrying perishable traffic in excess of the quotas fixed or to carry the left over of the previous day. A review of utilisation of 108 such Parcel Vans during the period 20 May 1987 to 13 July 1987 revealed that on 35 of them the parcel vans were found underloaded by more than one tonne, the total underloading being of 99.088 tonnes. On 18 occasions, the vans were run with underload of less than one tonne, the total underload on these cases being 9.954 MT. In all these cases, the parcel vans had been sealed through to the destination stations.

The loss of transport capacity and the corresponding earnings could not be assessed due to want of data for complete periods.

(ii) Over carriage of Parcels

Despite issue of instructions in August 1984 and later in December 1984, over carriage of parcels persisted

on the Railways.

A study of the problem on Palghat Division by the Southern Railway in October 1986 revealed that overcarriage of parcels by superfast trains like K.K. Express, Mangala Express, Gauhati Express, Ahmedabad Express, etc. were on the increase. The main reasons were identified as indiscriminate loading of parcels bound for all over the South and sealing of brake vans to intermediate points resulting in the guards simply altering the seal cards without unloading the parcels at the destinations on the plea of insufficient time for opening the seal and verifying the parcels. Again, a test check by Audit of the accounts of Erode parcel office revealed that overcarriages continued in the year 1987 also. The loss of earnings on this account in respect of parcels overcarried to this station during the period from January to May 1987 worked out to Rs. 1.81 lakhs.

On the South Eastern Railway, it was noticed during test check by Audit conducted at certain important stations like Tatanagar (February to April 1985), Bhubaneswar (January 1985), Waltair (January to March 1985) and Howrah (November 1986) that overcarriage of parcels to these stations involved loss of earnings of about Rs. 1.10 lakhs.

The extra expenditure incurred on handling, etc. of the overcarried consignments was not susceptible of quantification for want of requisite data.

The Railway Reforms Committee recommended in the year 1982 taking away of all parcel traffic from passenger trains in a gradual manner. However, as per the Corporate Plan (1985-2000), the movement of 'Smalls' and 'Parcels' by rail is not expected to be entirely stopped in the foreseeable future due to lack of alternative facilities. As claims arising out of movement of parcels were disproportionately higher than those for other types of freight traffic and increasing traffic density would render running of van and shunting trains difficult, the Corporate Plan envisaged a limited volume of parcels to be moved by Mail/Express trains between originating and destination stations to provide a Premier Parcel Service at premium rates and all enroute loading/unloading of parcels on long distance Mail/Express trains was proposed to be eliminated. However, all passenger trains introduced after the year 1982 had in their composition brake vans/parcel vans for carriage of luggage and parcels signifying that no action on the above recommendation/proposals had been taken. The exact financial implication involved in the proposals was not available. However, a sample analysis revealed that replacement of only two second class with brake and luggage (SLRs) out of the three run on Rajdhani Express between New Delhi and Bombay Central by A.C. Chair Cars (lowest class of accommodation provided on the train) could fetch an additional revenue of Rs. 1.30 crores approximately per annum as passenger fares.

7. Idle Capacity

As on 31 March 1981, the Railways had 10428 (except Southern Railway whose figures were not available) rolling stock in terms of four wheelers earmarked for transport of parcels. Between 1981-82 and 1986-87, the

Railways acquired 1001 units of Vans Parcel Units (VPUs) and SLRs to cater to parcel traffic at a cost of Rs.80.68 crores though the traffic was almost stagnant. As the requirements of the Railways for transport of parcel traffic could be met only with 40 per cent of the existing stock, the acquisition of additional new stock at a cost of Rs. 80.68 crores was not justified.

The Southern Railway Administration had a stock of 44 surplus MG VPUs as on 6 July 1983. While this surplus capacity was idle for want of demand, 15 VPUs allotted by the Railway Board to this Railway were procured from Jessop & Company Limited, Calcutta during 1983-84 at a cost of Rs. 50 lakhs in replacement of condemned stock. The stock of surplus VPUs on the Railways from year to year was as under:-

Position as on	Stock holding	Net requirements	Surplus
31.8.1984	135	89	46
31.3.1985	134	104	30
31.3.1986	130	97	33
31.3.1987	124	89	35
1.10.1987	123	70	53

The actual requirement of VPUs in all the years was much less than the stock held. The acquisition of the 15 VPUs in 1983-84 on replacement account thus lacked justification and resulted in idle investment of Rs. 50 lakhs.

The Southern Railway Administration approached the Railway Board in July 1984 for conversion of 20 VPUs (including the 15 VPUs acquired in 1983-84) into second class bogies and second class brake and luggage vans in equal proportion to meet the shortage of such stock. The proposal did not find favour with the Railway Board in view of heavy investments involved in conversion. The Railway Board, therefore, directed the Railway to furnish an estimate for the conversion work. The Railway estimated in December 1986 the cost of conversion of one VPU into SLR at Rs.4.70 lakhs and that of one VPU into second class bogie at Rs.5.20 lakhs as against the cost of acquisition of such new stock at Rs.4.37 lakhs and Rs. 5.00 lakhs respectively. Railway Board's decision in the matter was still awaited.

8. Rating of Parcels

Based on the recommendations of the Rail Tariff Enquiry Committee, 1980 an additional surcharge on parcels traffic was levied with effect from 1 October 1981 when booked by Mail/Express, Superfast and Rajdhani Express trains with a view to increasing the earnings of the Railways from parcels. This was further rationalised with effect from 1 April 1982.

A surcharge ranging from 5 per cent to 50 per cent on different classes of parcel rates was also introduced with effect from 29 April 1982 covering also the Premium Parcel Services introduced to boost the growth in parcel traffic. Under this scheme parcels were to be carried by superfast trains between specified pairs of stations and facilities for platform booking, platform delivery

and booking upto one hour in advance of scheduled departure of trains was to be provided. The scheme was a non-starter right from the start as the Railways did not have any facility to assure such prompt booking and delivery. The superfast train surcharge was reduced in August 1983 and finally withdrawn in September 1984 (except in respect of perishables) on the ground that the capacity in superfast trains was not being fully utilised because of the levy of surcharge.

The expenditure, if any, incurred in arranging platform booking and delivery which might have been rendered infructuous is not known. While the loss on account of reduction in rates of surcharge was Rs. 2.13 crores during 1983-84, the loss of revenue on account of withdrawal of surcharge from September 1984 onwards is not known.

9. Diversion to Road/Air

The Railway Reforms Committee observed in May 1984 that the rating policy of the Railways, apart from its linkage to cost, should essentially take into account the available prevalent rates for movement of traffic by road because if the margin between the two groups of rates was very wide in favour of the road transport, there was possibility of diversion of traffic from rail.

A check post census taken extensively by the Southern Railway in October-November 1985 at almost all the important traffic points indicated that a sizeable traffic between certain pairs of points was moving by road. An analysis of the road rates with reference to the railway rates between these pairs of points indicated that the road rates were generally only 19 to 30 per cent of the railway parcel rates. The movement of parcel by rail even when carried by express trains was slower compared to the road services offering door-to-door delivery. The analysis made by the Southern Railway Administration indicated that to meet the competition from road, substantial rate reduction was necessary. The calculations made in this regard revealed that while the equable rate to be quoted did not even cover the incremental cost on the selected Madras Egmore - Tiruchchirapalli-Madurai route, it generally covered only the costs on the BG routes. The experience gained in running the Premier Parcel Service on the Madras Central-Bangalore BG section of the Railway, however, was that traffic went steadily down from 54.85 quintals in April 1985 to 21.55 quintals in September 1985 mainly due to severe competition from road. The relevant rail rate was Rs. 32.48 per quintal plus 5 per cent surcharge as against Rs. 15 to Rs.20 per quintal by road. No steps were taken to attract the traffic to rail or to cut the parcel services in order to achieve reduction of losses in operation of uneconomic services and additional revenue by hauling passenger coaches.

Prior to 15 May 1982 empty milk cans were charged at Parcel Scale Rates CP-2. This was increased to GPA class rate with effect from 15 May 1982 on the recommendations of the Rail Tariff Enquiry Committee. As a result of upward revision of rates, the traffic offering in empty milk cans dwindled at Erode, Coimbatore and Uttukuli stations on Southern Railway and got diverted to road. The earnings from empty

milk can traffic at the Erode station came down from Rs.1.81 lakhs in 1984-85 to Rs.0.90 lakh in 1987-88 while the earnings from milk traffic came down from Rs.12.53 lakhs in 1981-82 to Rs. 2.27 lakhs in 1986-87. In respect of Coimbatore and Uttukuli stations, the earnings from empty milk can traffic went down from Rs.0.31 lakh and Rs.0.61 lakh in 1984-85 to Rs.0.10 lakh and Rs.0.06 lakh in 1987-88 (unto August 1987) respectively while the earnings from milk traffic went down from Rs.2.33 lakhs and Rs.7.40 lakhs in 1981-82 to Rs.0.15 lakh and Rs.0.60 lakh in 1986-87 respectively.

The Southern Railway Administration proposed in July 1984 restoration of the rate for empty milk cans to CP-2 scale but it was not approved by the Railway Board on the consideration that the higher revised rates were based on the recommendations of the Rail Tariff Enquiry Committee. This was not, however, in conformity with the recommendations of the Railway Reforms Committee (1984) that "suitable revision is necessary to compete with fluctuating levels of road transport rates" and that increase in rates "be effected scientifically and only after full analysis of market and other conditions".

A study by the Railway Board in 1982 indicated the following rates for transportation of motor cars by air and rail. The present rates are also shown in the Table:-

Pairs of stations	Minimum rate chargeable by Air per car		Minimum rate chargeable by Rail per car	
	1982 (Rs.)	1988 (Rs.)	1982 (Rs.)	1988 (Rs.)
Delhi - Bombay	2800	3800	3296	4871
Delhi - Hyderabad	3000	4050	3910	5700
Delhi - Calcutta	3150	4300	3439	5100
Delhi - Madras	3950	5350	5028	6768

The reasons for high rail rates are discussed further in para 11 below:

10. Freight Forwarder Scheme (Parcels)

With a view to fostering growth of traffic, the Ministry of Railways introduced in 1969 a new service called Freight Forwarder Scheme for Parcels. Under this scheme approved freight forwarders collect and deliver consignments from and to the godowns of individual traders in 'Smalls' and offer them for transportation by rail between specified terminals in wagon loads at rates lower than the normal tariff rates. A mention was made in para 8.22 of the Report of the Comptroller and Auditor General of India for 1975-76 - Union Government (Railways) about the working of this scheme relating to goods traffic. In its Action Taken Note on the Public Accounts

Committee's recommendation in para 1.130 of its 70th Report 1977-78, (Sixth Lok Sabha), Ministry of Railways had stated that all possible measures were being taken to effect further improvements in the performance of the Freight Forwarder Scheme.

The performance of this scheme on the Railways the last five years ending 1986-87 was as under:-

Year	No. of routes on which operated	No. of Parcel Vans loaded	Earnings (Rupees in lakhs)
1981-82	16	1246	80.72
1982-83	11	996	81.69
1983-84	12	1975	154.00
1984-85	10	1269	114.15
1985-86	7	1312	139.11
1986-87	4*	210	18.44

* Northern & South Eastern Railways only.

The scheme was not successful and the Railways made no efforts to review and revive the traffic.

A review in Audit of the functioning of the Freight Forwarder Scheme on certain Railways revealed the following:-

(i) In addition to the existing scheme for hard parcels between Delhi and Royapuram, freight forwarder scheme for movement of all types of fresh fruits and vegetables was introduced between 10 pairs of stations by the Northern Railway in July 1984. This was subsequently reduced to 6 pairs of stations in August 1985 and to 5 pairs in September 1986. Actually, the traffic materialised only between 3 pairs of stations, viz., from New Azadpur to Madras, Vijayawada and Secunderabad. The traffic under this scheme declined gradually over the years during 1983-84 to 1986-87 and was completely eliminated during 1987-88 (September 1987) as will be seen from the table below:-

Year	No. of VPs loaded	Weight carried (in quintals)	Earnings (Rupees in lakhs)
1983-84	535	91,438	38.37
1984-85	87	14,745	9.60
1985-86	51	8,709	5.16
1986-87	80	13,749	8.54
1987-88 (Upto September 1987)	Nil	Nil	Nil

The reasons for decline in traffic were higher rates compared to road rates and supply of less number of parcel vans than actually required.

Failure to supply the required number of parcel vans as per indents placed on Naya Azadpur station by the freight forwarders for loading of apples resulted in loss of traffic and revenue of Rs.22 lakhs. The station did not also levy the surcharge of 20 per cent on the perishables booked by freight forwarders by Mail/Express trains. This resulted in an undercharge of Rs.12.33 lakhs during the period 1983-84 to 1986-87.

The number of parcel vans loaded under the Freight Forwarder Scheme on Southern Railway came down from 108 in 1982-83 to 5 in 1987-88 (upto August 1987). Consequently, the earning therefrom was reduced from Rs.12.74 lakhs to Rs. 0.74 lakh.

(ii) On South Central Railway, the number of vans loaded came down from 36 in 1981-82 to 5 in 1983-84 with corresponding reduction in earnings from Rs.2.12 lakhs to Rs.0.44 lakh. There was no traffic during the years 1984-85 to 1986-87.

(iii) A study of the said scheme in South Eastern Railway for the period of six years from 1981-82 to 1986-87 disclosed that against the three routes (2 in Up direction and 1 in Down direction) prevailing in 1981-82, the number of service was brought down to one only in 1982-83 and the same continued thereafter. The service over the two routes viz. Howrah to Hyderabad and Nagpur to Howrah was kept in abeyance as the freight forwarder rates did not cover the dependent cost of haulage. The number of VPs loaded (130 Numbers) and earnings derived therefrom (Rs.9 lakhs) were the lowest in 1986-87.

11. Station to Station Rates

Station to station rates are the concessional rates between two stations quoted by the Railways under delegated powers subject to recovery of cost with a view to winning the traffic to rail.

On Northern Railway, station to staion rates for transportation of Maruti cars were introduced between Delhi and eight destinations though even the cost of haulage was not covered by the rates. The introduction of these rates resulted in a loss of Rs. 2.18 crores from September 1986 to August 1987 in respect of these eight destinations.

In respect of traffic in Maruti cars booked ex-New Delhi to Madras (Royapuram) alone the total loss due to quotation of station to station rates was Rs. 44.78 lakhs. The Northern Railway Administration had not reckoned the empty haulage of VPUs on return journey. A review in Audit revealed that the Southern Railway Administration had quoted station to station rate of Rs. 10,000 per VPU for loading of tractors in the Maruti specials ex-Madras to Delhi to avoid their empty haulage. In August 1986, this was withdrawn resulting in loss of traffic in tractors and empty haulage of Maruti specials on their return journey to Delhi. Non-utilisation of the empty 524 VPUs of Maruti specials during

the period September 1986 to August 1987 involved avoidable haulage charges of Rs. 76.74 lakhs at Rs.14,646 per VPU as assessed by the Southern Railway Administration without any return to the Railways.

The weight for charge for quotation of station to station rates is fixed by the Railway Board based on the recommendations of the Railway Administrations after test weighments of the loadability of wagons. For introduction of station to station rates on Central Railway in regard to banana traffic, the Railway Board fixed the loadability for charge on the basis of an average loadability of 203 quintals from 1 April 1970. This was later reduced to 185 quintals from 16 September 1970. The Central Railway Administration recommended in June 1971 that the loadability be revised to 196 quintals on the basis of test weighments conducted in 1969 and 1970. However, the Railway Board fixed the loadability at 191 quintals only from 15 July 1974. This resulted in loss of earnings of Rs. 2.96 crores in banana traffic carried during the years 1970-71 to 1986-87.

12. Parcel Express Trains

The Corporate Plan (1985-2000) envisaged running of intercity express parcel trains. No concrete steps in this regard had, however, been taken. A test check in Audit revealed that even the existing parcel trains had not been managed adequately as would be evident from the instances discussed below.

A Parcel Express train between Madras and Delhi with a load of 20 VP/VPUs was introduceed with the approval of the Railway Board to run on every Friday ex-Madras from 23 January 1987 and on return journey every Tuesday ex-Delhi from 27 January 1987 on the route of Madras-Jammu Tawi Janata Express (which was cancelled with effect from 11 November 1986) on the ground that with the cancellation of this train the movement of parcels from Southern Railway to Delhi was severely affected. The Southern Railway Administration observed in December 1986 that the traffic offering towards Delhi and other intermediate junction stations before and after cancellation of Janata Express train indicated a decrease in traffic of 6 tonnes per day involving an earning of Rs.8,500 per day. The decision to introduce a Parcel Express train composed of 20 VP/VPUs to make good an estimated loss of earnings of about Rs.8,500 per day was not judicious in view of the high cost of haulage of about Rs.2.19 lakhs involved in one running of the train ex-Madras to Delhi (2195 km.). However, the actual running of the Parcel Express trains ex-Madras was with loads of only 7 to 14 VPUs plus 1 SLR during 23 January 1987 to 27 February 1987 test checked in Audit. Consequent upon restoration of the Janata Express from 3 April 1987, the running of the Parcel Express trains was also discontinued from the same date.

The total earning to the Railway from running of the Parcel Express from 23 January 1987 to 3 April 1987 was Rs. 18.14 lakhs as against an expenditure of Rs.21.90 lakhs incurred on haulage of the train during the period.

A Parcel Express train runs bet-

ween Howrah and Nagpur on South Eastern Railway. The Railway Administration could not meet the demand of the trade for booking of parcel traffic by these Parcel Express trains. A sample analysis of the position of indents for covered wagons and the stock actually made available for loading and clearance at Howrah station during selected periods from 1 July 1985 to 15 July 1985, 16 August 1985 to 31 August 1985 and 1 September 1985 to 23 September 1985 revealed that as against the registered demands for 145, 91 and 140 covered wagons, the number of wagons made available for loading was only 41, 40 and 67 respectively. The percentage of loading against the available parcel traffic thus fell short to the extent of 45, 42 and 50 per cent during each of the selected periods respectively. Against the target time of 50 hours in the Up direction and 42 hours 40 minutes in the Down direction, the actual time taken by these trains ranged between 63 hours 33 minutes and 83 hours 26 minutes in the Up direction and between 72 hours 36 minutes and 81 hours 27 minutes in the Down direction during June 1986 to November 1986.

13. Infructuous expenditure on construction of Parcel Transhipment siding

A parcel transhipment siding at Barauni Junction on North Eastern Railway was provided at a cost of Rs.5.13 lakhs under the Barauni-katihar conversion project. Though the siding was completed in June 1985, it was not commissioned due to several defects coming to notice. The defects were removed and the siding was put to use only on 14 June 1987. Its use was, however, discontinued from 14 July 1987 and the transhipment work relating to this siding was done at Garhara 5 kms. away. Consequently, the expenditure of Rs.5.13 lakhs incurred on construction of the siding was rendered infructuous.

2.6 Chittaranjan Locomotive Works - Manufacture of traction motors

1. Introduction

Chittaranjan Locomotive Works (CLW) set up in 1950 for manufacture of steam locomotives switched over to production of electric locomotives in 1961 and Diesel shunters in 1967. Under a collaboration agreement entered into in November 1962, CLW acquired manufacturing rights for production of traction motors and other electrical equipments and parts of electric locomotives. A traction motor shop was established in 1966 and production of traction motors was commenced in February 1968 to suit AC 50 cycles freight locomotives. Consequent on the decision of the Railway Board in September 1967 to manufacture ACMT type mixed type locomotives at CLW, the collaboration agreement was extended by a supplementary agreement which, inter alia, provided for production of traction motors suitable to ACMT locomotives. The production of traction motors for the latter was commenced in 1971-72.

2. Scope of Review

Performance of the CLW in regard to production of traction motors was reviewed in Audit.

3. Highlights

- **Against the target of 488 motors per annum indicated in 1978-79, the production decreased substantially from 402 in 1982-83 to 305 and 325 during 1984-85 and 1985-86 respectively. Out of the total overhead expenditure of Rs.381 lakhs and Rs.364 lakhs for the two years, the element of unproductive expenditure was Rs.102.87 lakhs and Rs.80.08 lakhs respectively. The loss in direct labour hours rendered idle due to fall in production could not be assessed.**

- **Belated adoption of Kapton conductors (only from 1985-86) despite the fact that such conductors were being used all over the world and were also available indigenously resulted in incurrence of rewinding cost amounting to Rs.3.19 crores.**

- **The non-adoption of the use of Kapton tape fully in replacement of failed Glass-Mica - Glass Silica during the period 1983-84 to 1985-86 resulted in extra expenditure of Rs.11.15 lakhs.**

- **The rejection of 1070 armature heads (value Rs.36.20 lakhs) out of 5012 produced during the period April 1980 to March 1987 due to dimensional deviations and presence of excess metal resulted in loss of Rs.18.10 lakhs (labour content).**

4. Capacity Utilisation

A target of 488 motors per annum was indicated in 1978-79. The average production during 1978-79 to 1982-83 was, however, only 415. The production decreased from 402 in 1982-83 to 325 in 1985-86. The production of motors in 1986-87 was, however, 440. The CLW stated in January/ February 1988 that the actual capacity available was only about 420 motors and the same was to be stepped up to 528 with the creation of additional facilities under a scheme of modernisation. Explaining the reasons for fall in production during 1984-85 and 1985-86 they stated that the production was lower in 1984-85 due to budgetary constraints and in 1985-86 due to reduced locomotive building programme for that year. It was also stated that failure of a sole supplier of commutator micanite segments and cones during 1985-86 contributed to reduction in target and achievement. Efforts made to import the item was stated to have not materialised in 1985-86. The fact remains that the production fell continuously and the shop had not ensured availability of raw materials. Compared to the average of 415 the shortfall of 27 per cent and 22 per cent in 1984-85 and 1985-86 alone resulted in overhead expenditure of Rs. 102.87 lakhs and Rs.80.08 lakhs respectively being unproductive out of the total overhead expenditure of Rs.381 lakhs and Rs.364 lakhs respectively. The loss in direct labour hours rendered idle due to fall in production could not be assessed in Audit.

The Administration stated that there was no overall loss in direct labour hours because the production including spares had been almost equal to installed capacity and the capacity utilisation was 87.14 per cent and 94.52 per cent respectively. This, however, is not tenable as the actual prodcution of traction motors during the years 1984-85 and

1985-86 was much less than the installed capacity of 488 traction motors excluding 10 per cent spares.

5. Modernisation

As many as 106 items out of 278 items of machinery and plant had completed their prescribed period of 15 years life. Three ovens and 2 cranes alone recorded breakdown of 5765 hours during the period April 1986 to February 1987 test checked in Audit in one shop. In another shop 35 machines remained idle as production of MG traction motors was cut drastically since 1986. An estimate was submitted by CLW to the Railway Board in 1978 for modernisation and upgradation of technology and as a part of general improvement in productivity of magnet frame machining section involving CNC technology, Administration initiated action for procurement of two machines from abroad in July 1983. These machines were planned to centralise the various machining operations being carried out on a comparatively large number of machines. Though tender for the two machines was invited in November 1983, the tender was finalised and purchase order was placed on a Hungarian firm only in January 1985. The machines including accessories and tools costing Rs. 96.69 lakhs were received in knocked down condition in December 1986 and were ready for proving trials by June 1987. However, the commissioning certificate has not been issued so far (December 1988).

The Administration stated in January 1989 that the machines had been under prove-out and more or less in constant and regular use in the shops since November 1987. They further explained that the commissioning and proving test certificate could not be issued as the discrepancies in the spare parts and toolings had to be sorted out and that the balance 10 per cent payment had not been made to the firm.

6. Innovations

(i) In order to avoid failures in armature due to overheating, earth-fault and burns, etc. Kapton covered copper conductors were provided as an experimental measure in 100 motors built during 1975 to 1978 in place of glass braided conductors. CLW switched over to Kapton conductors only in 1985-86 though test results of the trials carried out on a limited scale and for limited period on Northern Railway had indicated reduction of 5 per cent in overall failure rate of conductors. The proposals of the Railway Board to import Kapton conductors were earlier turned down by Director General, Technical Development (DGTD) in 1981 and again in January 1983 on the ground that the material was available indigenously. Though Kapton conductors were being used all over the world due to their proved superiority and they were also available indigenously, the Railway Board issued instructions to CLW only in January 1983 to procure the indigenous Kapton conductors. As per their assessment each failure of glass braided conductors involved rewinding costs of Rs. 0.95 lakh. Due to belated adoption of Kapton conductors rewinding costs incurred on 336 glass braided conductors which failed during the period 1978-79 to 1985-86 amounted to Rs.3.19 crores.

CLW stated in January/February 1988 that introduction of Kapton conduc-

tors was done by the shops on their own as there was no technical advice available from the collaborators in this regard. It involved development and tests and hence the delay was not inordinate.

The Administration further stated in January 1989 that there had been no undue delay as the item, being a long lead one involved ordering through the tendering process and manufacturers had to procure bare copper and Kapton file through import. The reasons for the delay are not convincing.

(ii) Failure of stators due to absorption of moisture, etc. was tried in CLW in 1982-83 by replacing one layer GMGS (Glass - Mica - Glass Silica) tape by one layer of Kapton polymide tape. The total anticipated saving in replacement costs in the manufacture of 400 motors was Rs.21.67 lakhs, CLW has not so far adopted the use of Kapton tape fully. The extra expenditure in replacement of failed GMGS tape during the period 1983-84 to 1985-86 was Rs.11.15 lakhs.

The Administration strangely enough stated in January 1989 that the saving of Rs.21.67 lakhs as anticipated was a theoretical exercise and had no practical relevance and hence the cost of repair of coils which failed during in-stage testing might not be considered as extra expenditure. This argument, however, is not tenable as modified insulation scheme was to result in saving in costs. There cannot be a saving in theory and extra expenditure in practice.

(iii) Instructions were issued in August 1980 to ensure that armature head castings had dimensions as specified and without excess metal as this was likely to cause hindrance in ventilation of the traction motors. Despite this there were 46 failures, out of the total 226, in Ghaziabad shed of Northern Railway due to incorrect adoption of heat treatment process. A tesk check in Audit of the steel foundry revealed that during April 1980 to March 1987 as many as 1070 armature heads out of 5012 produced were rejected due to dimensional deviations and presence of excess metal. The 1070 armature heads were valued at Rs.36.20 lakhs of which Rs.18.10 lakhs (labour content) would be a total loss.

The Administration stated that the defective castings cannot be totally eliminated and added that it would not be correct to consider defective castings as total loss as the defective castings are re-melted.

7. Performance

7.1 Rejections in the manufacturing process

The manufacutre of armature undergoes seven operations like commutator field coil assembly, main pole coil assembly, armature coil assembly, etc. each operation having stages varying in number from 14 to 38 and requiring multiple inspection at different stages of operation. For all the seven operations, number of inspections are prescribed. Similar is the case with stators. Inspite of the various interstage inspections, the provision of which had evidently been made to detect the defects in various stages of production and for which substantial manhours were also involved, the overall rejections of traction motors during inspections since the year 1980-81 remained very high as

indicated below :

1980-81	49.76	per	cent
1981-82	60.35	"	"
1982-83	53.31	"	"
1983-84	45.73	"	"
1984-85	50.55	"	"
1985-86	37.24	"	"
1986-87	18.68	"	"

The rejection in the final stage of inspection resulted at times in dismantling of motor requiring rectifications even at primary stages. This involved substantial amount of rectification work. The total hours of rectification work as also the piece work bonus involved during 1984-85 and 1985-86 were as follows:-

Year	Total hours	Amount of piece work bonus
1984-85	2,37,702	Rs.2.08 lakhs
1985-86	1,45,589	Rs.1.32 lakhs

The Administration explained (January 1989) that these were inherent in this type of activity.

(a) The percentage of failures in Northern Railway was as high as 87.17 followed by South Central Railway (45.34), Western Railway (29.41) and South Eastern Railway (13.30). The major failures were on account of earthing of armature due to low insulation and resistance, solder run out, burning behind commutator riser, failure of steel hand armature, damaging of evalutes, etc. The failures on account of the first three causes were also noticed in the test -bed during the process of manufacture This indicates that measures taken to rectify these defects in the test-bed to withstand the pressure during service were not adequate. The CLW Administration replied that a good number of failures had been due to working of the motors beyond their capability.

The Administration stated (January 1989) that these failures were no reflection on adequacy of rectification during the assembly. This is not convincing.

In regard to steps taken to avoid failures, the Administration stated that motors of improved design, modified process and higher rating were being provided on the locomotives for freight service and for passenger loco system, and changes like modification of gear ratio were introduced.

(b) A test check of failures of traction motors reported during January to May 1984 and October 1984, January 1985 and February 1985 by the Zonal Railways showed that on three Zonal Railways viz., South Eastern, Central and Western Railways 23 traction motors failed within 6 months of commissioning, 34 motors within one year, 13 within 3 years and 11 within 10 years. As against the normal life of 20 years plus another 12 years on rewinding of traction motors, the TAO-659 traction motors failed prematurely without even giving service of 10 years.

The Administration stated in January 1989 that there might be cases of premature failures but assured that strict quality control during manufacture is being continuously enforced.

2.7 South Central Railway - Planning, execution and performance of Wagon Repair Workshop, Rayanapadu

1. Introduction

To meet the increased workload of periodical overhaul (POH) of broad gauge wagons, the Ministry of Railways made provision in 1973-74 for the construction of a wagon repair workshop at Rayanapadu near Vijayawada on the South Central Railway at an estimated cost of Rs. 18 crores. The workshop scheduled to be commissioned in March 1979 was to attain an annual POH capacity of 13,600 four-wheeler units from 1980-81. The Project Report contemplated completion of Civil Engineering works by 1977-78 and erection of plant and machinery by 1978-79 in prescribed stages. The sanction for the detailed estimate for Rs.14.83 crores was communicated by the Railway Board in July 1975.

2. Highlights

- **The non-fixing of time schedule for completion of works resulted not only in delay of over 9 years in completion of works but also in cost overrun of Rs.11.30 crores.**

- **The delay in termination of contract for over 3 years and in placement of order for winches on another firm for over a year entailed extra expenditure of over Rs.8 lakhs.**

- **The delay of over 20 months in placing the order for liquid oxygen resulted in an avoidable expenditure of Rs.15 lakhs.**

- **The premature overhaul of wagons not due for periodical overhaul resulted in avoidable expenditure of Rs.5.55 lakhs. Idling of wagons received in advance of the due dates for POH and returned caused detention to wagons. Against the target of 7 days for POH, actual time taken was in excess of 15 days. Earning capacity of Rs.49 lakhs and Rs.79 lakhs respectively was lost on account of such detentions.**

3. Implementation of Project

(i) No time schedules were fixed for completion of each item of the civil works resulting in delay of 9 years in completing these works. Against the estimated cost of Rs.854 lakhs for these works, the actual expenditure upto March 1988 was Rs.1524 lakhs. Out of the total increase of Rs.670 lakhs in the cost, while Rs.422 lakhs was attributed to escalation in prices, Rs.148 lakhs and Rs.100 lakhs were due to additional items of work or change in scope of work and increase in General Charges respectively. The additional items executed included works like Basic Training Centre, Hostel, Cash Office, Station Building, modifications to the yards at Rayanapadu and Vijayawada, etc. As these works were essential to the project, their omission from the initial estimation indicated defective planning. Basic Training Centre to train 200 apprentices in various trade and hostel facilities were provided at a cost of Rs.13.76 lakhs in 1981 and 1984 respectively. Only one batch of 42 apprentices was trained during the period 1982-83 to 1985-86. Since June 1985 the facilities have remained unutilised except for a portion of

the hostel which was given for running a school by a Railway Women's Organisation.

Besides there was escalation in the cost of plant and machinery to the tune of Rs. 404 lakhs. Against the sanctioned estimated cost of Rs. 14.83 crores (July 1975), the total expenditure booked upto end of March 1988 was Rs. 26.13 crores involving an increase in project cost to the tune of Rs. 11.30 crores.

The Administration stated in July 1988 that the escalation in the cost of the project was due to additional facilities found subsequently necessary and due to steep spiralling cost of material and labour.

(ii) The orders for plant and machinery were not dovetailed with the civil engineering facilities needed as evident from the following:

- By the target date of commissioning, i.e. March 1979, only 191 items out of 441 items (value Rs. 322 lakhs out of total Rs.520 lakhs) had been procured.

- 19 items procured at a cost of Rs. 143 lakhs were erected and commissioned after delays ranging from 8 to 50 months after procurement due to delay in completion of the connected civil engineering works.

- Out of 3 machines procured at a cost of Rs. 6.88 lakhs in December 1982, March 1985 and April 1985 only the machine costing Rs. 2.57 lakhs received in April 1985 was commissioned in October 1987. The other 2 machines are yet (August 1988) to be commissioned due to want of parts/defects.

(iii) Provision was made in the project report for eight electrically operated portable type winches at a cost of Rs.3.20 lakhs for pulling wagons in the Body Repair Shop. Order was placed on firm 'A' in April 1979 for supply of 5 winches at a cost of Rs. 1.73 lakhs by July 1979 (later extended upto September 1981). As the firm failed to complete the supplies the Railway Administration cancelled the order in June 1985 and placed an order in November 1986 on firm 'P' for supply of five winches at a cost of Rs. 10.49 lakhs. The supply was effected in April 1987 and the winches were commissioned only in December 1987 as the connected civil and electrical works were not ready.

Due to delay in termination of the contract with firm 'A' over 3 years and delay in placement of order on firm 'P' for over a year after termination of the contract the Railway has to bear extra expenditure of over Rs. 8 lakhs. The effect of delay of over 6 years in provision of the winches on production could not be assessed. No action to fix responsibility for the failures at various stages had been taken (July 1988).

The Administration explained in June 1988 that the delay had not in any way resulted in any appreciable financial loss to the Administration either by way of loss in outturn or due to cost factors. This is, however, not acceptable as it has been admitted by the Administration that the enforcement of risk and cost on the defaulting firm had become untenable because of the delay in the cancellation of the purchase order.

(iv) Despite instructions of the Railway Board issued in August 1973 to provide a suitable facility for oxygen and dissolved acetylene gas at the workshop, the facility was not planned and provided as the cost of Rs.20 lakhs was considered to be high. The Railway Administration sought and obtained Railway Board's approval in August 1981 for installation of a plant on emergency basis for supply of the two gases. The offer of firm 'A' to provide the facility at a cost of Rs.10.78 lakhs was accepted in December 1981. The work was to be completed by 25 February 1983. The firm supplied drawings for construction of sheds in April 1982. Tenders for construction of the sheds were invited in April 1983 and contract was awarded to firm 'B' in September 1983. The sheds could be got constructed only in November 1984. Consequently the firm 'A' commenced work only in July 1983 and erected the storage plants in March 1985. The Railway Administration tested the distribution system in July 1985.

Liquid oxygen converter (free of cost) was to be supplied if order for liquid oxygen was placed with the firm subject to certain quantity limits for the order. The Railway Administration placed the order for compressed oxygen on firm 'A' only in March 1987 involving a delay of over 20 months. The plant could not be fully commissioned till October 1987. Thus, while the investment of Rs.10.78 lakhs remained idle, the Railway incurred extra expenditure in procurement of compressed oxygen in cylinders to the extent of Rs. 4.26 lakhs for the period April 1985 to July 1986 alone. The avoidable expenditure for the entire period of delay i.e. from February 1983 to September 1987 is assessed at Rs. 15 lakhs. The plant became fully operational only by June 1988.

4. Production Performance

(i) The outturn increased gradually from 3544 units in 1980-81 to 8740 in 1984-85, 9295 in 1985-86 and 10012 in 1986-87. The targeted capacity of 13600 had not been achieved even six years after the commissioning of the workshop. The workshop had targeted an outturn of 10,000 units for the year 1986-87. The shortfall was attributed to non-filling up of vacancies and 25 per cent absenteeism. Steps taken to ensure fulfilment of the targets were not known.

(ii) A test check in Audit revealed that the workshop overhauled 433 wagons not due for POH during the period April 1984 to September 1986 resulting in avoidable expenditure of Rs. 5.55 lakhs.

During April 1984 to December 1986 the workshop received 1771 wagons which were not due for POH, 1382 wagons received were erroneously marked/loaded with materials for POH in advance of the due dates. These wagons were sent back after an average delay of 3 days per wagon. The loss of earning capacity due to idling of these wagons was assessed in Audit at Rs. 49 lakhs.

(iii) A test check of wagons received for POH during the period April to June 1986 revealed that 583 units were in the workshop for over 15 days and another 312 units for over 30 days as against the target of

seven days per wagon. Earning capacity of Rs.79 lakhs was lost during the period April to June 1986 on account of such detention to wagons in excess of 15 days in the workshop.

The Administration stated that the wagons had to be detained for more number of days as the same could not be overhauled because of their immobilisation due to heavy damages and due to non-availability of materials in stock at the time of repairs. The detention to wagons, according to them, was unavoidable. These contentions of the Administration are, however, not acceptable because immobilisation of wagons due to heavy damages was not a new feature and the Administration could have made arrangements for stocking adequate quantity of materials needed for heavy repairs.

(iv) The quality of repairs carried out in the workshop was poor as evident from high incidence of rejection during inspection by Neutral Control. The rejection of 5611 wagons out of 13009 wagons during the period April 1985 to November 1986 was due to bad workmanship in 19.61 per cent wagons and 23.52 per cent wagons due to use of defective/non-standard materials during repairs. The wagons were turned out without rectifying the defects pointed out by Neutral Control inspections.

According to Administration, exemption had been accorded for "local passing" of such wagons deficient of transition screw couplings and fitted with steel floorings as these would not have any effect on the capabilities, road worthiness and safety of the wagons. Such "local passing" was done to minimising detention time.

5. Other topics of interest

(i) Under utilisation of machinery: The two wheel lathes in operation turned out 31376 wheels in 3015 shifts during the period April 1984 to December 1986 giving an average output of 10.4 wheelsets per shift per lathe against the rated capacity of 24 wheelsets per shift per lathe. The cost of each lathe is Rs. 45 lakhs. Thus, one lathe worth Rs.45 lakhs was on the whole surplus.

The Administration stated in July 1988 that less outturn from the wheel lathes cannot be termed as underutilisation since these were meant to cover the needs of the arisings of the workshop to its full capacity and that the outturn from these wheel lathes was commensurate with the arisings of the workshop. This indicated that had the lathes been working to capacity only one lathe would have been sufficient to meet the requirements.

(ii) Misappropriation of stores: During 1979-80 and 1980-81 the Depot Store Keeper, Wagon Repair shop drew M.S. Scrap materials valuing about Rs.5.66 lakhs from the construction depots located at Vijayawada against valid requisitions placed by the Assistant Controller of Stores of the workshop. The materials were not accounted for in the stores depot of the workshop. A preliminary enquiry revealed that the materials taken over by the Depot Store Keeper and transported through private lorries did not reach the stores depot.

The Railway Administration stated

in July 1988 that a case was filed in the court of the Principal Special Judge, Hyderabad. The Court in their judgement of July 1982 had found four railway officials responsible. No departmental action against the staff involved (3 officials) could be initiated as they had retired from Railway Service, the case being timebarred. Action against the fourth official departmentally is yet to be taken (July 1988).

2.8 Outstanding claims against defaulting contractors.

1. Introduction

Railways procure stores for maintenance and Capital works either through Director Generai of Supplies and Disposals (DGS&D) or through invitation of tenders. General Conditions of the Contract and paras 762 to 764 and 772 of Indian Railway Code for Stores Department provide that in the event of failure by any firm to supply the materials within the stipulated period of delivery Railways are authorised to make purchases from other sources at the risk and cost of the defaulting firm. When under such provisions in the contract the materials are purchased at rates higher than those shown in the contract of original firm the extra expenditure on this account is recoverable from the defaulting firm.

Similarly, in cases where advance payments for the stores are made to the firms on the basis of Inspection Certificates and Railway Receipts and stores are subsequently rejected by consignees on account of deficiencies in specification and quality, amounts so paid are recoverable from the defaulting firms.

2. Scope of Review

The scope of the review is to analyse the outstanding dues against the defaulting firms and action taken by Railways to clear the outstandings. The review also points out several lapses and failures on the part of Railways to take action for recovery of dues from the defaulting firms.

3. Highlights

- **Major lapses in the managerial control system continued in spite of specific comment in the Report of the Comptroller and Auditor General of India for the year 1978-79 - Union Government (Railways) highlighting the need for creating an effective machinery to enforce recoveries of risk purchase dues. Total claims against defaulting firms increased from Rs.2.71 crores in 1978 to Rs.6.21 crores in 1986.**

- **Claims of Rs.31.12 lakhs became unsustainable under the provisions of the contract due to delayed action by Railways.**

- **Railways suffered a loss of Rs.13.49 lakhs due to non-enforcement of recovery of risk cost from defaulting firms.**

- **Claims of Rs.23.57 lakhs had become unsustainable due to non-observance of risk purchase procedure by Railways.**

- Claims of Rs.34.20 lakhs were

pending against firms for supply of defective stores against which 95 per cent advance payments had been made.

- **Claims of Rs.6.08 lakhs against the defaulting firms had been written off without proper scrutiny.**

- **Total claims pending in Arbitration/Courts increased from Rs.65 lakhs in 1978 to Rs.179.79 lakhs in 1988. Progress of implementation of Arbitration Awards was also very slow on Railways.**

- **Orders were placed on firms without obtaining security deposits and verifying financial capability of the firms to execute the orders. Claims of Rs.29.43 lakhs were outstanding against defaulting firms on this account.**

4. Heavy outstanding against defaulting firms

The position of outstanding claims against defaulting firms was reviewed in 1978-79 and it was pointed out that the quantum and duration of outstanding claims against defaulting firms needed concerted efforts for clearance.

Total outstanding claim against defaulting firms as on 31 March 1986 is indicated below:

Sl. No.	Railway	Items	Amount (lakhs of rupees)
1.	Central	874	76.19
2.	Eastern	Not available	Not available
3.	Northern	3005	262.61
4.	North Eastern	707	44.28
5.	Northeast Frontier	59	14.78
6.	Southern	498	29.95
7.	South Central	590	35.95
8.	South Eastern	Not available	Not available
9.	Western	1024	106.89
10.	Railway Production Units	312	50.58
	Total	7069	621.23

Quantum of outstanding claims against defaulting firms had risen from Rs.2.71 crores in 1978 to Rs.6.21 crores in 1986. The reasons for non-clearance of these items are attributable to the following:

(a) The Stores Department of Railways, after addressing the defaulting firms to remit the risk amount involved, did not take effective follow up action in most of the cases;

(b) The Accounts Wing of Railways did not effectively monitor the clearance except sending periodically the list of defaulting firms and the amounts involved against each defaulting firm to the Stores Department;

(c) Non-observance of proper procedures for risk purchase action by Stores Department;

(d) Non-replacement of rejected stores by the defaulting firms; and

(e) Non-implementation of Arbitration Awards.

5. Delayed placement of risk purchase order

(a) As per "Standard Conditions of Contract" the recovery of risk cost can be enforced only if the orders for risk purchase are placed within six months (9 months in case of materials not easily available in the market) of the termination of the contract.

Review in Audit revealed that risk purchase orders were not placed within the stipulated period and delays ranged over 6 months to 24 months. Delay in placement of risk purchase orders had made the claims against the defaulting firms untenable. Total loss on this account to Railways in respect of Central, Western, South Central, Northeast Frontier Railways and Integral Coach Factory (ICF) amounted to Rs.31.12 lakhs.

(b) The Diesel Locomotive Works (DLW) Administration had placed 83 purchase orders during 1985 and 1986 for a tota' value of Rs. 22.43 lakhs. Though the firms failed to supply the stores even after repeated extensions of the original delivery date, the DLW Administration did not initiate risk purchase action against the defaulting firms.

(c) In January 1984, ICF Administration placed an order on a firm for supply of 2000 numbers of seat frames at a cost of Rs.2.10 lakhs exclusive of sales tax. The seat frames were to be supplied by 30 September 1984. The firm did not supply the materials by that date inspite of several reminders by ICF Administration. The order was, therefore, cancelled on 1 March 1985 at the risk and cost of the defaulting firm. But ICF Administration did not place any risk purchase order before November 1985. The entire quantity of risk purchase supply was received in April 1986. The defaulting firm was asked to pay the extra cost of Rs.1.45 lakhs in April 1986. The firm refused to pay the amount on the ground that risk purchase action had not been taken within the stipulated period of nine months. On a proposal for arbitration in January 1988, the Law Officer advised that as purchase action was taken belatedly risk purchase claim would not be tenable before the Arbitrator. The Arbitrator entered on the reference in May 1988.

6. Loss due to non-enforcement of recovery of risk cost

The review revealed that Railways in many cases had not taken risk purchase action against the defaulting firms. A few cases are indicated below:

(a) Western Railway Administration placed a purchase order on a firm on 17 December 1984 for supply of 91 MTs of round steel structurals at the rate of Rs.4,600 per MT. The order was to be completed within 6/8 weeks. As the supply did not materialise even after extension of the delivery period, the order was cancelled on 8 May 1985 at the risk and cost of the firm. No action has been taken by Western Railway Administration to recover the extra cost of

Rs.2.03 lakhs incurred at the risk of the defaulting firm.

(b) South Central Railway placed two orders in April/May 1979 for purchase of flat cotter. The firms failed to complete the supply of full quantity and the Purchase Orders were cancelled and risk purchase action was taken within stipulated period of time. Though risk purchases were legally tenable South Central Railway Administration did not enforce recovery of Rs.59,000 towards risk cost.

(c) North Eastern Railway Administration placed an order on a firm for supply of lead base antifriction metal in June 1984. As the firm failed to supply the stores, the purchase order was cancelled in October 1984 at the risk and cost of the defaulting firm. Accounts Department was accordingly advised to recover Rs. 5.98 lakhs from the pending bills of the firm towards risk cost. But no action was initiated by the Accounts Department for recovery of the amount. In three other cases also, North Eastern Railway Administration did not initiate action for recovery of outstanding amount of Rs. 1.82 lakhs against defaulting firms.

(d) The Southern Railway Administration did not take effective action in time to recover an amount of Rs.3.07 lakhs due from four firms. After a lapse of over seven years only, the Railway Administration took action to trace the firms.

The Railway Administration stated (October 1988) that action had been taken by reminding the firms. As the firms were not in existence, legal and other measures could not be taken. The amount has become irrecoverable.

7. Loss due to non-observance of procedure for risk purchase

(a) South Central Railway

In a case of purchase of M.S. Tie bars by Construction Organisation of South Central Railway, a purchase order was placed without obtaining security deposit. The firm defaulted and risk purchase dues amounting to Rs.13.30 lakhs are still outstanding. Had the security deposit been collected, Rs.2.06 lakhs could have been adjusted.

In another case, an order for purchase of M.S. Tie bars was placed in August 1984 by Open Line Organisation but the firm failed and risk purchase cost amounting to Rs.5.42 laksh was due. The defaulting firm contested the tenability of risk purchase through a legal notice on the ground that Railway Administration, during the pendency of the contract, changed the destination station for supply of stores without the consent of the firm which amounted to breach of contract. No further action has been taken by the Railway Administration in this case.

(b) Northeast Frontier Railway

An acceptance letter for 99393 Kgs. of S.M. wire was issued on 27 August 1984 to a firm with the instruction that material should be supplied within six to eight weeks from the date of issue of the acceptance letter. Formal purchase order was issued on 31 October 1984 after two months of the issue of acceptance letter. The firm did not accept the purchase order on the ground that their quotation was vaild for 60 days only from the date of opening of the tender

(upto 21 August 1984). The Railway Administration did not agree to the contention of the firm and initiated risk purchase action in August 1985. Claim of Rs. 2.29 lakhs against the firm is still outstanding.

Limited tenders were invited for purchase of 63600 numbers of universal couplings in March 1984. When the tender was under consideration, the Northeast Frontier Railway Administration, in view of the urgency, placed an order on a firm on single tender basis in June 1984 for supply of 1300 numbers of couplings. The supply of 1300 numbers ordered was completed on 20 July 1984. This firm had earlier quoted the lowest rate against the limited tenders for 63600 numbers. The Tender Committee was, however, not informed of the urgent purchase of 1300 numbers against their quotation for 63600 numbers. When advance letter of acceptance was issued to the firm in June 1984 for supply of 63,600 nos. of couplings, the firm refused to comply with this order on the ground that with the delivery of 1300 numbers of couplings against June 1984 order within the stipulated period the contract stood discharged and the subsequent order of July 1984 was not binding on it as it was not placed within the validity period of the offer. Legal opinion supported the view of the firm.

As the contract for the entire quantity was not awarded to the firm within the validity period the recovery of cost of risk purchase could not be enforced and as a result the Railway Administration had sustained a loss of Rs. 2.56 lakhs.

Railway Administration stated (August 1988) that this case was a combination of freak circumstances. Before the Tender Committee could finalise its recommendations, the Controller of Stores, due to urgent requirement of the material, had decided to place an order for 1300 numbers of couplings on the firm on a single tender basis.

The contention of the Railway Administration is not acceptable as the Controller of Stores, while issuing the letter of acceptance on 15 June 1984 for 1300 couplings, did not ask the firm to treat this purchase as a separate one and wait for further order for 63,600 couplings within the extended date of validity of offer. Had this fact been made clear to the firm, the loss of Rs.2.56 lakhs could have been avoided.

8. Dues from the firms due to rejected materials

On South Central Railway, as on 31 March 1987, there were 141 cases of dues from the firms for a total amount of Rs.34.20 lakhs towards the advance payments made to them on materials which were rejected on receipt. A study of some of the high value items disclosed the following:

(a) 24 coils for YDM-4 locomotives valued at Rs.4.58 lakhs received in August 1985 by Diesel Locomotive Shed, Guntakal from DLW without any indent having been placed therefor were found unsuitable based on tests and were lying rejected (December1987).

(b) A quantity of 34.33 MTs (304 reams) of ticket board yellow and 3.4080 tonnes (30 reams) of ticket board drab valued at Rs.2.74 lakhs were supplied during September 1981 to

November 1981, without prior inspection. On receipt of the supplies, samples from each consignment were sent for inspection as per the terms of the contract to the Deputy Controller of Inspection, Calcutta who held that the material did not conform to the specifications and advised the firm accordingly during September 1981 to January 1982. The firm initially contested the rejection in December 1981 as time barred but subsequently agreed to replace the unsuitable ticket boards in January 1982. Rejected ticket boards are yet to be replaced by the firm (December 1987). An amount of Rs. 2.74 lakhs paid to the firm as advance payment, sorting charges of Rs.5,720 and ground rent which is yet to be assessed, stand recoverable.

(c) Against the orders placed on a firm in August 1980 and July 1982, 7136 cells supplied at a cost of Rs. 2.49 lakhs were found sub-standard and were rejected for use in works. The firm contested the rejection in August 1983 and the matter was referred to an Arbitrator in 1984. The final award of the Arbitrator is awaited (December 1987). Since guaranteed shelf life of these cells was only nine months there is hardly any possibility of using these sub-standard cells at this date and, therefore, the advance payment of Rs.2.24 lakhs for these cells had become totally infructuous.

(d) A purchase order was placed in April 1985 on a firm for supply of 4675 numbers of spring buckles on a firm at a cost of Rs.2.54 lakhs. The firm supplied by August 1985 a quantity of 2,202 numbers duly inspected by *RITES. On receipt the consignee, District Controller of Stores (DCOS), Rayanapadu rejected 2088 numbers in September 1985 due to defects in buckles. The firm was asked to refund the entire amount of Rs. 1.27 lakhs paid towards 95 per cent advance payment in October 1986. There was no response from the firm till December 1987.

9. Slow progress of waiver/writing off of recoveries arising out of risk purchases

The Railway Board in January 1978 authorised General Managers to waive recoveries where the amount was upto Rs. 2000 or less in each case subject to the condition that suitable penal action would be taken against the firm. But the progress of clearance of outstanding balances was very slow in all Railways especially in Northern Railway. Against the total outstanding amount of Rs.422 lakhs to end of February 1988, only 54 cases amounting to Rs. 93,636 could be decided and adjusted in May 1987.

During the period August 1983 to December 1987, Arbitrators gave awards in 176 cases against risk purchase claims for Rs.58.98 lakhs. Of these, 119 awards for Rs.24.30 lakhs were given in favour of Northern Railway Administration. The Administration realised only Rs.4.45 lakhs and the balance Rs.19.85 lakhs is still due for recovery from the defaulting firms. No concrete steps had been taken by Northern Railway Administration for recovery of this amount.

On South Central Railway an amount of Rs. 6.08 lakhs was written off in 378 cases and out of them in 122 cases an amount of Rs.1.25 lakhs was written off without even

* Rail India Technical and Economic Services

linking the purchase orders and the names of the firms.

In Integral Coach Factory, Arbitrators decided against Railway Administration in seven cases but action to write off Rs. 2.95 lakhs is yet to be taken by Integral Coach Factory Administration.

As on 31 March 1988, an amount of Rs.1.79 crores in respect of claims of Railways (except Eastern, South Eastern and Northern) was pending in Arbitration/Courts.

10. Non-implementation of the recommendations of Vendor Evaluation Committee on Inventory Management on Railways

The Committee on Inventory Management on Railways set up in 1973 recommended, inter-alia, that registration of firms as approved suppliers should be done carefully after assessing the capacity and capability of the firm and exercising necessary checks prescribed by the Railway Board from time to time. Though the recommendations of the committee were accepted by the Railway Board in full, the recommendations have not been implemented completely by Railways as mentioned below.

On South Central Railway, though six firms repeatedly failed in adhering to delivery schedules against past orders, the Railway Administration continued to place orders on these firms. An amount of Rs.9.31 lakhs is due from the firms towards risk cost.

On Chittaranjan Locomotive Works (CLW) six orders were placed on a firm during the period from November 1983 to May 1986 for procurement of loco components without verifying the financial capability of the firm. The firm could not complete the orders and a risk cost of Rs.33,910 was incurred by CLW. The amount is still to be recovered from the firm.

Three purchase orders were placed on two firms by ICF during the period from February 1973 to March 1984 without proper assessment of their financial position. Both the firms defaulted after making part supply to ICF. An amount of Rs.13.30 lakhs is still pending against the two firms. An amount of Rs.12.20 lakhs was awarded by the Arbitrator on 27 March 1986 in favour of ICF Administration but necessary suit for the amount awarded is yet to be filed by Administration.

ICF Administration stated (June 1988) that action had been taken to file a suit in the court but did not explain the reasons for the delay of over two years in filing the suit in the court.

On North Eastern Railway a purchase order for supply of 12 sets Diesel Engine was placed on 20 February 1980 on a firm at a cost of Rs.7.06 lakhs without obtaining security deposit and verifying the commercial and financial status of the firm. The firm defaulted on the ground that the terms offered by the North Eastern Railway Administration were not acceptable to it due to abnormal rise in prices. The Railway Administration did not accept the view of the firm and initiated risk purchase action in June 1980. An amount of Rs.6.49 lakhs towards risk cost is still to be

recovered from the firm (May 1988). Had proper assessment of commercial and financial status of the firm been made by the Railway Administration before placement of the order, the loss could have been avoided.

2.9 Working of Telegraph Circuits

1. Introduction

Telegraph circuits using 'Morse signalling' hired from the Post and Telegraph Department have been in use on the Railways since inception of the Railway system in India. With the advent of teleprinters, etc., and gradual switch over to the use of microwave channels, the utility of morse telegraph circuits has been considerably reduced over the years.

The Ministry of Railways (Railway Board) directed the Zonal Railways in September 1975 to consider feasibility of closing these telegraph circuits in sections having little or no traffic with a view to surrendering the associated Post and Telegraph lines and assess the resultant savings on account of rental charges and reduction of staff. The Railway Board directed all the Railways again in December 1985 to carry out a study in this regard as was done on South Central Railway.

2. Scope

Implementation of the Railway Board's instructions by the Railways was generally reviewed in Audit.

3. Highlights

- **The study on the subject has not so far been undertaken on one Railway.**

- **The Railway Board's instructions were not implemented either wholly or partly for over a decade resulting in avoidable expenditure of Rs.4.2 lakhs per annum on one Railway and Rs.28.96 lakhs per annum on another Railway.**

- **The study on two Zonal Railways indicated savings of Rs.35 and Rs. 11 lakhs per annum but the surrender of 147 and 47 surplus posts respectively had not been effected.**

- **Studies undertaken on one Railway in 1988 indicated saving of Rs.3.29 lakhs per annum.**

- **The study on one Railway revealed avoidable expenditure of Rs.1.47 crores from 1976 to 1987. It indicated avoidable expenditure of Rs. 40.78 and Rs.1.9 lakhs per annum respectively in two other Railways.**

4. Morse Circuits

Even after twelve years, study of the need for the use of morse and intermorse circuits has not been completed. A review of the postion by Audit on some Railways revealed the following:-

i) The study has not been undertaken on the South Eastern Railway.

ii) On the Southern Railway a study was undertaken in 1976 and abolition of morse lines in

16 sections was recommended. The recommendations in respect of 10 out of 16 sections were not implemented then, though some of them have not been functioning for several years.

After a lapse of 10 years, only 6 circuits were surrendered in full (1986). One circuit was handed over to the adjoining Railway (South Central Railway) and the other three circuits were surrendered partially.

On the Mysore-Bangalore Section (139 Kms) though the messages are being sent over the teleprinter installed in 1962, the Morse circuit had not been surrendered. The Morse Circuit, on a part of this section (Maddur to Bangalore - 60 Kms) was surrendered only after a decade i.e. on 1.7.1986.

The rental charges paid to Post and Telegraph Department amounting to Rs. 4.2 lakhs per annum comprised rental charges of Rs. 3.03 lakhs in respect of sections not in operation due to non availability of Signallers or the section not being in working condition and rental charges of Rs.1.17 lakhs in respect of sections rendered redundant due to availability of other modes of communication like Teleprinter.

(iii) Based on the actual utilisation of Morse Telegraph circuits on Northeast Frontier Railway, as early as June 1976, Railway Board recommended the surrender of Inter-Wire Telegraph (IWT) circuits provided there. The savings on the rental alone were assessed at Rs.1.50 lakhs per annum. But no action has so far been taken to implement this recommendation. A fresh study was undertaken in December 1985 and a report was submitted to Railway Board in June 1986 identifying a total of 176 posts as surplus (cost Rs.24.83 lakhs per annum) and Rs. 4.13 lakhs per annum on rental paid to Post and Telegraph Department. The report was accepted by the Railway Administration in March 1986 and the same was approved by Railway Board in September 1986. But this has not been implemented so far. The extra expenditure for the entire period 1976 to 1987 thus comes to Rs. 2.9 crores.

(iv) On the Western Railway a study was undertaken in 1975 and the interwire circuits with nominal work load on controlled sections were surrendered. However, through morse circuits were retained. Due to reduction in the work load a total of 147 posts of telegraph staff were identified recently as surplus which would result in a saving of Rs.35 to 40 lakhs per annum but they have not yet been surrendered.

(v) In response to Railway Board's orders of September 1975 a study was conducted on Central Railway when a total of 45 Morse Circuits were surrendered from 1 April 1976. The posts of signallers, if any, surrendered could not be ascertained.

Another study of Teleprinters and Morse Circuits was completed in September 1986. Even though the savings resulting from the surrender of 47 posts work out to Rs.11 lakhs per annum they have not yet been surrendered.

(vi) A study of the circuits on North Eastern Railway available in Achnera-

Kanpur Anwarganj, Lucknow Junction-Gonda and Gorakhpur-Katihar sections was undertaken in December 1985 and a decision was taken in March 1986 to surrender Gorakhpur - Siwan and Siwan - Chapra circuits resulting in a saving of Rs. 25740 per annum on the rental paid to Post and Telegraph Department. Due to delay in undertaking the study, unnecessary payment of Rs.2.83 lakhs as rent for the period 1976 to 1987 was avoidable. Later in July 1988 the position of surrender of Posts and Telegraph Morse Circuits on other sections hired by the Railway Administration was reviewed when it was decided to surrender a total of 2121.87 kms. of Post and Telegraph lines. By surrendering these lines the Railway Administration would save Rs.3.03 lakhs per annum. The number of posts of signallers that could be surrendered and the resultant savings are yet to be assessed.

The line wires (Telegraph and Telephone) in the section Bhagalpur-Bharai (107 Km) were owned by Post and Telegraph Department. Even though Bharai Railway Exchange was closed in November 1974, the line wires were surrendered only on 31 July 1987 resulting in avoidable payment of rent amounting to Rs.1.83 lakhs.

(vii) On the Eastern Railway a study was undertaken first in 1982 on Sealdah Division and the study on the remaining Divisions was completed in May 1986. As a result, a total of 104 posts of Signallers were identified as surplus. Actual surrender made could not, however, be verified for want of records. The recurring expenditure resulting from the continued operation of these posts works out to Rs.12.50 lakhs per annum. The extra expenditure for the period 1976 to 1987 which could have been avoided had the study been completed in 1975 amounts to Rs. 1.38 crores. The avoidable expenditure for 17 circuits that could usefully have been surrendered works out to Rs.8.56 lakhs (Upto May 1986).

(viii) On Northern Railway the study was undertaken for the first time in May 1986 and the same was completed in October 1986. As a result a total of 167 posts of signallers of different grades were identified as surplus. The annual savings anticipated by this surrender were Rs28.15 lakhs. But only 159 posts were surrendered upto 31 August 1988. 8 more posts which would result in a further saving of Rs.2.55 lakhs per annum are yet to be surrendered. A total of 70 telegraph circuits were surrendered up to 31 July 1987 resulting in a recurring saving of Rs.12.63 lakhs per annum towards the rent payable to Post and Telegraph Department. Had this study been undertaken earlier, the Railway Administration could have saved Rs.40.78 lakhs per annum.

(ix) On the South Central Railway the study was taken up only in June 1983 and was completed in July 1985 revealing a net surplus of 6 posts of signallers and the annual savings of Rs.0.71 lakh on their pay and allowances and Rs.1.19 lakhs on rental to be paid to Post and Telegraph Department. The avoidable expenditure incurred due to delay in undertaking the study for the period 1976 to 1986 was thus Rs. 20.9 lakhs at the rate of Rs. 1.90 lakhs per annum.

CHAPTER III

PURCHASES, STORES, WORKS, ESTABLISHMENT AND OTHER EXPENDITURE

3.1 Avoidable expenditure on procurement of elastic rail clips

'Elastic Rail Clip' is a vital component for fastening the rail and the sleeper. Production of these fastners called for sophisticated technology and they were being procured on single tender basis from a Bangalore firm who were manufacturing this item under a collaboration agreement entered into by them with a United Kingdom firm under the patented name "Pandrol clip". Procurement from this firm was commented upon in para 15 of the Comptroller and Auditor General of India's Report-Union Government (Railways) for 1975-76. The Public Accounts Committee, while dealing with the action taken by the Government on their recommendations contained in their 74 Report (Sixth Lok Sabha) expressed their unhappiness that no alternative source of supply for this vital track component was developed on Indian Railways. The Railway Board in reply stated that the design for this component was developed by Research, Designs and Standards Organisation of the Railways in May 1975 but not many firms could be found by them in India with adequate laboratory/testing facilities and the resources for the production of this item. They, however, explained that orders were placed on six different firms but they were not able to meet the Railways' requirements satisfactorily. The Public Accounts Committee, therefore, recommended in April 1978 that Railway Board should give every possible assistance to those up coming firms so that they would be able to meet the Railways' requirements to avoid the situation of paying exorbitant prices.

A review of the procurement since 1980 revealed the following:-

(i) After placing educational orders on 6 firms in 1978 and 1979 for small quantities, the Railway Board assessed in February 1980 a rate of Rs.10 per clip as reasonable. Tenders for 32.5 lakh clips were opened in January 1980. The Tender Committee recommended in February 1980 counter offer of Rs.10 subject to escalation. However, a rate of Rs.10.99 was negotiated with established suppliers and this was accepted in June 1980. When this rate was offered to some more suppliers, it was represented that escalation be allowed on electricity, light diesel oil and excise duty besides the melting scrap to be used in the production. This was accepted. However the same rate was allowed even on the educational orders placed against five firms who had quoted in their tenders rates lower than the negotiated rates. The extra expenditure incurred on this account was Rs.6.11 lakhs. Extra expenditure of Rs.1.40 lakhs was also incurred on this account on the tender invited in November 1981 when development orders were placed on two firms at rates higher than those quoted by the firms.

Railway Board stated (December 1988) that the firms which had quoted

lower rates had declined to accept the offer at their quoted rates. Actually out of five firms only two firms refused to accept their quoted (lower) rates but agreed to accept the orders at some negotiated rates. Other firms did not raise any objection. Railway Board, instead of working out separate negotiated rate, unilaterally increased their rates to Rs.10.99 per clip alongwith provision for escalation which was not justified.

(ii) Open tenders were invited in November 1981 for supply of 38.5 lakh clips and orders were placed at the rate of Rs.12.40 per clip. The rate was considered reasonable with reference to the rate of Rs. 10.99 per clip accepted in the previous tender. It was observed that the increase was justified by assuming melting scrap requirement as 1.553 kg per clip against the requirement of 1 kg provided in subsequent tenders. If the latter quantity requirement had been assumed, the increase in price justified would have been Rs.1.10 per clip instead of Rs.1.34 per clip. The extra expenditure incurred due to this incorrect assessment of raw material requirement amounted to Rs.9.24 lakhs.

Against the subsequent three tenders finalised in December 1983, December 1985 and June 1987, a total quantity of 326 lakh clips was procured by assessing the reasonableness of rates on the basis of requirement of incorrect quantity of melting scrap adopted in the 1981 tender. This resulted in avoidable expenditure of Rs.78.24 lakhs. The total avoidable expenditure on the procurement of 364.5 lakhs clips amounted to Rs.87.48 lakhs.

iii) Tenders were invited in February 1983 for procurement of 40 lakhs clips required during the year 1983-84. Tenders were opened on 7.4.1983 and a firm rate of Rs.12.40 per clip recommended by the Tender Committee in December 1983 was accepted on 26.12.1983. The requirement of clips for 1984-85 was assessed in September 1984 at 105 lakhs. Another tender was invited in September 1985 for procurement of 80 lakhs clips with the intention of procuring the balance under the 30 per cent option clause. A firm rate of Rs. 13.80 per clip was accepted in December 1985. If the requirements of 1983-84 and 1984-85 had been combined and deliveries obtained in a phased manner a saving of Rs.1.46 crores could have been effected on the 104 lakhs clips procured against the tender of September 1985. The recommendation of the Railway Reforms Committee accepted by the Railway Board in April 1983 to cover the requirements of such critical materials for two years in a tender was not observed. This was implemented only in 1986-87.

Railway Board stated (December 1988) that the firm rate of Rs. 12.40 per clip was repeated for additional quantity of 40 lakhs in 1984. This quantity was procured by placing orders in October 1984 (on receipt of RDSO's approval) on 14 firms against tender of February 1983. Railway Board could as well have procured the requirement for 1984-85 at the same rates and saved the Railways Rs.1.46 crores.

The reasonableness of the rate in the tender finalised in December 1985 was determined with reference to the escalation during the period October 1984 to October 1985 in respect of melting scrap, excise duty, electri-

city charges and price of light diesel oil. For every variation of Rs.100/- per tonne in the price of melting scrap, the price of each elastic rail clip was to vary by 10 paise. For this purpose, the prices published for Heavy Melting Scrap Grade I by M/s Metal Scrap Trading Corporation Ltd. (MSTC), Calcutta was to be accepted.

The average increase was assessed as Rs.1.46 per clip based on the prices published by M.S.T.C. for Northern and Eastern regions and consequently the reasonable rate was assessed at Rs.13.86 as compared to Rs. 12.40 per clip accepted in the previous tender. The reasonable rate against this tender should have been assessed at Rs.13.51 as the average increase in the Eastern region was only Rs.1.11. This had resulted in inflating the rate by 29 paise per clip. The rate of Rs.13.60 (benefit under MODVAT being retained by the firms) per clip against the next tender invited in December 1986 and accepted in June 1987 was also assessed as reasonable after considering escalation on average basis to the rate of Rs.13.80 finalised against this tender. The avoidable expenditure incurred in procuring 250 lakh numbers of this item against the two tenders 1985 and 1986 worked out to Rs. 79.46 lakhs.

3.2 Overpayment due to wrong adoption of price for material escalation

In May 1982, Ministry of Railways (Railway Board) placed two orders on firms 'A' and 'B' for supply of 3,000 CASNUB bogies each for a total value of Rs.33 crores with an option to increase the ordered quantity by 30 per cent. These bogies were to be used in the manufacture of BOXN wagons. Considering the difficulty of the firms in obtaining scrap required for producing bogies from the market in time, the Railway Board, as a special case, agreed to supply scrap from the respective Railways at a fixed rate of Rs.3808 per bogie. As scrap was to be supplied at a fixed price under clauses 2.2 and 13 of the contract, the escalation factor was applicable to net acceptable price excluding the cost of scrap. Firm 'A' completed the supply of 3820 bogies by 15 March 1984, while firm 'B' completed supply of 3200 bogies by 15 July 1984.

Review of escalation bills of Firm 'A' revealed that, while wage escalation claims were admitted excluding the cost of scrap material escalation claims were admitted on the basis of net acceptable price including the cost of scrap. Payment for material escalation claim on 3820 bogies in respect of the value of scrap supplied at fixed price against one order resulted in overpayment of Rs.41.61 lakhs. Material escalation bills of Firm 'B' (3200 bogies) are yet to be made available by the Railway Administration for Audit scrutiny.

The Ministry of Railways (Railway Board) stated (January 1989) that escalation formulae by very nature were empirical and the scope of parameters would vary according to the multiplication factors and other constraints used in the respective formulae. The Railway Board did not, however, explain the reasons why the value of scrap was not to be excluded from the price of the bogie for the purpose of material escalation.

3.3 Avoidable expenditure on procurement of bearings

The Ministry of Railways (Railway Board) invited two global tenders under the World Bank loan/credit under IDA guidelines in October 1984 and January 1986 for procurement of 48076 and 57400 roller tapered cartridge bearings respectively for fitment in BOX'N wagons. These bearings are supplied by the Railway Board to wagon builders as free supply items.

Review of finalisation of contracts against these tenders revealed excess procurement of bearings due to incorrect assessment of requirements and extra expenditure due to ignoring cheaper offers as discussed below.

Tender of October 1984

The requirement of the bearings was reduced to 43668 numbers based on reassessment done subsequent to the opening of tender. After technical evaluation of 12 offers, the Tender Committee recommended in December 1984 placement of orders on three firms as under:-

Firms	Rate Rs.	Quantity in numbers	Cost (Rs. in crores)
Firm 'A' (Japanese)	2186	21,000	4.59
Firm 'B' (Japanese)	2248	11,334	2.55
Firm 'C' (Indian)	2241	11,334	2.53

The competent authority, however, approved on 6 February 1985 placement of orders only on two firms 'A' and 'C' as under, after considering the advantage of reduction in the foreign exchange outgo if the quantity recommended for firm 'B' was also given to the Indian firm 'C'.

Firms	Rate Rs.	Quantity in numbers	Cost (Rs.in crores)
Firm 'A'	2186	21,000	4.59
Firm 'C'	2241	22,668	5.07

Due to heavy reduction in allotment of funds for 1985-86, the Railway Board revised the requirement from 43668 bearings to 18,000 bearings and approved on 25 February 1985 the placement of orders on the two firms as under:-

(a) Firm 'A' - 12,000 bearings

(b) Firm 'C' - 6,000 bearings

In the meantime, the Principals of Firm 'C' complained to International Development Authority (IDA) in March 1985 and sought re-evaluation of the offers against this tender on the basis of the delivery schedule offered by each firm. International Development Authority asked the Railway Board to re-evaluate the offers.

The offers were accordingly re-evaluated loading them suitably for deliveries not corresponding to the time frame laid down in the tender schedule. Consequently, the offer of Firm 'C' became the lowest, while the offer of Firm 'A' stood second. The Tender Committee recommended on 1 May 1985 placement of orders for 12000 nos. on Firm 'C' and 6000 nos. on Firm 'A'.

The competent authority, however, approved on 6 June 1985 placement of order on Firm 'C' only for 11900 nos. at Rs.2241 each and the order was placed on 18 June 1985. The quantity on this order was subsequently increased in stages from 11,900 bearings to 62,499 bearings.

Tender of 1986

Against this tender for the procurement of 57,400 roller tapered cartridge bearings 11 offers were received. Tender was opened on 9 April 1986. Of the 11 offers, the lowest two offers at Rs.2150 each and Rs.2174 each were from two indigenous firms 'D' and 'E'. However, the first lowest offer of Firm 'D' was treated as "Unresponsive" as the firm did not offer to supply the full quantity on tender and the second lowest offer of Firm 'E' was ignored on the ground that delivery offered was not according to tender schedule. The order was placed on firm 'C' at Rs.2241 each for 57,400 bearings in October 1986. The quantity was further increased to 74,620 bearings in May 1987 without calling for fresh tenders. The total value of the contract was Rs. 17.10 crores.

In this connection the following points arise:-

(i) While increasing the quantity ordered against 1984 tender and while placing the new order against 1986 tender the Railway Board failed to reckon the actual production of wagons by wagon builders and fixed unrealistic targets of production and also changed the quantity for buffer from three months' to six months' requirements which resulted in excess procurement of bearings at higher rate on account of higher monthly rate of delivery. The excess holding of bearings at the end of 1987-88 was 39,655 bearings (value - about Rs.8.9 crores) excluding six month's buffer quantity.

(ii) Despite reservations expressed in May-June 1985 by the Research, Designs and Standards Organisation (RDSO) and the Chairman, Railway Board, regarding the quantity and life of the bearings supplied earlier by Firm 'C', the order for additional quantity was placed on the firm on the ground that upto April 1985 as many as 6954 BOX'N' wagons had been turned out with the bearings supplied by Firm 'C' without any complaint. The quantity was increased from 11,900 bearings to 62,499 bearings during August 1985 to May 1986 in stages. According to reports received from Railways, it has been observed that there were large scale failures of bearings of Firm 'C', some of them within the warranty period. The firm is yet to replace the rejected bearings costing Rs.11.91 lakhs (approximately)

The Ministry of Railways (Railway Board) stated (December 1988) that the failures of bearings did not relate to bearings ordered against global tenders and that all the bearings found defective within the warranty period had been rectified/replaced by the firm. They further explained the reasons for increase in quantities from time to time in consideration of the following factors:

(i) the original tender was floated for 48,076 nos with an option clause to increase the quantity by 30 percent;

(ii) any future tender might lead to cost escalation;

(iii) floating of fresh tender, etc. would take a longer time,

(iv) the delivery offered was quicker, and

(v) the offer had no liability for customs duty.

The Railway Board, however, had not explained whether the performance of the firm viewed in the context of their past supplies and adverse reports of RDSO and Chairman, Railway Board in May - June 1985 was ever considered before increasing the quantity in stages.

Against the tender opened in April 1986, Firm 'D' offered to supply 24,000 bearings at the lowest rate in eight equal monthly instalments. The Railway Board, however, ignored their offer on the ground that delivery offered was not according to tender schedule. According to tender schedule, 57,400 bearings were to be supplied in eight monthly instalments. In case of Tender of 1984, the Railway Board approached the International Development Authority for modification of quantity on tender and quantity was modified. In the case of Tender of 1986, though there was ample justification for reduction in quantity on tender in view of reduced actual production of wagons as well as excess holding of bearings the Railway Board did not approach the International Development Authority for modification of quantity on tender but placed order for 57,400 bearings on Firm 'C' at higher rate. On the other hand this was later increased to 74,620 nos.

The Ministry of Railways (Railway Board) stated (December 1988) that the offer of firm 'D' at a quoted FOR price of Rs.2150 was for a part quantity of 24,000 bearings against the tendered quantity of 57,400 bearings and in accordance with the procedure prescribed by the World Bank such offers ought to be deemed "unresponsive" and rejected. They further explained that no parallel could be drawn between the two cases of 1984 and 1986 tenders as in the case of first tender, the splitting up of the order was considered as the firm quoted for full quantity on tender and, therefore, was eligible according to the World Bank guidelines while in the latter tender the offer itself was "unresponsive" according to the World Bank guidelines.

The contention of the Railway Board is, however, not tenable as according to the clarification of the IDA in March 1985 to the Railway Board, the Bank guidelines do permit splitting up of the award when the lowest bidder failed to offer full quantity on tender. As the firm 'D' offered to supply 24,000 bearings according to the delivery schedule stipulated in the Tender, it was eligible for an order of 24,000 bearings. The non-placement of order on firm 'D' resulted in extra expenditure of Rs. 33.84 lakhs.

3.4 Extra expenditure on procurement of miniature plug-in-type relays

Open tenders invited in September 1986 for procurement of 42,529 miniature plug-in-type relays fetched the lowest rates of Rs.1350 each and Rs.1400 each for non-A.C. and A.C. immunised relays respectively from Firm 'A'. The rates offered were firm but were about Rs. 200 more than the rates at which supplies

were obtained from them in 1985. This increase represented the likely escalation for about 4 years since last purchase. Despite this the Tender Committee decided to counter offer the lowest firm rates quoted by firm 'A' to the other four tenderers with provision for escalation though one of them had not sought any price variation. Against the earlier tender (1985), also no price variation clause was accepted in favour of the said firm. The counter offer made was accepted and orders were placed in June/July 1987 on all the five firms for completion between 6 months and 21 months from the date of placement of order depending on the capacities of the firms, the total value of all the contracts being Rs.5.82 crores excluding excise duty and sales tax. The extra expenditure resulting from the provision of price variation clause was Rs.15 lakhs.

The Railway Board stated in March 1988 that supplies were made on long term basis of about two and half years during which period prices of inputs fluctuated, and that it was in the interest of the administration that price variation clause was given to firms to avoid possibility of the non-fructifying of contracts due to prices becoming uneconomic owing to the prolonged nature of the contracts. This view is not tenable as the Railway Board had indicated while inviting tenders that the Board would prefer firm prices to be quoted by the tenderers. Moreover, the practice of ordering on each firm a quantity equal to their production for four years was changed in this tender and orders were placed to the extent of production for two and half years after taking into account the supplies pending on previous orders.

Orders on firm 'A' for supply of 2518 relays were placed on the basis of annual capacity of only 3000 assessed by the Railway Board after taking into account supplies pending from the previous order. The firm had indicated their capacity at 1000 per month (normal) and 2000 per month (maximum) while submitting the tender. The annual capacities of two other firms on whom orders were placed were assessed at 7000 nos each even though they were yet to set up their local manufacture in collaboration with foreign firms and their prototypes had not been approved by the Research, Designs and Standards Organisation (RDSO). Firm 'A' represented against allotment of meagre quantity in April 1987. The Railway Board had neither kept on record the reason for gross under assessment of capacity of firm 'A' nor took any action on thier representation. Failure to assess realistically the capacity of the firm and escalation already built into the lowest rates resulted in extra expenditure of Rs. 15 lakhs.

3.5 Extra expenditure on procurement of billets

In July 1984, the Ministry of Railways (Railway Board) placed an order on firm 'A' of Calcutta for supply of 160 tonnes of 50mm and 20 tonnes of 63 mm billets at Rs.4605 per tonne for delivery by 15 February 1985. On a request from the firm the delivery date was extended upto 15 June 1985. The firm supplied 21.82 tonnes of 50 mm billets and submitted their bills in March 1985 to the Eastern Railway for Rs.1.09 lakhs.

Security Deposit amounting to Rs.41,445/- was to be arranged by the firm within 15 days of receipt of the contract either in cash or through a Bank Guarantee. Only

in Aprill 1985 the Railway Board realised that the said security had not been deposited by the firm. The Eastern Railway was directed to obtain the deposit. The firm, on being asked to deposit the security requested the Railway Administration for the recovery of the amount from the bill pending with them. The Railway Board did not accede to this request and directed the Railway Administration in June 1985 to withhold payment of the bill pending arrangement of security deposit. While representing for payment against the pending bill, the firm pointed out that further supplies could be possible only after the Railways released their dues. The purchase order for the balance quantity was cancelled in August 1985 at the risk and cost of the supplier on the ground of their failure to supply the entire quantity within the stipulated period.

The Indian Railway Standard Conditions of the Contract make it lawful for the purchaser to recover the security deposit from the pending bill of the contractor under the contract or any other contract with the purchaser. In this case, the firm made a specific request for its recovery from its bill pending payment. Withholding payment of the pending bill and cancellation of the purchase order at the risk and cost of the supplier was, therefore, not justified.

Risk purchase order for the procurement of the balance quantity of 138.18 tonnes of 50 mm and 20 tonnes of 63 mm billets was placed on firm 'B' of Calcutta in November 1985. In March 1986 firm 'A' was served with demand notice to deposit a sum of Rs.2.91 lakhs being the extra expenditure incurred by the Railways in arranging the risk purchase. The firm, while contesting the claim of the Railways explained that the further despatch of the materials by them was linked with the payment against their bill and requested the Railway Board (July 1986) to release their dues. This request was not processed by the Railway Board for over a year. Only after Audit took up the matter, the Railway Board in September 1987 proposed to refer the dispute to an Arbitrator. An Arbitrator was appointed only in September 1988.

The Ministry of Railways (Railway Board) stated (December 1988) that the manner of execution of the contract gave rise to the reasonable apprehension that the contractor was not serious in executing the contract. They also stated that the contractor did not fulfill the conditions of producing Income Tax Clearance Certificate to the Paying Authority. Railway Board's apprehension is not substantiated in view of the fact that the firm was already effecting supplies against contract placed in April 1984 satisfactorily.

3.6 Chittaranjan Locomotive Works Non-installation and commissioning of costly machine.

The replacement of two Direct Arc Electric Melting Furnaces of 7-8 tonnes capacity each for the Steel Foundary was approved by the Ministry of Railways (Railway Board) in April 1982. Accordingly, purchase order was placed on an Indian firm in January 1985. The preparation of layout drawings and planning for installation of the furnaces was completed in May 1985. The Administration had decided to install the first furnace at a new site by August

1985. The second furnace was, however, to be installed by October 1985 at the old site released by the furnace which was to be condemned and disposed of. As the firm could not supply the furnace within the stipulated delivery period of September 1985 and November 1985 respectively, the delivery period was extended upto 31 January 1987. The furnaces with all major items (except the temperature recording system) were received by August 1986. The temperature recording system (2 numbers) were received only in March 1987. The first new furnace was installed at a new site by November 1986. For the second new furnace to be installed at the site of the old furnace (which was to be condemned and disposed of), the Administration sought the permission of the Ministry of Railways (Railway Board) in May 1985 for disposal of the old furnace on 'as is where is' basis in working condition. The sanction of the Ministry of Railways (Railway Board) was, however, accorded only in November 1986. Despite Railway Board's sanction of November 1986 for disposal of the old furnace, the same was not disposed of. According to Administration, attempts were made to dispose of the furnace in site by tender and auction but the same did not materialise. The old furnace was dismantled in March/April 1988 and the Administration expects the erection and commissioning of the new furnace only by May 1989. Thus, the second furnace procured in August 1986 at a cost of Rs. 65.15 lakhs is yet (September 1988) to be installed and commissioned despite the lapse of 24 months since receipt. Meanwhile, the warranty period viz., 12 months from the date of commissioning or 21 months from the date of last major delivery whichever was earlier, has already expired. The delay in installation of the furnace has not only led to idling of machine worth Rs.65.15 lakhs but also resulted in payment of Dividend to General Revenues to the tune of Rs.3.18 lakhs for 1986-87 and 1987-88.

3.7 Southern Railway - Avoidable payment of customs duty on imported medical equipments for Railway Hospital

In terms of the Government of India Customs notification issued in March 1985, as amended in March 1986, and the notification of April 1986, certain specified medical equipments, when imported in India, are exempt from so much of that portion of the duty of customs leviable as is in excess of the amount calculated at the rate of 40 per cent ad valorem and the whole of the additional duty leviable under section 3 of the Customs Tariff Act, 1975, on production, by the importer, of certificates in each case from the Director General of Technical Development that the equipments were not manufactured in India and from the Director General of Health Services or the Ministry of Health and Family Welfare of the Government of India that the import was necessary and recommending grant of exemption.

It was noticed in Audit that in respect of 13 items of medical equipments required for use in the hospitals of the Railway and imported against Purchase Orders placed during 1985-86 and 1986-87, the Railway Administration did not obtain the necessary certificates to secure the benefit of partial exemption from customs duty admissible under the rules. This led to an avoidable payment of customs duty amounting to Rs.35 lakhs.

The Railway Administration stated in December 1988 that the matter had been referred to the Railway Board for taking up the issue with the Ministry of Finance and the Ministry of Health.

3.8 Central Railway - Avoidable payment of demurrage charges due to non-availability of import licence copy

The Ministry of Railways (Railway Board) placed an order on a firm of Czechoslovakia in April 1985 for import of 1500 MT of H.R. sheets. The Exchange Control and Customs Clearance Copies of the import licence were forwarded by the Railway Board through Registered Post on 30 May 1985 to the Financial Adviser and Chief Accounts Officer (FA & CAO) and Controller of Stores (COS) of the Railway respectively. While the Exchange Control Copy was received correctly by the FA & CAO and sent to the Bank of India for opening letter of credit, the Customs Clearance Copy was reportedly not received in the office of the COS.

Although the Indian agents of the firm advised the COS on 17 October 1985 that the material had been despatched by the firm in the shipments on 30 September 1985 and 4 October 1985 reference to the Railway Board for obtaining the import licence was made only on 1 November 1985. Meanwhile, the shipments had arrived at the Bombay Port on 28 October 1985 and 13 November 1985 for the clearance of which the last free dates of delivery were 31 October 1985 and 18 November 1985 respectively. As, however, the import licence was not available with the Railway Administration clearance of the Customs to release of the shipments could be had only between 22 and 24 January 1986 by producing the Exchange Control Copy of the import licence obtained from the Bank. The delay resulted in payment of demurrage charges on these two vessels to the tune of Rs.29.66 lakhs.

Failure to produce import licence copy to Customs in time resulted in avoidable payment of Rs.29.66 lakhs towards demurrage charges.

3.9 Metro Railway - Unnecessary procurement of two Battery Locomotives with spares

In April 1977, Metro Railway, Calcutta, invited open tender for construction of two parallel tunnels in the Northern Sector of the Project by Shield tunnelling method. Although, according to original stipulation in the tender provision of battery locomotives was not obligatory, Metro Railway Administration revised, in July 1977, the tender specification and provided for supplying to the contractor free of cost two battery locomotives with two spare batteries and one battery charging set for hauling trolleys inside the non-compressed air zone in the tunnel during construction stage.

While submitting the quotation in November 1977, the contractor made out a list of machines required by him for execution of the work and confirmed in April 1978 that there was no possibility that any work could be carried out without using compressed air. There was, therefore, no need for the use of battery locomotives. The contract for the tunnelling work was awarded to that contractor at Rs. 6.19 crores in December 1979.

Despite this fact, the Metro Railway did not reconsider the procurement but went ahead and placed an order on a Central Government Undertaking for supply of two 8 tonne battery locomotives with spares in May 1978 at cost of Rs.17.30 lakhs. While the locomotives were received in October 1980 the spares were received in December 1981.

The two battery locomotives with other accessories and spare parts were never used until the completion of the tunnelling work in the section of the Northern Sector in the mid of 1987. These two battery locomotives and spares were lying idle all along since their receipt in October 1980 and December 1981 respectively. Due to this prolonged storage without any use there is risk of deterioration to the locomotives as well as batteries. No attempt has yet been made to dispose of the locomotives and batteries.

Procurement of two battery locomotives along with accessories which were not required resulted in infructuous expenditure of Rs.17.30 lakhs.

The Ministry of Railways (Railway Board) stated (November 1988) that the battery locomotives were purchased on the advice of technical experts for use of tunnelling in non-pressurised zone, and it was not possible to visualise that these locomotives would not be required under Indian conditions. It was also explained that locomotives were likey to be utilised in other sections and the contractors would allow rebate for their use.

The contention of the Railway Board is not tenable as tunnelling work in section 3-B is also being executed under similar conditions and about forty per cent of the work has been completed without the use of these battery locomotives (November 1988).

3.10 Metro Railway – Unproductive expenditure on procurement of Road Rollers

The Project Report of the Metro Railway envisaged that supply of such construction equipments as are now manufactured indigenously shall be arranged by the construction firms themselves. The Metro Railway Administration accordingly laid down in the contracts relating to restoration of road surface works that the contractors would be responsbile to complete the works with the help of their own equipments and resources within the stipulated completion period.

It was noticed in Audit that although Road Roller was included in the list of equipments manufactured indigenously and were required to be procured by the contractors through their own resources, the Metro Railway Administration procured during the years 1972 to 1982 four vibrating type road rollers of 2/4 ton capacity and seven heavy duty rollers of 8/10 ton capacity at a total cost of Rs.15.40 lakhs for supplying to the contractors working on restoration of road surface. The main considerations on which these were procured were that the rollers were required simultaneously in different sections and were not available on hire from open market

or from other Government agencies, etc. and that these were emergency reserve equipments.

The four vibrating type rollers costing Rs.3.43 lakhs were used only sparingly since their procurement in December 1974 and December 1979 and were lying out of order. Of the four heavy duty rollers, one purchased for Rs.1.12 lakhs in the year 1972 went out of order before it was put to use and had to undergo major repairs. It was put to use in January 1983 but could be utilised for only 51 and 3 days during the years 1983 and 1984 respectively. It was lying out of order since February 1985 requiring major repairs. Three rollers purchased in the year 1978 for Rs.4.57 lakhs were used for total periods of 51, 79 and 161 days upto May 1988. Despite these discouraging trends of utilisation of the rollers in stock, the Administration purchased two more rollers for Rs. 1.96 lakhs each in July 1980 and one for Rs.2.37 lakhs in March 1982. Even these could be utilised for only 108, 622 and 315 days respectively upto 31 May 1988.

Apart from the fact that the Railway Administration was not obliged to supply the road rollers on hire, the reason for poor utilisation of the rollers was that their hire charges fixed by the Railway were comparatively higher than those charged in the market and that in the absence of any contractual obligation the contractors were free to obtain the rollers from other sources at lesser rates. Thus, the Railway Administration's decision to procure the rollers contrary to the provisions in the works contracts was not judicious.

This resulted in the investment of Rs.15.40 lakhs on procurement of the road rollers lying unproductive over the years. Besides, the total cost of servicing of the rollers upto May 1988 was Rs.33.47 lakhs, against an amount of Rs.5.60 lakhs realised as hire charges from the contractors upto that period.

3.11 Western Railway - Loss due to receipt of defective wooden sleepers

Ministry of Railways (Railway Board) issued instructions in May 1985 that various consignees, on receipt of sleepers, must inspect the sleepers, stack the rejected sleepers separately in such a way that they do not further deteriorate due to termites, water logging, etc. and send a report to the procuring Railway immediately for taking up with the forest department concerned for re-inspection of the rejected sleepers and for recovery of their cost from the defaulting agencies.

The Western Railway Administration received 60,000 wooden sleepers in 1985-86 through South Eastern Railway (Procuring Railway) for various track renewal works on the Churchgate-Virar suburban section. The consignee Permanent Way Inspector (PWI), Bandra rejected 3,563 sleepers during May 1985 to February 1986 and lodged necessary rejection complaints with the Deputy Chief Engineer (SLC), South Eastern Railway who re-inspected the sleepers in May 1986 and reported in July 1986 that the complaints lodged by the PWI, Bandra, except for 891 numbers supplied by one agency, could not

be honoured as defective sleepers of different agencies had been mixed up. In April 1987, the Railway Administration referred the issue to South Eastern Railway refuting the allegation about the mixing up of sleepers and also conveyed the intention of the Railway Administration to auction the rejected sleepers to avoid further damages to them. The Railway's claim for refund of the cost was not processed by the South Eastern Railway. However, in May 1988, the South Eastern Railway agreed for re-inspection of the rejected sleepers but it has not been arranged so far (September 1988). Meanwhile, 576 rejected sleepers out of total 3,563 were removed by the suppliers and the balance 2,987 sleepers costing Rs.10.44 lakhs were still lying exposed to further damages.

3.12 Chittaranjan Locomotive Works - Non-accountal of stores in transit

Rules for the accountal of scrap provide that such stores should be handed over promptly on the authority of Advice Notes of Returned Stores to the Stores Department whose duty is to see that the materials are valued and accounted for properly. It was, however, noticed that 308 M.T. of cast iron scrap valuing Rs.7.52 lakhs returned by Alloy Iron Foundry of Chittaranjan Locomotive Works (CLW) through Advice Notes of Returned Stores during April 1980 to March 1983 were not accounted for by the Stores Depot even after 5 to 8 years of their despatch from the Alloy Iron Foundry. In February 1988 the Stores Depot concerned confirmed that they neither received the materials nor the relevant vouchers for the returned stores.

On this being pointed out by Audit in June 1988, the CLW Administration stated in September 1988 that an Inter-departmental Enquiry Committee had been constituted to look into the delay in accountal of the missing stores. However, the stores had not been accounted for by the Stores Depot till December 1988.

3.13 Central Railway - Infructuous expenditure on procurement of angle and channel straightening machine

The Chief Mechanical Engineer (CME) of the Railway indented in August 1984 for supply of an Angle and Channel Straightening Machine for the Jhansi workshop. The size of the channel to be straightened was, however, wrongly mentioned as 25 x 100 mm instead of 250 x 100 mm required. Based on this the Railway placed an indent on the Director General Supplies and Disposals (DGS&D) in May 1985 for supply of the machine to the incorrect specification. The DGS&D invited tenders accordingly and sent the offers to the Railway for acceptance of the technical parameters. The Railway Administration after technical scrutiny advised in February 1986 the suitability of the machine and again in March 1986 confirmed its acceptance. Accordingly, the DGS&D placed a contract on firm 'F' in April 1986 for supply of the machine by 31 October 1986 at a cost of Rs.8.02 lakhs.

The Additional Chief Mechanical Engineer (ACME) of the Jhansi workshop intimated on 27 June 1986 the DGS&D and the firm that the machine was not required and requested that the order be cancelled. The DGS&D, however, cancelled the order on 28 November 1986 on the ground

of the firm's failure to furnish Income Tax Clearance Certificate till expiry of the delivery period on 31 October 1986. Meanwhile, the firm had tendered the machine for inspection on 31 October 1986 and the same was inspected and accepted on the same day. The machine was received in the workshop at Jhansi on 19 November 1986. This is yet to be commissioned (November 1988).

The DGS&D, on the advice of the Ministry of Law to whom the matter was referred, withdrew the letter of cancellation of order and instructed that the firm's payment be released. A debit for Rs.7.28 lakhs was accepted by the Railway in December 1987 on account of 90 per cent payment made to the firm.

The Railway Administration had an opportunity to notice the incorrect specification when it was pointed out by the ACME, Jhansi in July 1984 itself, even before the indent was placed by the CME in August 1984 and again on receipt of a copy of the supply order placed on the firm from the DGS&D in April 1986. Besides, in order to enable it to design and manufacture the machine suitably the firm had in June 1986 requested the Railway Administration to supply to it a piece of 25 x 100 mm channel as channel of this size was not available in the market. The Railway Administration did not, however, take any action to point out the inaccuracy in the specification. Failure to place indent to the correct specification and to rectify the mistake even at subsequent stages resulted in procurement of a machine costing Rs.8.02 lakhs for which the Railway had no use.

The Railway Board explained in November 1988 that the machine was not a total waste and could perform the function of straightening the channels upto size 25 x 100 mm. However, this is yet to be proved in practice.

3.14 Central Railway - Loss due to acceptance of brake blocks without hardness test

The Railway Administration placed an order in September 1979 for fabrication and supply of 2,20,175 brake blocks for EMU coaches at Rs.7.10 each against supply of 2427.429 tonnes of C.I. scrap grade I or grade II free of cost. The supply order provided for inspection of stores by the consignee but did not specify the tests to be conducted. All consignments on receipt were inspected, certified and passed for payment except for a few items from each lot which were rejected as being "porous". By May 1981 the contract was completed and a total number of 2,20,310 brake blocks were received and issued to shops for consumption.

In November 1981, the consignee reported that the brake blocks were tearing scratches on the wheel tyres. Samples subjected to test at the Railway laboratory at Parel revealed that a total of 64,014 brake blocks out of 65,802 numbers tested were found unfit for use on EMUs as the hardness exceeded 300 against 220 -260 specified in the purchase order. These 64,014 numbers of brake blocks valued at Rs. 4.55 lakhs (excluding cost of C.I. scrap supplied free) were lying idle in stores for over six years. On this being pointed out by Audit in June 1986, the Railway Administration despatched 45,438 brake blocks to Divisions/Depots not dealing with EMU stores during June 1987 to August 1988 without

any demand from them.

On the basis of rejection of 64,014 out of 65,802 brake blocks tested, the probability of substandard brake blocks in the balance of the untested 1,54,508 brake blocks would be 1,50,310 numbers valued at Rs.10.67 lakhs (excluding cost of C.I. scrap supplied free). The loss due to shorter life of the brake blocks and damages to the wheels caused by such substandard brake blocks cannot be assessed as brake blocks have a short life of only five days and no records of the changes made earlier than five days are kept.

The Ministry of Railways (Railway Board) stated in November 1988 that owing to non-availability of on the spot facility for testing the hardness, this aspect was not tested and that no legal action could be taken against the supplier as the period legally available for conveying rejection as per the contract had expired when the defect came to light.

3.15 Diesel Locomotive Works - Fraudulent payment obtained by a supplier.

Diesel Locomotive Works (DLW) used to purchase components of Air Brakes for the Diesel Locomotives from a Calcutta firm who had been a regular supplier for over a decade. The terms and conditions of the contracts awarded to them upto the middle of 1982 included, inter alia, advance payment of 95% of the value of the materials supplied on production of proof of despatch viz, Inspection Certificate and Railway Receipts.

Consequent on the non-availability of certain components of Air Brakes in 1983, the DLW scrutinised the position of the supplies pending with the firm relating to contracts awarded to it during 1980-81 and 1981-82. On investigation, it came to light in July 1983 that there were shortages/non-supply of materials worth Rs.3.88 lakhs. Although the firm agreed to make good the shortages they have not done so till date.

Preliminary investigation report of the Vigilance Department revealed that the firm had drawn excess payment to the extent of Rs.5.94 lakhs approximately against ten purchase orders placed on them between January 1980 to June 1981. The Preliminary Report revealed that the firm drew 95% advance payments by either quoting same Railway Receipt or by altering the challans or submitting challans/ Inspection Certificates for inflated quantities. The case was thereafter handed over to Central Bureau of Investigation for investigation of the ten purchase orders. Meanwhile, a High Level Officers' Committee was formed in September 1983 for examining procedural lacunae and for suggesting the remedial measures. In December 1983, a Departmental Committee consisting of a Section Officer (Accounts) and a Depot Officer was also formed with the object of checking cases where excess payments had been made and also to review all irregularities in the accountal of materials supplied by the firm. The report of the Committee of Officers dated 31 May 1984 which revealed some procedural lacunae and suggested remedial measures was sent to the Railway Board in January 1985. The Departmental Committee which examined the transactions of 78 Purchase Orders also suggested some remedial measures.

The total amount of excess payment, as assessed on 18 February 1985, amounted to Rs.9.15 lakhs.

DLW requested all Zonal Railways and Production Units in October 1983 to withhold payments due to the firm, if any. An amount of Rs.2 lakhs withheld by Chittaranjan Locomotive Works could not be transferred to DLW as the amount was found insufficient even to cover their own dues from this firm on account of Risk Purchase. Southern Railway, who withheld the payment of one bill of the firm neither advised the amount so withheld nor transferred the amount to DLW. No other Railway or Production Units responded to the request of DLW. The Railway Board, however, banned business dealings with the firm for five years in August 1985.

The following observations are made:

a) Advance payments were made

(i) without scrutiny of quantities shown in the Railway Receipts and in the bills and the Railway Receipt numbers shown in different bills;

(ii) on the basis of local delivery challans contrary to the provisions of the contracts;

(iii) on inflated quantities shown in the challans;

(iv) without any authority from the Executives and

(v) on bogus Railway Receipts.

b) Though the Purchase Account Register contained huge debit balances of the various Purchase Orders pending over a length of time against this firm no effective steps had been taken by the Accounts Department before July 1983 to investigate non-receipt or short receipt of materials from the firm after the payment of advance bills.

c) The suspected fraud was clearly established on investigation involving an amount of Rs.9.15 lakhs. After setting off the amount of Rs.3.44 lakhs due to the firm in respect of materials supplied but not paid for, the net amount recoverable from the firm comes to Rs.5.71 lakhs, the possibility of realisation of which seems remote.

The Railway Administration stated (November 1988) that the investigation into staff responsibility had been completed by Central Bureau of Investigation, charge sheets had been served against some staff and the departmental enquiry was in process.

3.16 South Eastern Railway - Avoidable loss due to damage in transit

In order to effect repairs in the Railway's own repair shop at Bilaspur to a traction power transformer that failed in September 1981 at the Bilaspur traction sub-station the Railway Administration placed a purchase order in July 1983 on M/s. Bharat Heavy Electricals Limited (BHEL) for supply of a complete set of winding kit at a total cost of Rs.4.92 lakhs including taxes. According to the conditions of supply, M/s. BHEL was to inspect the material internally

and deliver the same to the Traction Foreman at Bilaspur, F.O.R. Jhansi by 30 May 1984. The material despatched by the firm on 29 March 1984 arrived at Bilaspur on 20 June 1984 in a smashed condition with contents lying scattered on the wagon floor. The consignee demanded open assessment delivery which was agreed to only on 11 October 1984. It was revealed during joint inspection by the representatives of the Engineering, Commercial and Security Departments that the equipment was totally unserviceable and that the outer and inner packing conditions had not been complied with. A claim for a compensation of Rs.4.63 lakhs preferred in November 1984 by the traction sub-station was rejected by the Commercial Department on 25 April 1985 on the ground that the same had not been received within six months from the date of booking as per rules. The repair of the failed transformer was arranged later in June 1985 at the BHEL Workshop at Jhansi at a cost of Rs.8.05 lakhs. The expenditure of Rs.4.63 lakhs on purchase of the winding kit was thus rendered completely infructuous due to damages to the consignment in transit.

The Railway Administration stated in May 1988 that it was a case of incidental loss for which nobody could be specifically held responsible.

Failure of the Railway Administration to ensure compliance of requisite outer and inner packing conditions led to a loss of Rs.4.63 lakhs.

3.17 South Central Railway - Avoidable loss on account of damages to high value imported goods

The Railway Administration placed an order in February 1982 on a firm in Baroda for procurement of 58 items of DBTF Breaker Spares and Tap Changer Spares for WAM-4 electric locos valued at Rs.26.04 lakhs (excluding customs duty of Rs.29.55 lakhs) through import from their principals in Switzerland. Of these 19 items were received in good condition by the port consignee, Controller of Stores (Shipping), Central Railway, Bombay on 10 December 1982 and despatched on 14 December 1982 by passenger train to the ultimate consignee, Assistant Controller of Stores, Electric Loco Stores (ELS) at Vijayawada who received them correctly. The remaining 39 items also received in good condtion by the port consignee on 22 February 1983 were, however, booked at Railway risk on 25 April 1983 as 'smalls in goods' and were loaded in an open wagon on 6 May 1983. On its arrival at Vijayawada on 27 May 1983, the wagon was marked sick and the consignment was transhipped into another wagon on 9 June 1983. The wagon went on moving in the Vijayawada yard with the imported consignments loaded in it without being connected. Despite several enquiries from the consignee, the arrival of the consignment was not notified by the Commercial Department. Subsequently, the consignment was located by the consignee on 24 August 1983 lying in a damaged condition. Open delivery taken on 2 September 1983 revealed a shortage of 2.47 quintals of the materials. Claim for compensation of Rs.17.26 lakhs preferred on this account on 5 September 1983 (revised subsequently in 1988 to Rs.18.12 lakhs) was repudiated by the Commercial Department in April 1985 on the ground that this high value commodity had been booked as 'smalls' without bringing to the notice of the Railway staff its importance

at the time of booking.

The insurance company covering the risk of damages, etc. till delivery of the goods to the ultimate consignee was prepared (August 1988) to accept only fifty per cent of the Railway's revised total claim of Rs.18.12 lakhs on the plea that by not repairing the broken case enroute the Railway had not taken measures for preservation and salvage of the goods as required under the terms and conditions of insurance. However, the Railway is pursuing for full settlement of the claim and the matter has not been finalised so far (December 1988).

In another case, out of twelve sets of Capacitance Unbalance Measuring sets imported from Hungary against contract placed by the Ministry of Railways (Railway Board) in December 1982, one consignment containing four sets of the equipment meant for Senior Stores Officer, Railway Electrification, Vijayawada was wrongly handed over by the port consignee at Bombay on 20 January 1984 to Assistant Controller of Stores, Lower Parel for onward transmission to Depot Store Keeper (Railway Electrification), Kota, as per markings on the consignment. The consignment was reported as having been despatched to Depot Store Keeper (Railway Electrication), Kota on 21 January 1984. However, ACOS/C/Lower Parel later advised on 29 November 1985 availability of unconnected cases of imported material with him. It was then found that the four sets of instruments were lying in an unpacked condition and meters soaked completely in water damaging all its vital components. The equipments were declared unserviceable and its delivery was not taken by the consignee. Debit for Rs.1.17 lakhs on account of advance payment for the equipments were accepted during 1982-83 by the consignee. The claim for compensation preferred in November 1986 on the Insurance Company was, however, rejected as it had become time barred.

Thus due to its failure to ensure safety of the consignments in transit and their safe custody in the Stores Depot the Railway Administration incurred a loss of Rs.1.17 lakhs and a further loss of Rs.9.06 lakhs for which claim has not been accepted by the Insurance Company so far.

3.18 South Central Railway - Loss due to delay in taking inventory of stores

In October 1980, a Head Clerk in charge of Railway Electrification(RE) stores at Vijayawada received 9,767.5 Kg. of Zinc dross and 2,967.9 Kg. of Zinc scrap. Stock verification of these items conducted on 7 and 8 January 1983 revealed shortages of 293.5 Kg. of Zinc dross and 58.9 kg. of Zinc scrap. The Head Clerk died on 26 January 1983. The Railway Administration did not take inventory of the stores after his death and allowed it to remain without proper and authorised custody for two years. Physical verification of the stores by Accounts was not conducted during 1983-84 and 1984-85 nor was sanction of the competent authority obtained for relaxation of the prescribed procedure.

The stores were handed over to the Depot Stores Keeper (RE), Kazipet after taking inventory on 26 March 1985, i.e., 2 years and 2 months after the death of the Head Clerk which revealed shortages of 7,483 Kg. of Zinc dross and 1757

Kg. of Zinc scrap and some other materials the total value of which was assessed by the Administration at Rs.2.23 lakhs. Recovery of the loss on this account was not possible as the Railway Administration was not in a position to fix responsibility for these deficiencies.

The Railway Administration stated in August 1988 that finalisation of the departmental stock sheet was in process.

Non-observance of the prescribed rules led to a loss of Rs.2.23 lakhs.

3.19 North Eastern Railway - Unnecessary procurement of a bus

The Railway Administration provided in its Machinery and Plant (M&P) Programme for 1984-85 a sum of Rs. 2 lakhs for provision of a school bus to facilitate schooling between Sonepur and Patna/ Hajipur of the children of railway employees posted at its Divisional Headquarter at Sonepur because of inadequate educational facilities available at that station. A bus chasis was received from Executive Engineer (Bridges), Gorakhpur in October 1983 and brought to Sonepur for body building as a school bus. Necessary contract for body building was awarded in April 1984 and the same was completed in February 1985 at a total expenditure of Rs.2.68 lakhs.

Simultaneously, on General Manager's instructions in February 1984 to explore possibilities of opening a school at Sonepur itself, the Divisional Authorities of the Railway arranged and got a missionary school opened at Sonepur in November 1984. This rendered the school bus without any use. The Railway Administration made efforts to obtain willingness of the railway employees for using the bus on approved rates for them as well as for their college going children for journeys ex Sonepur to Patna/Hazipur and back but there was no response from the staff.

The bus had been used since its manufacture in February 1985 for a period of only five days in June 1985 for ticket checking purposes in Sonepur Division and for nearly four months from 19 July 1985 to 22 November 1985 as school bus in the Izatnagar Division of the Railway and again for 8 days for ticket checking during April 1988. The Railway Administration at Sonepur is unable to put the bus to any use there including its use for ticket checking purposes exclusively on account of its uneconomical cost of operation and maintenance compared to the expenditure on hiring of buses.

The Ministry of Railways (Railway Board) stated in December 1988 that the bus was not procured for a commercial purpose and that it had been transferred to Muzaffarpur for use by the Zonal Training School and children of railway employees attending the Central School there. However, the actual utilisation of the bus at Muzaffarpur from 12 October 1988 revealed that it was not fully utilised as the bus was operated for only 40 students for a total period of 35 days from that date to 4 January 1989 and was later sent for repairs on 9 January 1989. The monthly expenditure on account of wages of the driver and a khalasi alone amounted

to Rs.2238/- against Rs.1440 recoverable as hire charges from the users. The expenditure on operating the bus and repairs and maintenance charges are also to be incurred in addition. The bus built for Railway in 1985 at a total cost of Rs. 2.68 lakhs is yet to be fully utilised and has not served its intended purpose.

3.20 North Eastern Railway - Avoidable extra payment of sales tax

The Salex Tax generally payable in the State of Uttar Pradesh (U.P), as per provisions of the Uttar Pradesh Sales Tax Act 1948, is at the rate of eight per cent on the turnover of goods. The Rules also provide that the tax on the turnover of sales of goods to a department of the Central Government is to be levied and paid at the rate of four per cent as specified in sub-section (1) of Section 8 of the Central Sales Tax Act 1956 on furnishing a declaration in Form III-D as prescribed.

The Ministry of Railways (Railway Board) placed two purchase orders in June 1979 and August 1981 on a firm of Calcutta for supply of 3000 tonnes and 900 tonnes of CST-9 sleeper pots respectively from the firm's workshop F.O.R. Mughalsarai in U.P. to the North Eastern Railway Administration as per consignee instructions issued by the Construction Organisation of the Railway. The terms and conditions of the purchase order provided that any tax legally leviable would be borne by the Railway Administration. The Railway Administration did not, however, furnish the requisite declaration in the prescribed Form III-D in respect of a quantity of 2900.28 tonnes supplied in U.P to avail the concessional rate of sales tax at four per cent. As a result, an amount of Rs.3.89 lakhs was paid towards Uttar Pradesh Sales Tax at the rate of eight per cent instead of the concessional rate of four per cent.

Failure to furnish the requisite declaration to avail the concessional rate of tax led to an avoidable extra payment amounting to Rs.1.94 lakhs.

3.21 Metro Railway, Calcutta - Construction of sub-way structures

Metro Railway invited global tenders in January 1983 for construction of sub-way structures in contract sections A and B. The approximate value of the works indicated in the tender for the two sections was Rs.24 crores and Rs.35 crores respectively. The tender was to be opened in two parts - Part I and Part II. Part I of the tender which was to be opened first comprised of technical data concerning technical competence and expertise of the firm and their collaborator for assessing capacity. Part II which was to be opened later contained commercial and financial data i.e. rates and special conditions, etc.

In all, five offers were received for section A and three offers for section B. The offers were valid for 180 days from 7 April 1983 i.e. upto 3 October 1983. Part I of the tenders opened on 7 April 1983 was considered by the Tender Committee on 18 April 1983. Out of 5 firms who had quoted for section A and 3 firms for section B, only two firms- firm 'A' in collaboration with a firm of Japan and firm 'B' of Japan were found technically capable of executing the works. Metro Railway's proposal of April 1983 for opening

of Part II of the tender of the above firms was approved by the Railway Board on 29 April 1983. The capacity/ capability for executing the work having been established, Part II of the tenders was opened on 2 May 1983 and the offer of firm 'A' at Rs. 65.99 crores for both sections was recommended (June 1983) for acceptance to the Railway Board by the Tender Committee. Meanwhile, as the validity period of the tenders had expired, the tenderers were asked to extend the validity of their offers upto 3 December 1983 and later from 4 December 1983 onwards. Both the firms did not impose any condition while extending the validity period upto 3 December 1983. However, subsequently while firm 'B' extended the validity period beyond 3 December 1983 without any condition, firm 'A' imposed two special conditions:

i) increase in the mobilisation fee of Rs.100 lakhs by Rs.75 lakhs for each section (total Rs.1.50 crores), and

ii) that the ceiling of usual price escalation of 15 per cent of the value of the contract would be applicable from the month of award of contract i.e. the effect of escalation payment between the base month of the tender opening and the month of award of the work was to be deemed beyond the ceiling limit of 15 per cent. The above special conditions were post-tender stipulations.

In May 1984, while communicating their approval for award of contracts for both sections to firm 'A', the Railway Board directed the Project Administration to conduct negotiations/ dialogue for improving tender conditions, removing discrepancies, for obtaining suitable clarifications/reduction/adjustments in rates as also reasons for variations in the rates quoted by them for sections A and B when the work in the two sections was more or less identical/similar. The Project Administration was also asked to make efforts to get the post-tender stipulations withdrawn. In pursuance of Railway Board's instructions, two separate letters of intent dated 13 June 1984 for sections A and B (for each tender) were issued in favour of firm 'A' by the Project Administration. As directed by the Railway Board negotiations/dialogue/discussions were also held on 18 June 1984 and 20 July 1984 for getting reduction in rates and withdrawal of the two special conditions. But the firm did not agree. Consequently, the Tender Committee, having no other alternative, recommended in August 1984 the offer of firm 'A' involving additional financial burden of Rs.8.17 crores by way of mobilisation fee (Rs.1.50 crores) and escalation (Rs.6.67 crores). The time taken in recommending the tender was 15 months.

The letter of acceptance was issued in October 1984 in favour of firm 'A' (for both sections) at the negotiated contract value of Rs.27.67 crores and Rs.39.81 crores respectively. The scheduled date of completion of the work was 48 months from the date of issue of letter of acceptance i.e. 12 November 1988 for section A and 15 October 1988 for section B. The work in sections A and B started on 5 February and 6 February 1985 respectively. The dates of completion of both the sections had to be extended upto December 1990 due to slow progress of work which was 31 per cent and 33 per cent in sections A and B respectively as at the end of July 1988. The extension had been granted mainly

on the grounds of delay in import of requisite machineries, acquisition of land/plots in both sections, completion of diversion of utilities by Post and Telegraph Department, constraints in movement of excavated soil on narrow approach road, deteriorating law and order situation involving thefts, labour trouble, etc. The extension was granted along with an outright payment of Rs.150 lakhs as advance with the Railway Board's approval in April 1988 on the specific condition that by mobilising additional inputs/ resources the firm would complete the work by December 1990.

Firm 'B', through their authorised Indian Company, had sent two communications indicating their willingness for negotiations but the Tender Committee had not taken congnizance of these communications treating it as post-tender modifications. The Tender Committee had also examined independently the question as to whether it was necessary to conduct negotiations with firm 'B'. But keeping in view that the offer of firm 'B' was higher by Rs.37.64 crores than that of firm 'A', the foreign exchange (Japanese Yens) payable to firm 'B' was equivalent to Rs. 23.07 crores, against the total Japanese loan of Rs.20 crores available to India for this project, the rebate offered by firm 'B' for placing orders for both the sections on them was 4.5 per cent as against 6 per cent offered by firm 'A' and in the event of each party getting one section the rebates of both the parties amounting to a little over Rs. 4 crores would be lost the Tender Committee did not recommend negotiations with firm 'B'. Consequently, negotiations were held with the lone tenderer. There being no other tenderer in field, the Administration had to virtually concede to every demand.

The following points arise in this case:-

i) The tender documents stipulated outright payment of mobilisation fee (advance) of Rs.100 lakhs for each section. The tenderers were expected to quote rates keeping in view this advance payment. Despite the provisions that the mobilisation fee of rupees one crore was an one time payment and no demand for its enhancement would be made, firm 'A' demanded enhancement of this one time payment of rupees one crore by Rs.75 lakhs for each section on the ground of increase in the cost of machineries, electrical goods, rails, conveyor belts. During negotiations, the Tender Committee had asked the firm to substantiate their claim of 15 per cent increase on an average in the cost of plant and machineries. The tenderer did not submit the corresponding indices of Japan in respect of the imported items and for indigenous items but furnished only the published indices for Reserve Bank of India. Though this did not help the Tender Committee to determine the exact increase involved, yet it recommended the mobilisation fee of Rs.150 lakhs for both the sections. This was totally against the original tender conditions and hence was not justified.

ii) The tenderer had to make corresponding adjustment in formulating rates keeping in view the payment of mobilisation fee of Rs.2 crores. The Administration on detailed scrutiny had found that there was huge difference in the itemwise rates of sections A and B in respect of similar works and in more than 80 per cent of the items the rates quoted in section A were considerably higher. The estimated value of this difference as assessed by the Administration

was approximately Rs.2 crores. The argument advanced by the contractor for the difference in itemwise rates was that they had to pay equal amount of foreign exchange to their Japanese collaborator for each section towards cost of plants and machineries, consultancy fees, personal service charges, etc. But considering that the quantum of work to be executed in section A was less than in section B and the nature of work was indentical the above reasons did not appear convincing. Administration, nevertheless, accepted it.

iii) Further, on comparative evaluation of the offers with the average of latest accepted rates together with up-to-date escalation thereon for major items of work like diaphragm wall, decking boxes, utility, etc. as already available with the Administration, the tender for section A worked out to Rs. 25.05 crores as against Rs.28.64 crores quoted by the contractor. Similar differences also persisted in section B also. This indicated that the contractor did not take into account the outright payment of mobilisation fee while quoting rates for the various items of works. Though the difference between the comparative evaluated rates of Administration and those of the contractor's rates was about Rs.3.6 crores, the Administration accepted the same without any apparent justification.

iv) While extending the validity period of their offer firm 'A' had asked for escalation in price between the base month of tender quotation and the month of award of the contract being treated as over and above the prescribed ceiling limit of 15 per cent. During negotiation, the Tender Committee had asked the firm to withdraw this stipulation since it did not make any such stipulation at the time of extending the validity period upto 3 December 1983. Moreover, as per the original tender conditions, firm's offer was valid without any change for the initial period of 180 days ending on 3 October 1983. The extended period upto 3 December 1983, therefore, ought to have been excluded from the scope of escalation payment. The firm, however, did not agree to withdraw the special condition. Consequently, Administration had to agree for the escalation payment as asked for by the firm. The acceptance of the modified escalation clause entailed extra financial burden of Rs.6.67 crores.

(v) Besides the above financial accommodations, the contractors were further accommodated by interest bearing recoverable advances of Rs.4.04 crores for each section on furnishing requisite bank guarantee under the terms and conditions of the contract.

(vi) Firm 'A' in their revised offer of June 1984 contended that while the cost of cement and reinforcement to be supplied by the Administration be recovered, the recovery for the cost of 300 metric tonnes of structural for each section might not be made as the same would not be consumed and would be returned to the Railways after completion of the works. This condition, though the same was against the provision of the tender conditions, was accepted by the Project Administration involving financial accommodation of Rs.36 lakhs approximately for a period of four years i.e. upto the scheduled date of completion. But as the contract is likely to prolong beyond the original scheduled date of completion i.e. October 1988 (extension now having been granted upto 31 December 1990) the impact of this financial accommodation would

further escalate and result in blocking up of capital and thereby also losing interest on it.

Notwithstanding the fact that the guidelines stipulated by 'Overseas Economic Co-operation Fund' (OECF) (section 4.03) that no bidder should be permitted to alter his bid after opening of bids, of which the Railway Administration was fully aware, and that any splitting of the two works to each of the tenderers would result in a rebate loss of Rs.4 crores approximately, the Ministry of Railways (Railway Board) requested the Ministry of Finance in September 1983 to obtain permission of the OECF for negotiating with firm 'B' to bring down their rates at par with that of firm 'A' so that contract for section A was awarded to firm 'B' and that for section B to firm 'A'. Ministry of Railways (Railway Board)'s proposal for negotiations was, however, not agreed to by the OECF. Repeated requests made by the Railway Board in December 1983 and by the Minister for Railways in February 1984 to Finance Minister for relaxation of rules by OECF to enable the splitting of the contract between the two tenderers were of no avail (February 1984). The delay caused by such references despite specific guidelines of OECF was thus avoidable.

The failure of the Project Administration in not finalising the contract within the validity period, not only resulted in acceptance of the two post-tender additional stipulations increasing the cost of the contract by Rs.8.17 crores but also resulted in making payments of heavy advances/ financial accommodation to the tune of Rs.1.86 crores.

The Administration stated in December 1988 that the delay occured in accepting the offer of the lowest firm was quite unavoidable as a number of Ministries/Departments, such as, Ministry of Finance had to be consulted. According to them, the correspondence with the Ministry of Finance, etc. on the one hand and with the contractor on the other, led to unavoidable delays and the conditions connected with OECF had also come in the way. The needless insistence on the part of the Administration for getting relaxation of rules by OECF through Ministry of Finance for conducting negotiations with firm 'B' and for splitting the contract for awarding it to both the firms contrary to OECF guidelines, in which it failed, delayed the finalisation of the contract considerably. All in all, it took the Railway Administration 18 months (April 1983 to October 1984) against the validity period of 180 days for tenders which expired on 3 October 1983. It had to be got extended four times and while agreeing to the second extension firm 'A' imposed the two special conditions mentioned above.

3.22 South Eastern Railway - Non-realisation of cost of operation due to speed restriction of trains during execution of Canal Crossing Deposit Works

The South Eastern Railway Administration have been undertaking execution of Canal Crossing Works on behalf of the State Governments on 'Deposit Work' terms. These works involve stoppage/slowing down of trains as a result of imposing speed restrictions during construction. The Railway Board had earlier in 1956 prescribed a general formula for working out the cost of stopping a train. The cost of stopping/slowing down of trains during construction is, however, not taken into account and included in the estimates of Deposit Works

prepared by the Railway for acceptance by the State Governments. In October 1981, the General Manager of the Railway observed that in all such deposit works necessary provisions should be made in the relevant estimates, etc. to provide for the losses sustained on account of speed restrictions. Even after this, the Railway Administration did not make suitable provision for this factor in the estimates.

A review in Audit of 45 Deposit Works in Nagpur Division of the Railway undertaken during the period 1977-78 to 1985-86 revealed that omission to provide in the estimates of these works for the cost of consumption of extra fuel, extra wear and tear on breaking gear, loss of section capacity and wastage of staff hours, etc. on account of imposition of speed restrictions/stoppages of trains in the sections involved financial implications of the order of Rs.1.31 crores on the basis of costs worked out by the Division in December 1981 and February 1982.

In reply to an Audit enquiry on the subject the Railway Administration stated (August 1986) that no detailed instructions on the subject were available and that decision at higher level was necessary.

No decision in the matter has, however, been taken so far (December 1988).

3.23 Central Railway - Infructuous expenditure on the rehabilitation of Thakurli Power House

The Railway Power House at Thakurli, 50 kilometres away from Bombay, was set up in 1929. The boilers of this power house were replaced by nine high pressure boilers between 1952 and 1958 to create generation capacity of 96 MW. In 1959, the generating capacity of the power house was 136 MW. But due to ageing of turbines and boilers the generating capacity was reduced to 96 MW and 80 MW during 1970-80. In December 1970, the Central Railway Administration advised the Maharashtra State Electricity Board (MSEB) that the combined load requirement of Central and Western Railways for suburban as well as mainline traffic was 220 MW. This power requirement was estimated to rise by 1979-80. The Master Plan Committee set up by the MSEB recommended in April 1971 that the power house be expanded by 200 MW, but against the recommendations of the Master Plan Committee, the MSEB informed the Railway in July 1971 that it would meet the entire power demand of the Railways during the next 10 years and hence it was not necessary to expand the power house at Thakurli. In March 1972, the Railway Administration revised their demand from 220 MW to 280 MW including that of Metropolitan Transport Project (MTP) Railways, Bombay. In August 1972, the MSEB pointed out to the Administration that while conveying their decision in the past that the Administration need not proceed with the expansion of the power house, they had not taken into consideration the enhanced quantity of 60 MW power requirement of MTP Railways, Bombay. The MSEB, therefore, suggested in August 1972 the augmentation of the power house. By 1978-79 the existing plants had deteriorated and were not only poor in performance but were also considered unsafe for further operation. The recommendation of a consultant appointed by the Railways in 1973-74 to set

up two 110 MW plants at an estimated cost of Rs.60 crores at Thakurli was accepted by the Railway Board in October 1980 to the extent of provision of one 60 MW plant at a cost of Rs.45 crores.

An abstract estimate was sanctioned in February 1982 for Rs.59.96 crores (revised cost assessed at Rs.95.16 crores by Electrical Department in September 1985) and a consultant with a fee of Rs.51.43 lakhs was appointed in February 1983 for the project. Supply and erection of the plant was awarded in October 1985 to a Public Sector Undertaking at a cost of Rs.41.4 crores and other incidental works and supplies had also commenced. In October 1985 the Government of Maharashtra advised the Railway Board that their request for supply of 20 MW power had been accepted. On 7 November 1985, when an expenditure of Rs.5.97 crores (excluding commitments for further Rs.1.79 crores) had been incurred, the Railway Board advised the Undertaking to stop further work on the project as they were looking into the possibility of obtaining power from MSEB/Tatas due to financial constraints. Simultaneously, the Government of Maharashtra was also requested in November 1985 to meet the Railways requirements fully from 1989-90. Orders were issued in May 1986 to close the project and to obtain future requirements from MSEB. Out of Rs.6.04 crores expended, irretrievable expenditure incurred on the project amounted to Rs.92 lakhs comprising wages to staff (Rs.39 lakhs), consultancy fees (Rs.13 lakhs), filling up of low lying area by using coal ash (Rs.30 lakhs) and miscellaneous expenditure (Rs.10 lakhs). Expenditure on assets like quarters (Rs.47 lakhs), offices and rest house (Rs.22 lakhs) and plant and machinery (Rs. 10 lakhs) had been treated as retrievable and had been transferred to other works.

In the meanwhile, a High Level Expert Committee was appointed to consider rehabilitation of the aged plants at this power house and on the basis of their recommendation an estimate for Rs.3.76 crores was sanctioned by the Railway Board in August 1979. The cost was revised to Rs.6.40 crores in July 1983. The actual expenditure on rehabilitation was Rs.5.28 crores upto 31 March 1986. The rehabilitation work commenced in 1979 was completed to the extent of 99 per cent by the end of December 1986. The power house met the Railways full requirement of ghat load for only 33 months from March 1983 to November 1985.

The Government of Maharashtra was finally informed at the ministerial level in December 1987 that the Thakurli Power House would be closed as and when the equipments became obsolete and that the proposal to put up new set was not financially viable. As a proper grid had developed and generation and distribution was a State subject, MSEB was also told to meet the requirements of Railways.

On 15 December 1987 an acciden occurred in this power house due to bursting of one of the generator tubes resulting in fatal injuries to eight employees. Consequently, the Central Railway Administration closed this power house. The Technical Director of MSEB who inspected the power house on 7 January 1988 indicated the deteriorated condition of various structures and equipments of the power house. Since then the power requirement is being taken from the grid pending formal approval by the State Goverment.

The Railway Administration was aware that power generation and its distribution was a State subject and responsibility to meet Railway's requirements fully was that of MSEB. It was, therefore, not necessary for the Railway Administration to have gone in for rehabilitation of the existing power house which was in a dilapidated condition and also attempt to set up a new power plant of 60 MW and later give up the project resulting in infructuous expenditure of Rs.92 lakhs (wages to staff, consultancy fees, use of coal ash and miscellaneous expenditure).

3.24 Southern Railway - Extra expenditure due to error in revision of the Basic Schedule of Rates

To facilitate the preparation of estimates and examine the reasonableness of rates quoted by contractors for supply of materials and execution of works, a Basic Schedule of Rates (BSR) is maintained by the Railway Administration. The BSR is updated periodically to bring these rates in line with prevailing market rates.

On the Southern Railway, the BSR was last revised and brought into force from 1 June 1984. As a result of preventive checks exercised on items of painting works executed under certain contracts on Madras Division, the Vigilance Branch of the Railway reported in November 1986 that the rates adopted in BSR 1984 for items of painting works seemed to be exorbitant and suggested that the Divisions be advised not to operate these items of the BSR. In December 1986 the Vigilance Branch, after checking a few agreements, pointed out that the rates of emulsion paints adopted for the purpose of framing the BSR 1984 rates were Rs.20 and Rs.40 per kg. for paints without and with mica respectively although the manufacturer's rates for these paints were only Rs.3.14 and Rs.3.60 per kg. respectively. The BSR rates were revised in July 1987 by the Railway to accord with the latter rates. The adoption of the erroneous higher rates was not detected in internal check by the Railway Administration.

A comparison of these rates with those in the BSR 1984 revealed that in respect of works valuing Rs.59.57 lakhs carried out by the Railway Administration in the Madras, Mysore and Madurai Divisions during the years 1985 and 1986 involving operation of the relevant items of BSR 1984, the extra expenditure due to adoption of higher rates for paints worked out to (Rs.52.52 lakhs. On the Madras Division where a major portion(Rs. 50.92 lakhs) of the extra expenditure had been incurred, the works were executed only through agency of contractors during the period the erroneous rates were in force as against their execution departmentally before revision of the Basic Schedule of Rates in 1984. No specific justification for execution of the works through contractors during the period was, however, available on records nor any such work had been done so far after rectification of the incorrect rates.

Reasons for adoption of incorrect rates in the year 1984 had not been investigated nor any responsibility fixed for the same so far (December 1988).

3.25 South Central Railway - Vijayawada-Balharshah Railway Electrification Project - Irregularities in the award of fabrication contracts and in issue of Zinc and Steel to Fabrication Contractors

The South Central Railway Electrification Organisation awarded six contracts during April 1982 to May 1986 for fabrication, drilling and galvanisation of steel masts/structures for the Vijayawada-Balharshah Railway Electrification Project. Total value of these contracts was Rs. 3.54 crores.

Three local firms, 'A', 'B' and 'C', all sister concerns, were among those who responded to these tenders and firms 'A' and 'B' were awarded the work in five contracts (Fab-2, 3(b), 4, 5 and 6).

All these three firms being sister concerns functioned with the same zinc bath and labour for the purpose of galvanisation.

Review of award of contracts and their implementation by firms 'A' and 'B' revealed that these firms derived undue benefits due to failure of Railway Administration to observe financial propriety and contractual provisions as brought out in succeeding paragraphs.

Award of Contracts

While awarding the contracts Railway Administration did not adopt an uniform policy but changed the norms of selection of offers in favour of particular firms. Consequently, the firms 'A' and 'B' derived undue benefits.

(a) The contract for fabrication etc. of 2000 MTs (Fab-2) was awarded on 30 May 1982 to firm 'A' though the firm did not have any past experience of galvanisation and did not acquire necessary facilities. As per contract the period of completion was 12 months from the date of supply of steel structures. However, the Railway Administration did not specifically advise the firm about the exact due date for completion of work even though the contract included price variation clause for zinc operative till the due date for completion. Against the quantity of 2000 MTs ordered, firm 'A' supplied 118.660 MTs by 20 June 1983 and sought extension of time upto 31 December 1983. The Railway Administration granted on 9 August 1983 extension of time upto 31 December 1983 with the stipulation that no payment will be made towards price escalation for zinc "for the quantity in shortfall as on 2 July 1983".

The firm could not, however, complete the work and sought on 15 January 1984 further extension of time upto 30 June 1984 for completion of the work. The second extension was also granted by Railway Administration on 24 February 1984 with the same condition as stipulated for first extension viz. no payment for escalation in prices of zinc for the quantity in shortfall as on 2 July 1983.

As per provisions of the contract the firm was required to apply for extension of time at least two months before the due date of completion of the contract. As the firm failed to apply in time for extension of time for completion of work and supplies made by it were far behind the schedule, Railway should have terminated the contract at the risk

and cost of firm 'A'. Instead, the Railway Administration granted extension for second time and later further accommodated the firm by accepting its claim of Rs.4.30 lakhs towards 50 per cent escalation in price of zinc supplied beyond 1 January 1984 which was not admissible to the firm according to the provisions of the contract.

The Railway Administration stated inter-alia (December 1988) that a Departmental Committee examined various aspects and recommended that the termination of contract was not advisable on cost considerations as the expenditure to be incurred by Railways for getting the remaining portion of the work completed by alternative agency would be considerable. This, however, is not convincing as any extra expenditure incurred would be recoverable from the defaulting firm.

(b) In awarding tender for Fab-3 in December 1982 Railway Administration ignored the lower offer of a local firm on the plea that the firm did not have the requisite facility for galvanising work. However, higher offer of firm 'A' which had also not set up the zinc bath was accepted though local firm promised to set up 14 metre long zinc bath. In August 1985 and May 1986, in respect of Fab-5 and 6 tenders, lower offers of other local firms were, however, rejected on the plea that these firms did not have past experience and contracts were placed at higher rates on firm 'B'. Railway Administration also failed to evaluate the offers excluding the freight element and accepted considerably higher rate offered by firm 'B' which had preference over other tenderers because of substantially lesser element of freight in their offer. The fact that freight element by rail is actually an income for Indian Railways had not been given proper consideration by the Railway Administration. Avoidable expenditure on these contracts was Rs.10.02 lakhs on the basis of fourth lowest offer excluding freight element.

The Railway Administration stated in December 1988 that the aspects pointed out by Audit were already considered by the competent authority (while accepting the tender) who had overruled similar remarks given by Accounts Member of Tender Committee in her dissenting note. The fact, however, remains that the inclusion of elements of freight as part of the quotations has distorted the inter-se position of the tenderers.

(c) As per provisions contained in para 1256 of Indian Railway Code for the Engineering Department the issue by Railway Administration of the letter of acceptance to successful tenderers constitutes a binding contract by itself. The Railway Administration, however, followed a different practice in respect of fabrication contract No. Fab-4 and asked firm 'A' to accept the letter of acceptance issued by the Railway Administration in April 1983. The firm 'A', however, backed out from its earlier offer and inflated its rates with new conditions not quoted by it earlier. Railway Administration did not penalise the firm by way of recovery of "Risk and Cost" but cancelled the contract. The work was subsequently entrusted to firm 'B', a sister concern of firm 'A', at higher rates at an additional expenditure of Rs. 32.06 lakhs which could have been recovered at the "risk and cost" of firm 'A' had Railway Administration followed contractual

provisions of the contract and taken action against the firm.

The Administration stated (December 1988) that this was the standard practice followed in all cases. As the acceptance by the Railway was unconditional, the letter of acceptance constituted a binding contract.

Execution of contracts

The firms 'A' and 'B' derived the following benefits because of the lapses of Railway Administration in observing contractual provisions.

(i) The fabrication contracts did not have any provision for issue of materials to the contractors on loan basis. Even so, the Railway Administration supplied to the firms 'A' and 'B' during November 1985 to December 1986, 53.649 MTs of Zinc costing about Rs. 14.7 lakhs though the terms of the contract were for galvanisation with contractor's own zinc. This transaction was treated as unofficial and of private nature, though public money and materials were involved. This transaction was not reflected in the books of Railways. While no amount was recovered towards supplies of zinc valuing Rs.14.7 lakhs made to contractors, which was done outside the provision of the contract, Railway Administration paid amount of Rs.5.51 lakhs to firm 'A' towards escalation in the price of zinc against contracts as though the firm used its own zinc. The issue of zinc to firm 'A' for which no provision existed in the contracts amounted to unauthorised accommodation to the contractor and the payment of escalation charges thereon compounded the error. No action has been taken to fix responsibility for these lapses.

The Administration admitted (December 1988) that the zinc was issued under instructions but the normal procedure of accountal, issue and recovery from the contractors were not followed simultaneously. The Administration also accepted that the price variation should not have been paid to the contractor till the cost was recovered.

(ii) The requirement of M.S. rounds flats for fabrication contract Fab-5 was assessed at maximum of 100 MTs. To meet this requirement, in the event of non-supply of steel by steel plants, provision was made in the contract for supply by firm 'B' to Railway Administration 100 MTs of M.S. Rounds at Rs. 8,500 per MT. After the award of the contract, Railway Administration supplied to the firm 'B' 97.038 MTs of M.S. Rounds by 8 July 1986. The Railway Administration also indicated in its ledger a receipt of 20 MTs on 1 September 1986 and 80 MTs on 10 September 1986 and showed as having issued the same to the firm 'B' on the same date at the above agreed rate. Further in September 1986, when the supply of the materials was made by the firm the Railway Administration had a stock of 184.380 MTs of M.S. Rounds and they were also having such high stocks of M.S. Rounds since March 1986 onwards. As such, purchase of 100 MTs of M.S. Rounds from firm 'B' at the higher rate had not only involved extra expenditure of Rs.3.08 lakhs but was also avoidable as sufficient stocks were available

(iii) The issue of steel to the firms 'A' and 'B' much in excess of the quantity

covered by the bank guarantees had been a constant feature, especially against the contract Fab 2. The value of such steel issued in excess during August 1982 to December 1986 ranged between Rs.2.46 lakhs and Rs.38.99 lakhs. Besides this, 1104 MTs steel was allowed to remain within the firms' premises (December 1986) which was not covered by bank guarantees. Investigation conducted by Central Bureau of Investigation in June/July 1987 revealed a shortage of 219 MTs of steel from their stocks. At this stage firm 'A' claimed a payment of Rs. 8.96 lakhs towards watch and ward and ground rent. Pending finalisation of firm's claim Railway Administration terminated contract Fab - 2 in September 1987 and the left over work of contract was awarded to firm 'K' in February 1988 at the "risk and cost" of firm 'A'. A provisional assessment by the Railway Administration made in May 1988 revealed that there had been a total shortage of steel of 238 MTs (value-Rs.22.39 lakhs) against the Fab-2 and Fab-6 contracts the supply against other contracts having been completed by that time . The amount recoverable from the firm towards risk cost and the value of shortage of steel was Rs.47.99 lakhs excluding the amounts due for recovery towards zinc supplied (assessed at Rs. 25.78 lakhs approximately). The Railway Administration encahsed the bank guarantee of Rs.17.25 lakhs and has on date an amount of 8.22 lakhs due to the firm kept in 'Deposit' leaving an uncovered balance of Rs. 48.3 lakhs.

The Railway Board stated (December 1988) that Bank Guarantee to the value of Rs.26.81 lakhs had been encashed. Bills to the extent of Rs.6.71 lakhs had been passed and kept under 'Deposit' with Railways to meet the dues from the contractor. Besides, bills to the extent of Rs.8.74 lakhs were yet to be prepared and the same would be adjusted against dues from the firm as and when prepared and passed. This leaves a balance of Rs. 40.25 lakhs still to be recovered from the firm.

To sum up, Railway Administration had incurred avoidable extra expenditure of Rs. 49.46 lakhs in the award of the fabrication contracts to two sister firms 'A' and 'B' apart from heavy dues of Rs.40.25 lakhs still pending recovery from these two firms.

The Administration stated in May 1988 that all the aspects regarding issue of zinc, excess quantity of steel, purchase of M.S. Rounds at a higher cost when sufficient stock was already available with the firms were under investigation by the Central Bureau of Investigation who had taken over the connected records and added that the exact amount due for recovery could be assessed and efforts made to recover the same on completion of the investigation.

The Ministry of Railways (Railway Board) admitted (December 1988) that it was a case of procedural irregularities and stated that on completion of investigation by Central Bureau of Investigation appropriate action in the light of Central Bureau of Investigation's findings would be taken.

3.26 Central Railway - Delay in installation of lubricating oil storage tanks

The Railway Administration commissioned the Diesel Loco Shed at Jhansi in 1974-75. In May 1978 the Railway Administration proposed provision of tanks at the shed at an estimated cost of Rs.2.5 lakhs for storage of lubricating oil envisaging a saving of Rs.75,000 per annum therefrom. The Railway Board had advised all the Railways in May 1980 to provide storage tanks at diesel sheds having consumption of lubricating oil of 30 KL per month or more as the facility was economical. In March 1982, they further advised that the Indian Oil Corporation (IOC) had agreed to provide the storage and maintenance facilities at their own cost provided the off take was about 100 KL per month and that they would consider installing the facility even if the off take was less than 100 KL per month if suitable drawal was guaranteed. However, the matter remained under correspondence with the IOC and the Chief Controller of Explosives, Agra till December 1983 when the Railway Administration requested the Directorate General of Supplies and Disposals (DGS&D) for assisting in the provision of storage-cum-dispensing facilities at the shed. The Railway's requirement for installation of two storage tanks of 50 KL capacity with ancilliary equipment and facilities at the Jhansi shed was covered by the DGS&D in its contract for supply of oil placed on the IOC in June 1984. The tanks were commissioned by the IOC and the facilities made over to the Railway in April 1987.

The delay in installation of the storage tanks resulted in avoidable extra expenditure of Rs.27.80 lakhs representing the difference between the rates for bulk supply of oil in tank wagons and those for supply in barrels during the years 1978-79 to 1986-87. The extra cost of transportation in barrels vis-a-vis transport in tank wagons amounted to Rs.5.26 lakhs during the same period besides a loss of Rs.3.05 lakhs on account of storage and leakage of oil during 1979-80 to 1986-87.

The Ministry of Railways (Railway Board) stated in November 1988 that initially it was felt that installation of storage tanks required clearance from the Explosives Department but was subsequently found to be not necessary and that the decision about the shape of the tank, whether vertical or horizontal, also took some time.

The fact, however, remains that the delay in provision of storage tanks resulted in an avoidable extra expenditure of Rs.36.11 lakhs.

3.27 Northern Railway - Idling of assets created for Foundry Research at Research, Design and Standards Organisation, Lucknow

The Railway Board decided (February 1966) to shift the Metallurgical and Chemical Wing of Research, Designs and Standards Organisation (RDSO) from Chittaranjan to Lucknow in stages. In September 1971, the Director General, RDSO sanctioned an abstract estimate for Rs.29.21 lakhs for the provision of office and residential accommodation including the construction of a Foundry Research Building.

A detailed justification for phase-wise requirement of additional personnel

and plant and machinery to bring the foundry into commissioning immediately after completion of the building, was sent by the Director General, RDSO to Railway Board in December 1973. The construction of the Foundry Research building at a cost of Rs.3.99 lakhs was completed in 1975. Despite their earlier decision for setting up the Research Foundary at RDSO, Lucknow, the Railway Board was of the view, during the discussions held with RDSO, that Chittaranjan Locomotive Works (CLW) having a big Steel Foundry and Cast Iron Foundry was the most suitable place for installation of the Research Foundry at CLW. The Railway Board did not decide for six years about the final location of the foundry either at Chittaranjan or at Lucknow. It was only in December 1979 that the Railway Board decided to set up the Research Foundry at RDSO, Lucknow in preference to Chittaranjan. Railway Board's sanction was accorded in January 1980 for the procurement of the machinery and equipment for Research Foundry at RDSO, Lucknow at an estimated cost of Rs.20.10 lakhs. Subsequently in February 1982, a revised estimate for Rs.34.58 lakhs to cover the expenditure on plant and machinery, eletrification and for 9 work charged posts for a period of one year but excluding the cost of Foundry Research building was sanctioned by the Railway Board. The expenditure incurred so far (August 1988) on procurement of plant and machinery, on work charged posts and on electrical works including expenditure incurred (Rs.3.99 lakhs) on the construction of Foundry Research building completed in 1975 stood at Rs.33.07 lakhs.

There was abnormal delay of over 3 years in commissioning the Induction Melting Furnace received in November 1981. The furnace procured at a cost of Rs.13.04 lakhs was commissioned only in May 1985. No Research and Development Work could be undertaken for want of Operational Organisation for which sanction of Railway Board was not forthcoming.

Despite the fact that the construction of Foundary Research building at RDSO, Lucknow was completed in 1975 and the Induction Melting Furnace commissioned in May 1985, the Railway Board reversed in November 1985 their earlier decision and decided that the Foundry Research Facilities at Lucknow should be shifted to Steel Foundry, Chittaranjan. The General Manager, Chittaranjan Locomotive Works, however, informed the Director General, RDSO, Lucknow in June 1987 that the entire equipment was not required for setting up of the Foundry Research Facilities at CLW and that only the Induction Furnace would be useful. Consequently, the Director General, RDSO requested the Railway Board in July 1987 and February 1988 for retaining the facilities already created at Lucknow as a Metallurgical Technology Development Laboratory for Research and Development activities other than Foundry Research. The Railway Board conveyed their approval to this only in April 1988.

The Ministry of Railways (Railway Board) explained in January 1989 that two schools of thought - one that research oriented activity should not be located in a Production Unit and the other that research and production should be combined- had influenced the decision making at the highest level in the Railway Boards's office at different points of time and added that the equipments and facilities created at Lucknow for Metallurgical Technology Development

and Foundry Research were in good condition and would be pressed to the intended use as proposed by RDSO and approved by the Railway Board in April 1988.

Due to lack of a firm and timely decision and lack of co-ordination of all issues, assets worth Rs.33.07 lakhs had remained unutilised for over three years.

3.28 North Eastern Railway - Working of Sleeper Creosoting Plant at Clutterbuckganj

The Sleeper Creosoting Plant at Clutterbuckganj on North Eastern Railway was established in 1954 with installed capacity to treat 24750 cum. of wooden sleepers per annum in one shift. A review in Audit of the working of the plant revealed the following points:-

(i) The average annual outturn during 1975-76 to 1986-87 was 14940 cum. due to less offtake of raw sleepers by the Railways. The treatment of wooden sleepers was much below even one shift capacity during the years 1975-76 to 1986-87 but the complement of 72 khalasis/helpers was neither reduced nor diverted to manufacture RCC sleepers for which an estimate was sanctioned in January 1982.

The Railway Administration accepted in February 1988 that the outturn in post 1985-86 period was comparatively less but contended that slight under utilisation of plant did not necessarily signify surplus staff. As the percentage of underutilisation ranged between 62.8 in 1984-85 and 49.1 in 1986-87 the contention was not tenable. The plant produced 27196 RCC sleepers during the period January 1982 to July 1984 without utilising surplus staff of creosoting plant. Payment of Rs.5.98 lakhs made to this additional labour could have been avoided by diversion of surplus labour.

The Ministry of Railways(Railway Board) explained (November 1988) that the receipt of sleepers from the State Forest Department had been going down year after year and although the intake of sleepers had been less, the staff had to be retained as each one of them performed a specific technical job and depolying them for jobs outside the plant was not feasible. The contention of the Railway Board is not tenable as in the proposal for setting up of monoblock pre-stressed concrete plant in the premises of the existing creosoting plant, it was mentioned that the existing staff working in the creosoting plant would be utilised after suitable training.

(ii) The chemical treatment of wooden sleepers at this plant is done by impregnating the sleepers with chemical preservative viz. creosote oil and furnace oil mixed in the ratio of 50:50. If, however, another preservative known as Pentochlorophenyl (PCP) is used to the extent of 2 per cent, the ratio of creosote oil to furnace oil required could be changed to 25:75.

As per report of a Committee on policy for use of treated wooden sleepers in 1972, average absorption rate of creosote oil at four different plants on Indian Railways during 1965-66 to 1969-70 ranged from 43.75 kgs. to 56.38 kgs. per cum. The Committee, however, recommended an average of 48 kgs. of creosote

oil per cum. of sleepers to be treated which could be achieved by prolongation of the pressure period, proper pre-seasoning and proper quality control during treatment. The requirement thus amounted to 96 kgs. containing mixture of creosote and furnace oils in the ratio of 50:50. It was, however, seen that the absorption rate at Clutterbuckganj plant was very high during 1975-76 to 1982-83 ranging fom 104.63 kgs. (52.31 kgs. of creosote oil) to 131.78 kgs. (60.89 kgs. of creosote oil) though in subsequent years 1983-84 to 1985-86 it was within the permissible limit (Annexure-X). The excess consumption of 1463.04 tonnes each of creosote oil and furnace oil during 1975-76 to 1982-83 (Annexure-XI) was valued at Rs.36.23 lakhs.

The Railway Administration explained in February 1988 that another committee in 1973 had recommended minimum absorption of 112 kgs. per cum. and that the consumption varied from species to species. The absorption rate varied between 95.94 kgs. and 96.90 kgs. during the period 1983-84 to 1985-86 and thus the plant could have observed the norm of 96 kgs. per cum. even for the earlier periods. The contention regarding variation in consumption in different species was also not supported by the quantities of species treated and which required higher consumption.

(iii) Though use of 2 per cent PCP was recommended for use in 1972 as mentioned in the previous paragraph by the Forest Research Institute, Dehradun, it was accepted by the plant for trial only in December 1981 and decision to use it was taken only in September 1982. The extra expenditure incurred for the period 1981-82 to 1985-86 due to non-utilisation/post utilisation of PCP amounted to Rs.27.99 lakhs.

The Railway Administration stated in February 1988 that as decision was taken to use PCP only in September1982, the loss for the period prior to that date was not relevant and the loss for the years 1984-85 and 1985-86 to the tune of Rs.8.63 lakhs was due to non-availability of PCP from the trade.

The Ministry of Railways (Railway Board) further stated (November 1988) that delay in adopting Joint Plant Committee report could not be explained since records pertaining to 1972-1981 were not traceable.

(iv) The raw wooden sleepers were received in the plant from Uttar Pradesh Forest Department and by way of inter-railway transfers. A prophylactic treatment by spraying arsenic pentaoxide-copper sulphate and potassium dichromate solution in water is required to be given to untreated sleepers immediately after sawing by the forest department before despatch to avoid damage to the sleepers from fungi. No evidence was available to indicate whether such treatment had been given. The loss due to damage from fungi to the sleepers not so treated in the years 1983-84 to 1985-86 was to the extent of Rs.12.95 lakhs.

The Railway Administration stated in February 1988 that the treatment was to be given immediately after sawing by Forest Department and that they were not aware of the exact reasons. The Railway Board explained (November 1988) that no inspection of sleepers was done at the loading points and that only counting of sleepers for purpose of clear Railway

Receipt was done.

3.29 Central Railway - Avoidable expenditure on construction of car shed at Kalwa

In order to augment the repair facilities for EMU coaches the Railway Administration constructed a car shed at Kalwa which was commissioned in January 1981. A review in Audit of the construction work revealed avoidable expenditure of Rs. 19.83 lakhs on earthwork and construction of inspection pits as discussed in the succeeding paragraphs.

Earth Work in embankment

For constructing the shed the Railway Administration acquired approximately 82 acres (33.15 hectares) of land valuing Rs.52.76 lakhs. A total quantity of 5.14 lakh cubic metres of earth work to be done in phases at a total cost of Rs.77.10 lakhs was provided in the estimate.

Even though a major part of the land required for construction of the Car Shed (except a small portion under encroachment) was in its possession by 1975, the Railway Administration planned the execution of earthwork in four stages. The work was executed under four separate agreements with different contractors in 1975, 1977, 1980 and 1982 at the rates of Rs.90/-, Rs.105/-, Rs.155/- and Rs.239/- per 10 cubic metre respectively. The higher rates paid in the contracts in 1980 and 1982 could have been avoided if the work had been done in a single phase. The extra expenditure on execution of the work in phases at higher rates was Rs.15.27 lakhs.

The Ministry of Railways (Railway Board) stated in January 1989 that the work of Kalwa car shed was sanctioned in three phases - Phase I approved in 1974-75 and Phases IB and IC in subsequent years and the earthwork was planned in such a manner that various facilities required in the shed were developed progressively to match the holding of EMU rakes so that assets created could be gainfully utilised.

This, however, is not convincing in as much as the Railway Administration had itself intimated the Railway Board in March 1977 that from the point of view of economic construction of the work it was best to complete the entire earthwork covering both phases I-A and I-B and also design and complete the shed structure as one unit, covering requirements in both the phases, and further that the two phases I-A and I-B were intricately connected in so far as the earth work and construction of shed structure were concerned.

Inspection pits

Although three inspection lines were provided in the estimate for the work, the agreement with the contractor provided for construction of only one pit. During execution of the contract, the number of inspection pits was increased to two in July 1979 and to three in March 1980. The contractor refused to undertake construction of the third pit and the Railway Administration awarded the contract for the third pit to another contractor

at a higher rate in January 1984 involving an extra expenditure of Rs.1.48 lakhs.

All the three inspection pits constructed were given a longitudinal slope of 1 in 400 and were sloping in the centre from either end. The Electrical Department pointed out in August 1981 that this slope and the consequent varying depths presented problems to the workers doing under-gear inspection and desired that the level of floor of the pits be made uniform throughout the length. The work of raising the level of the floor was executed in January 1984 at a cost of Rs.3.08 lakhs.

Failure to provide correct floor slope for the inspection pits according to actual requirements of the work resulted in an avoidable extra expenditure of Rs.3.08 lakhs.

3.30 Western Railway - Vasai-Creek Bridges - Grant of unintended benefit to the earthwork contractor by changing contract conditions

Western Railway Administration awarded during July 1983 - October 1983 three earthwork contracts for two new bridges number 73 and 75 across Vasai Creek on Bombay-Delhi trunk route. Although the guidelines issued by Research Designs and Standards Organisation (RDSO) in August 1978 envisaged mechanical compaction of earthwork either wholly or partially, the Railway Administration decided not to provide for mechanical compaction on the ground that (i) a suitable clause would be incorporated in the contract for use of approved quality of soil, (ii) banks would be subjected to atleast four or five monsoons before opening to traffic and (iii) the bank's height would be raised in two seasons to ensure consolidation of the banks and the base soil.

The work was required to be completed in two seasons upto the height of 2.5 metres in the first season and upto 0.5 metre below final formation level in second season. The rates covered the full cost of finished banks with shrinkage to be deducted at 12 per cent from the gross cubic contents of the finished works and included cost of maintenance of banks including repair of all rain cuts and turfing the slopes of the earthwork.

The contractor commenced the earthwork on 23 November 1983 at Bhayandar end, on 15 March 1984 at Naigaon end and on 1 November 1984 at Panju Island and completed 50.62 per cent of the earthwork (1.23 lakhs cum. out of total 2.43 lakhs cum.) at Bhayander and Naigaon ends without mechanical compaction upto 15 June 1984. Meanwhile the contractor approached the Railway Administration in January 1984 and offered to do the earthwork at Bhayandar and Naigaon ends with mechanical compaction without any extra charge provided no deduction on account of shrinkage was made and that he might be given an option to progress the work upto final level in one working season instead of two. While the offer was under consideration of the Railway Administration, the contractor withdrew his offer on 29 February 1984 and later within a month, on 28 March 1984, revived his offer with an additional condition that for the portion of work already done he

should be paid as for the compacted earth i.e. without any deduction of shrinkage.

The revised offer was examined by Railway Administration and was recommended for acceptance on the following grounds:

(i) Mechanical compaction of earth was technically more sound and was in conformity with guidelines laid down by RDSO in August 1978; and

(ii) Financially there would be no difference because due to mechanical compaction the net quantity would remain more or less the same as compared with gross quantity of earthwork without compaction less 12 per cent due to shrinkage.

The General Manager did not, however, accept the recommendation but later suggested a reference to be made to the Railway Board for a technical decision. A reference was, therefore, made to the Railway Board in May 1984 and in reply the Railway Board advised in the same month that it would be preferable from the technical considerations to go in for compaction of earthwork. The General Manger ultimately accorded his approval on 21 July 1984 to the modification in the agreements.

For earthwork in Panju Island also the contractor agreed for mechanical compaction with marginal reduction in rate from Rs.93.77 to Rs.93 per cum. which was approved by Railway Administration. The contract conditions of all the three contracts were modified in December 1984/January 1985.

In the light of these modifications an amount of Rs.8.14 lakhs which was originally deducted towards shrinkage in respect of Bhayandar and Naigaon ends was refunded to the contractor by way of adjustment through 'on account' bills in January 1985.

In this connection, the following points arise:

(i) Initial award of the contracts for earthwork was not in consonance with guidelines laid down by RDSO in 1978. The deviation from the general policy was stated to be on consideration of economy but not supported by financial projections. It would have been more appropriate to invite tenders with and without mechanical compaction.

(ii) Although the contractor started the work on 23 November 1983, he offered to do the work with compaction only on 2 January 1984. He, however, withdrew the offer on 29 February 1984 and later revised his offer on 28 March 1984. The Exeuctive Engineer issued instructions to the contractor in April 1984 that until written orders were given to him for mechanical compaction, he should continue to do the work as per agreement in force. It was only on 4 August 1984 instructions were issued that the earthwork should be done by mechanical compaction. Despite these events, which clearly indicate that the earthwork done till 3 August 1984 was without mechanical compaction, the Railway Administration refunded the amount of Rs.8.14 lakhs deducted earlier towards 12 per

cent shrinkage, as per the old conditions of the contract. This refund was not justified.

(iii) The quantum of reduction in Panju Island, if extended to other contracts, would have resulted in a saving of Rs.1.87 lakhs.

The Ministry of Railways (Railway Board) stated (December 1988) that tests conducted at 58 sites showed required degree of compactions at 41 places and the contractor carried out rectifications at 17 places where compaction was marginally inadequate, but could not, however, confirm whether mechanical compaction was done or the compaction was natural.

3.31 Southern Railway - Construction of a swimming pool for the Railway Officers' Club at Madras

The Sterling Club of the Railway Officers at Madras requested the Southern Railway Administration in April 1981 for the construction of a swimming pool for the use of its members. The Railway Administration justified the work in December 1981 on grounds of providing recreational facilities to the occupants of the quarters in the area as also to serve as a provision for fire fighting arrangement for the quarters. The Railway Board in January 1983 approved the work being executed by contribution of rupees one lakh as notional cost of providing fire fighting arrangements for the officers' quarters under construction in the area and contribution of rupees one lakh from staff benefit fund. The balance cost was to be borne by the Club including any increase in cost. The Officers' Club agreed to these conditions and deposited Rs.1.04 lakhs between January 1983 and December 1983.

An estimate for Rs.2.54 lakhs was sanctioned by the Administration in March 1983 and the work was awarded to a contractor in June 1983 for Rs.1.80 lakhs. In September 1983, certain additional works, including flooring with slabs/marbles, were entrusted to the contractor bringing the total contract value to Rs.2.48 lakhs. Again in December 1983, some more items of work such as dress change room, circular bath places etc. were entrusted to the contractor raising the total contract value to Rs.3.65 lakhs. The work of swimming pool was completed in August 1983, after providing for some more additional works such as compound wall, borewell, submersible pump, filter plant, etc. by the Administration. The total cost of the work, including the incidental works, was Rs.10.29 lakhs.

The entire expenditure, except for the small contribution of Rs.1.04 lakhs by the Club, was borne by the Railway under heads chargeable to open line and construction of quarters. When Audit raised the issue in May 1986, the Railway Administration replied in September 1986 that Rs.6.68 lakhs should be charged to the railway construction work and the balance Rs.3.61 lakhs representing the cost of compound wall, pitching, flooring, circular bath places, dress change room, borewell, filter plant, etc. to open line works and works of construction of type V quarters. The Club was requested in September 1986 to pay the balance of Rs.3.69 lakhs (Rs.6.73 lakhs-

Rs.3.04 lakhs). The Club, however, contended in March 1987 that as per Codal Provisions the initial cost of all infrastructures including recreation was to be borne by the Railway and, on the other hand, demanded reimbursement of Rs.1.04 lakhs already paid by them.

Although the cost of the work had exceeded the cost indicated to the Railway Board at the time of approval of the work, the Railway Administration proposed in October 1987 that an amount of Rs.4.64 lakhs might be distributed amongst the works relating to construction of various types of quarters in the area. In January 1988 the Railway Administration justified the proposal on the ground that the swimming pool was proposed to be used as the ground level tank for fire fighting for four multistoreyed blocks consisting of 12 type V units each although the original plan for swimming pool emanated from the Sterling Club for the use of its members. Railway Board in August 1988 decided to regularise, as a special case, the excess by increasing the Railway's share of cost from rupees one lakh to Rs.4.18 lakhs and insisting on an additional contribution of only Rs.46,000 from the Officer's Club thereby increasing the share of latter's cost from Rs.1.04 lakhs to Rs.1.50 lakhs. Accordingly, an amount of Rs.46,000 was remitted by the Officer's Club in October 1988 and the amount of Rs.4.18 lakhs was distributed to the works relating to construction of quarters. The Railway Board, while regularising the excess, expressed its displeasure at the total disregard of financial discipline by the Zonal Railway in the processing and execution of the work and also desired that responsibility should be fixed on the officers concerned for the lapses.

The debiting of an expenditure of Rs.6.79 lakhs (Rs.10.29 lakhs-Rs.3.50 lakhs) to Railway Estimates was irregular on the grounds indicated below:

(a) The type V quarters constructed in Sterling Road in the vicinity of the swimming pool had two ground level reservoirs with capacity of 1.59 lakh litres each which could be used for fire fighting in an emergency and the provision of an additional fire fighting was not necessary.

(b) The decision to utilise the swimming pool which was constructed mainly for use of the members of the Sterling Club and not for fire fighting as such was not taken after consultation with the Director of Fire Services. Even the Madras Metropolitan Development Authority was approached for ex post facto sanction only in October 1986 and the sanction in still awaited (November 1988)

(c) The incidental works the cost of which had been debited of open line were taken up along with the construction of the swimming pool and completed around the same time. The debiting of their cost subsequently to open line is, therefore, considered purely as an afterthought.

In the circumstances, the charging of the expenditure of Rs.6.79 lakhs to works relating to construction of quarters and open line treating them as incidental works is to be considered only as a measure to relieve the burden on the Officers' Club. If it were so, the Administration could have openly said so.

3.32 Western Railway - Infructuous expenditure due to abandonment of the construction of a bridge

A bridge was planned to be provided in two spans of 5 metre RCC slabs on the Kota - Chittaurgarh new BG line. The work was commenced in November 1984. The Chief Engineer incharge of the work ordered during his inspection on 6 December 1986 that the bridge was unnecessary as it was on a small channel and heavy catchment was not involved. Further work on the bridge was stopped in December 1987 and a pipe culvert in lieu was provided departmentally in April 1988 at a total cost of Rs.1.95 lakhs.

The expenditure of Rs.6.11 lakhs incurred on the abandoned bridge became infructuous due to inadequate survey to determine the need for a bridge before undertaking the work.

3.33 Southern Railway - Extra expenditure on construction of two road over bridges

The construction of two road over bridges in lieu of the existing level crossing near Tiruvarur Station, one in the Tiruvarur - Peralam section and the other at Mayuram - Muthupet road State Highway, was included in the Final Works Programme of the Railway for 1977-78. The estimates for the works were sanctioned by the Southern Railway Administration on 6 November 1978 at a total cost of Rs.46.22 lakhs. Out of the total amount of Rs.9.63 lakhs required to be deposited by the Highways Department of the State Government towards their share of cost a sum of Rs.6.03 lakhs was received in September 1979 itself and the balance Rs.3.60 lakhs in February 1981.

The works were awarded to a contractor on 2 August 1979 at a cost of Rs.10.43 lakhs (on open tender basis) with the stipulation that these should be completed within a period of nine months, i.e., before 1 May 1980.

The contractor could not start the works before 20 February 1981/ 1 April 1981 due to non-receipt of well curbs and cement required to be supplied to him by the Railway Administration under the provisions of the contract. The contractor, therefore, demanded in March 1981 higher rates, to be settled through negotiation/arbitration, in order to carry out the works. The work was stopped by the contractor on 7 April 1983 and in June 1983 he sought arbitration in case the Railway Administration was not able to grant enhanced rates through negotiation.

The pre-arbitration committee appointed by the Railway Administration in August 1983 with a view to settling the case without arbitration came to the conclusion in February 1984 that the delay in commencement of work upto February 1981 was on account of delay in supply of well curbs and cement by the Railway which was beyond the control of the contractor.

The Committee recommended award of higher rates involving extra payment of Rs.2.82 lakhs. The works were completed by the contractor in December 1985 and the extra amount actually

paid amounted to Rs.2.35 lakhs.

The Railway Administration stated in July 1988 that the main reason for the delay in taking up the works was the non-realisation of the cheque received towards State Government's share of work from the Highway Department and that delay in supply of well curbs had not contributed to the delay in commencement of the work as, in any case, the work could not be started in full swing till February 1981 for want of cement.

This is not, however, acceptable for the following reasons:

(i) The extant rules provide that works for other Government Departments may be taken up after detailed estimates have been accepted by the department concerned of the Government and sanctioned by the competent authority. The estimates for these works had already been accepted by the authorities concerned and an amount of Rs.6.03 lakhs was deposited with the Railway in September 1979.

(ii) A review of availability of cement in stock with the Railway revealed that only 1650 bags of cement equivalent to 82.5 tonnes were diverted to other works and, even after these issues, there was enough quantity of cement available in stock with the Railway to start the works in the year 1979 itself.

Lack of proper planning to arrange and supply well curbs and non-supply of cement in time resulted in an avoidable expenditure of Rs.2.35 lakhs to the Railway.

3.34 Western Railway - Delay in Commissioning of Fire Stations for Diesel Sheds

The Railway Administration sanctioned during 1979-81 fire stations/mobile fire stations at the Diesel Sheds at Abu Raod, Phulera and Ratlam. The construction of the buildings and procurement of equipments were completed at a total cost of RS.20.29 lakhs. These fire stations could not be commissioned due to dealy in the creation of posts for provisioning of new staff.

The position at each of these stations is as under:-

(a) Abu Road

The mobile fire station for Diesel Shed at Abu Road was sanctioned in November 1979 at an estimated cost of Rs.3.45 lakhs. Although the engineering and electrical works were completed in September 1981, yet the fire station could not be commissioned for want of fire appliances and staff. The General Manager had desired (May 1982) that Civil Defence Volunteers at Abu Road be trained in fire fighting. Accordingly, one trailer fire pump and one trailer vehicle with two head constables and two constables were arranged from Ajmer for Abu Road fire station. Subsequently, one new towing vehicle jeep and fire engine (water tender) were also received in March 1982 and October 1984 respectively. The proposals sent in July 1983 and November 1985 to Railway Board for sanctioning of additional staff in various categories for the fire station have not been sanctioned so far (June 1988). The total expenditure booked at the end of June 1988 was Rs.4.96 lakhs.

(b) Phulera

The work estimated to cost Rs.6.37 lakhs was sanctioned in June 1981. While the building was completed in June 1983 and the fire fighting equipments and accessories were received in 1984 and 1985, the battery chargers were received only in September 1987. The equipments continued to remain idle from 1984 at Ajmer. Proposal for creation of posts in various categories were sent by the Divisional Authorities in April 1984 and November 1985 but the posts have not been sanctioned as yet (June 1988). The total expenditure booked so far amounts to Rs.4.96 lakhs.

(c) Ratlam

The work estimated to cost Rs.6.73 lakhs was sanctioned by the Railway Board in February 1981. The construction of building for fire station was completed in August 1986 and fire fighting equipments (cost Rs.5.05 lakhs) were received between August 1982 to March 1987. The total expenditure booked upto June 1988 worked out to Rs.10.36 lakhs. The proposal for sanctioning of staff for this fire station was initiated by the Security Department in July 1983 but the staff has not been sanctioned so far.

The failure of the Administration in not sanctioning the staff for the fire stations in time has led to idling of assets costing Rs.20.29 lakhs provided as a safety measure for Diesel Sheds and exposing these Diesel Sheds to the risk of fire accidents.

The Ministry of Railways (Railway Board) explained in December 1988 that the manpower required for manning the Fire Stations could not be sanctioned due to the ban on creation of posts and also because provision by matching surrender was not found feasible. Necessary action for creation of the required posts by matching surrender was stated to be under way. They had also stated that the Fire Stations were expected to be manned and commissioned shortly and that there had been no fire accident so far at any of the above fire stations.

3.35 Southern Railway - Infructuous expenditure on provision of traffic facilities at Chengalpattu station

Metre Gauge wagons intended for transhipment at Arakkonam for onward movement to the northeast and northwest directions required sorting at Chengalpattu station in the Villupuram-Madras Egmore M.G. section of Southern Railway. With a view to reducing detention to wagons due to insufficient holding capacity of the sorting lines and to improve the operational efficiency by increasing the holding capacity of these lines, the Railway Administration sanctioned in June 1981 an estimate for Rs.6.19 lakhs for provision of two sorting lines with a capacity of 63 vehicles each by extending two of the existing short sidings at the Chengalpattu station. Items of earthwork in formation and extension of culverts in connection with the work were let out in June 1982 on a contract for Rs.2.41 lakhs stipulating completion of work by 4 October 1982. However, the work was actually commenced on 22 October 1982 and declared closed on 31 October 1984 after allowing three extensions in the dates of completion upto February 1983, October 1983 and October 1984 respectively on grounds of heavy rains and

non-supply of cement by the Railway Administration.

Meanwhile, the Administration decided in 1980 to rationalise the streams of traffic on the Railway and to effect economy in wagon handling by closing down as many transhipment sheds as possible. Accordingly, the transhipment facilities at Arakkonam were closed with effect from 1 September 1982 with which the justification for provision of the two sorting lines at Chengalpattu also ceased to exist. Nevertheless, the work was allowed to be commenced on 22 October 1982 and extension in the date of completion was sanctioned upto 28 February 1983. In view of the operational advantages gained by closure of various small yards on the Railway and the volume of traffic dealt with at the station the Chengalpattu Yard itself was closed in September 1983. Despite this, the contractor was allowed to continue execution of works by granting further extensions upto October 1983 and again upto October 1984. On 21 January 1985 the Divisional Railway Manager, advised that consequent upon closure of the transhipment facilities at Arakkonam the allotment of funds for this work had been curtailed and hence no more bills in respect of this work need be sent for payment. The agreement was finalised in March 1985 showing date of completion of the work as 31 October 1984. The total expenditure booked to the work to end of June 1988 was Rs.2.59 lakhs. As the work done consisted of only earthwork and extension to culverts and the track had not been laid it could not be put to any use. The expenditure of Rs.2.59 lakhs on the work was thus rendered infructuous.

The Railway Administration stated in May 1988 that the agreement was finalised to the extent of work done upto August 1983 in view of the closure of Chengalpattu Yard. However, an expenditure of Rs.52,791 was incurred on the work even after September 1983. Moreover, the need for the work should have been reviewed in 1980 itself when the rationalisation scheme was decided upon. Failure to do so resulted in an infructuous expenditure of Rs.2.59 lakhs.

3.36 Eastern Railway - Loss due to irregular appointment of a contractor

The Railway Administration invited open tenders in January 1982 for operating the motor car stand at Howrah station for a period of two years. Of the eight offers received, the highest was a late tender from a Co-operative Society of Calcutta. Although the tender was liable to be rejected outright on account of its late receipt, the Tender Committee consisting of three Divisional Officers of the Railway recommended acceptance thereof without verifying the antecedents and registration, etc. of the Society. The tender was accepted and a contract was executed with the Society on 20 July 1982 to be operative for a period of two years commencing from 26 July 1982.

Subsequently, the issue of irregular appointment of the contractor was pointed out by the Vigilance Branch of the Railway to the Divisional Railway Manager, Howrah. A notice was served on the Society on 20 June 1983 for termination of the contract after one month from that date. The agreement thus became inoperative with effect from 20 July 1983. However, the Society obtained injunction from

the court and continued to carry on business without paying any licence fee beyond July 1984 (upto which they had remitted the fee) till 17 October 1985 when the contract was awarded to another agency. An amount of Rs.1.58 lakhs was due from the Society on account of licence fee for the period from 26 July 1984 to 17 October 1985 without any prospect of its recovery.

Irregular appointment of the contractor thus resulted in a loss of Rs.1.58 lakhs.

3.37 Leasing of Rolling Stock by Indian Railway Finance Corporation

To meet the substantial investment needs for modernisation and technological upgradation of the Indian Railways, the requirement of planned funds by the Railways increased from Rs. 11,817 crores in the Sixth Five Year Plan to Rs.18,500 crores in the Seventh Plan. The internal resource generation was, however, only Rs.2783 crores during the Sixth Plan. The Railway Reforms Committee had recommended in June 1984 floating of bonds by the Government of India and lending the monies to the Railways to meet their need for resources which would bear only the normal dividend liability. The Railway Convention Committee, 1985 recommended that a large corporation may be set up under the Ministry of Finance to raise funds for all the Government Companies including the Railways. Government, however, decided to set up the Indian Railway Finance Corporation (IRFC) as a Government Company for the limited purpose of mobilising resources for Indian Railways through flotation of bonds. It was incorporated in December 1986 with an Authorised Capital of Rs.200 crores and Paid up capital of Rs.50 crores with the object of acquiring assets for Railways through these borrowings and lease them to the Railways on payment of leasing charges.

Pending acquisition of assets by the Railways, the funds mobilised by IRFC were, in consultation with Ministry of Finance, deposited in the Public Account of India, which would attract interest at 10 per cent annually.

The Railway Board decided in February 1988 to acquire Rolling Stock viz. wagons, coaches and locos through IRFC against the funds raised by it and use them by payment of leasing charges, tentatively determined at 16 per cent which include service charges, the element of interest payable by the IRFC to the subscribers as also the element of redemption of capital. The Railway Board further confirmed in June 1988 the presumption of IRFC that lease rental would be paid from the first of the month in which assets were identified and placed on line, from 1 September 1987 in respect of assets for which no date/month have been indicated for placing on line and from 1 March 1988 in respect of the remaining assets for which identification was not furnished by the Railway Board.

The Railway Board stated (December 1988) that against Rs.770 crores provided by IRFC, Rolling Stock worth Rs.588.48 crores were identified and for the balance amount (Rs.181.52 crores) the process of identification of the stocks could not be finalised. They also stated that the lease rentals paid were tentative and the amount of interest (10 percent) earned by IRFC was deducted from the same.

A reivew in Audit of the arrangements made so far revealed the following points:-

i) The IRFC since its incorporation in December 1986 raised Rs.559.3954 crores in March 1987 and Rs.400 crores in January 1988. The contribution from the private sector and the general public towards the bond issues were only Rs.60.71 and Rs.42.75 crores respectively and the balance was contributed by the public sector. Public participation was, thus, not significant.

ii) Though the IRFC was incorported in December 1986 i.e. over two years ago, the Railway Board has not finalised any lease agreement defining its relations with IRFC. The Railway Board stated (December 1988) that the lease agreement was under finalisation. In the absence of a lease agreement, it is not known how the settlement of claims, if any, on account of damages/loss due to causes other than accidents, insurance and other incidental matters would be dealt with.

iii) The arrangement agreed to by the Railways for payment of lease charges from 1 September 1987 in respect of assets for which no date/ month have been indicated for placing them on line and from 1 March 1988 in respect of remaining assets for which identification has not been furnished, though tentative, is not correct as lease rental is to be based on the value of the assets which have been identified and placed on line. The payment of lease rental from 1 September 1987/1 March 1988 amounting to Rs.25.89 crores was, thus, not covered by the arrangement worked out by the Railways.

iv) The Railway Board indicated in May 1988 that assets of the value of Rs.588.48 crores only had been identified and placed on line during the year out of Rs.770 crores (Rs.106 crores in February 1988 and Rs.664 crores in March 1988) made available. It was then explained that the identification of assets was time consuming and the process of obtaining relevant information i.e. type, individual number of wagons (numbering thousands), coaches, locos etc. from the manufacturers was a huge task. The explanation is hardly convincing considering the fact that these assets are being procured centrally and the number involved even for a major portion of the Funds viz. Rs.588.48 crores was only 220 locos and 5958 wagons. Apparently the Railways have not been able to gear up their machinery adequately and complete the work of identification quickly.

v) Out of Rs.960 crores raised by IRFC, only a sum of Rs.770 crores was transferred to Railways during 1987-88. The balance sum of Rs. 190 crores could not, so far, be drawn by Railways. As the Railways are not in a postion to invest these surplus funds, IRFC has been advised (September 1988) by the Financial Commissioner to explore the possibilities of financing other public sector undertakings like NTPC, etc. The IRFC was set up with the avowed purpose of providing the much needed funds to the Railways, and it is, therefore, strange that the latter could not utilise the funds available with them. Obviously the Railways have not been able to organise their operations to fully utilise the available funds to derive the maximum benefit . The Ministry of Railways (Railway Board) explained the delay in utilisation of the funds as due to procurement of assets (Rolling Stock) on lease being 'quite a new subject' for the Railways.

3.38 Eastern Railway - Loss due to non-realisation of sales tax

According to the provisions of the West Bengal Sales Tax Act every dealer registered under the Act is liable to pay the amount of sales tax due and to furnish to the Salex Tax Authorities a return at the prescribed periodicity failing which interest at the rate of two per cent per month accrues on the tax liability.

In respect of the various Railway stalls catering food and snacks at different Railway stations on the Eastern Railway within the jurisdiction of the State of West Bengal the Railway Administration made only adhoc payments of sales tax during the years 1984 to 1986 without filing the prescribed returns since 1 April 1984. On this being taken up by the Sales Tax Authorities, the Railway Administration submitted the requisite details on 6 January 1987 showing a total sale turnover of Rs.8.30 crores during the period from 1 April 1984 to 30 September 1986. Estimating the sales tax liability for the quarter ending 31 December 1986 also the Sales Tax Authorities assessed in January 1987 the amount of sales tax payable by the Railway upto 31 December 1986 at Rs.60.24 lakhs including a turnover tax of Rs.6.66 lakhs and interest of Rs.5 lakhs. On the basis of sales tax statements prepared by the Railway Administration after negotiations with the Commercial Tax Officer on 23 March 1987 the Railway Administration assessed the total payable amount of sales tax from 1 April 1985 to 31 December 1986 at Rs.37.48 lakhs besides an undischarged liability of Rs.5 lakhs towards interest charges for non-filing of returns and made payments of Rs.29.29 lakhs upto 31 March 1987.

Further, items of cooked food other than cakes, pastries, biscuits and sweetmeats sold at one time to a person at a price of not more than Rs.15 (Rs.10 with effect from 1 April 1984) were exempt from payment of tax from 1 October 1983 to 31 March 1985. The exemption was withdrawn from 1 April 1985 and thereafter all cooked food became liable to be taxed at the general rate of 8 per cent of the amount of sale. As, however, the catering organisation of the Railway was not aware of the withdrawal of this exemption an amount of Rs.29.32 lakhs on account of sales tax leviable on sale of cooked food with effect from 1 April 1985 was not recovered from the consumers during the period April 1985 to December 1986. The instructions to the units to recover the sales tax in such cases were issued only on 27 January 1987.

Failure to collect the tax from consumers in respect of sale of food items during April 1985 to December 1986 resulted in a loss of Rs.29.32 lakhs and an undischarged liability of Rs.5 lakhs due to delay in filing of returns.

3.39 Western Railway - Loss due to payment of energy bills without consumption of energy

The Railway Administration executed an agreement with the Madhya Pradesh Electricity Board (MPEB) in October 1986 for supply of 132 KV power at the traction sub-station, Ratlam from 1 January 1987. The terms of the agreement provided that the Railway Administration would have to pay the minimum charges as per tariff with effect from 1 January 1987 irrespective of whether energy was consumed or not. The MPEB informed the Railway that power supply from the Board's mains to the premises of the traction sub-station at Ratlam

was available from 30 December 1986. However, due to delay in completion of works by the contractor, the traction sub-station at Ratlam could be energised only on 15 March 1987. Bills for Rs.7.16 lakhs on account of minimum charges for the period from 1 January 1987 to 14 March 1987 preferred by the MPEB had, nevertheless, to be paid by the Railway in terms of the agreement though no energy was consumed during this period. The Ministry of Railways (Railway Board) stated in December 1988 that an amount of Rs.70,500 had since been recovered and adjusted and the total amount paid to the MPEB stood finally at Rs.6.46 lakhs.

Similarly, a payment of minimum charges amounting to Rs.3.04 lakhs relating to the period 5 April 1986 to 11 May 1986 had to be made to the MPEB in respect of Bamnia traction sub-station in terms of the agreement without consumption of energy on account of delayed energisation of the station due to delay in charging 132 KV railway feeder line and further delay in obtaining sanction of competent authority for energising the sub-station.

Railway Administration's requests for waiver of the charges in both the cases had been rejected by the MPEB. The delays in energisastion of the two traction sub-stations led to a total avoidable loss of Rs.9.50 lakhs to the Railway.

3.40 North Eastern Railway - Extra expenditure due to delayed execution of agreement

The supply of electric energy for consumption at Sonepur station of the Railway was being obtained from the Bihar State Electricity Board (BSEB) on low tension circuit till 28 February 1962. Due to increase in load, the Railway Administration installed its own transformer at the station and requested the BSEB to give high tension (HT) supply. The BSEB agreed to the Railway's request and gave the HT supply from 1 March 1962. Notwithstanding the HT supply since 1 March 1962 bills for consumption of energy at the station continued to be preferred by the BSEB at the low tension tariff rates till 31 January 1973 and the same were also paid by the Railway Administration without any protest as agreement for the HT supply had not been executed. The Railway Administration, however, executed the agreement only on 12 November 1971 after a delay of more than nine years since they began getting HT supply in March 1962. The total amount assessed by the Railway Administration as over paid for the period upto January 1973 was Rs.7.41 lakhs.

The Railway Administration stated that all possible efforts were made to execute the agreement from the very beginning and that there was no provision for retrospective operation of the agreement. However, they approached the BSEB in September 1975 for obtaining refund of the assessed over paid amount of Rs.7.41 lakhs. Bihar State Electricity Board was inclined to favour the Railway only to the extent of allowing them credit from 12 November 1971 till January 1973. However, even this refund had not been obtained by the Railway so far (December 1988).

Delayed execution of the agreement for HT supply thus led to an avoidable extra expenditure of Rs.7.41 lakhs.

3.41 Eastern Railway - Infructuous expenditure due to unnecessary retention of high tension lines

The Railway Administration obtained from the West Bengal State Electricity Board (WBSEB) supply of electric energy on 33 KV lines at five stations including the traction sub-stations at Bandel and Gangpur for use in D.C. traction as also for Signals, Railway Buildings, Staff Quarters, etc. As per tariff applicable to the supply, the Railway was liable to pay demand charges for a minimum of 50 KVA per month even when the maximum demand fell short of 50 KVA. The transformer installed at the Bandel sub-station was sent for repairs to the Railway Workshop at Jamalpur in October 1972 and the sub-station became inoperative. The existing load at Bandel and that at Gangpur was transferred to other sub-stations due to which the sub-station at Gangpur also became inoperative since February 1978. There was thus no consumption of energy at these two points. The Railway Administration, however, continued the agreement with the WBSEB and made payments of the minimum demand charges in respect of these sub-stations.

On this being pointed out by Audit in July 1983, the Railway Administration terminated the agreement for the sub-station at Bandel in December 1984 and that for Gangpur in October 1983. The payment of minimum demand charges of Rs.3.46 lakhs as per records available in respect of Gangpur from February 1978 to October 1983 and for Bandel from December 1974 to December 1984 without consumption of energy was, therefore, infructuous.

3.42 South Eastern Railway - Misappropriation of cash by a Senior Cashier

On the basis of complaints from some retired/serving railway employees of Nagpur Division received in July/August 1985 about non-payment of their settlement dues/other personal claims, a special check was arranged by the Cash Department of the vouchers, accounts maintained/cash handled by a cashier. The special check revealed that 90 vouchers partly paid/unpaid (Rs.3,17,363.28) pertaining to the months of May, June, July and August 1985 shown by the cashier in his Cash Book as fully paid and returned to Accounts Office had, however, not actually been fully paid and returned. Out of 90 vouchers involved one voucher was lying in Divisional Cash Office while the remaining 89 vouchers were found in the house of the cashier. Further verification revealed total shortage of Rs.1,72,497.63 representing the amount of Rs.1,70,234.55 for which bills and cash had been received by the cashier but not paid to the staff concerned and Rs.2,263.08 for which collection was made by the cashier as per recovery list at the time of disbursement but not credited to Railways' Account. This misappropriation of Rs. 1,72,497.63 was not detected at the time of cash verification conducted by the Accounts Office, Nagpur on 14 August 1985.

The Fact Finding Enquiry Committee consisting of three Senior Scale Officers appointed in September 1985 had in their report of 31 January 1986 held the Senior Cashier responsible for wilful misappropriation of Rs.1,72,497.63. Consequently,

the cashier was removed from service on 12 February 1986. A First Information Report (F.I.R.) was lodged with the local Police on 7 September 1985 and the Senior Cashier was arrested on 13 September 1986. The criminal case was, however, filed by the Police only in September 1987.

The Railway Administration which had decided in February 1986 to initiate a civil suit against the cashier has not filed the suit so far (December 1988).

The following were the lapses on the part of the Cash office and Accounts Department:-

(i) The return of the bills by the cashier alongwith the unpaid cash after 21/30 days was to be watched both in the Cash Office as well as in the Accounts Office. This was not done. The advice slip of bills returned by the cashier was not got checked by the Divisional Cashier with the unpaid amount and the bills actually returned therewith. Instead, credit was afforded to the cashier (though payments were not made to the payees) on the basis of advice slip without any check with the bills.

(ii) The inspection of the records maintained by the cashier periodically to be done by Divisional Cashier was not done.

The failure of the Cash Office and the Accounts Department in not following the laid down procedures resulted in misappropriation of Rs.1.72 lakhs the recovery of which appears to be remote.

The Ministry of Railways (Railway Board) stated in December 1988 that the case was under investigation and that prospect of recovery of Rs.1.72 lakhs could not be ruled out till such time the criminal and civil suits were finalised.

3.43 Western Railway - Payment of compensation due to accident to a Railway truck

A truck belonging to Permanent Way Inspector, Baroda on its way from Derol Stores Depot to Pratapnagar (PRTN) on 28 April 1982 loaded with 4.45 tonnes of unserviceable rails and fish plates and driven by a gangman overturned and fell into a ditch. At the time of the accident there were 15 railway employees and 10 outsiders in the truck. Four railway employees and one outsider died in the accident and 11 railway employees and nine outsiders were injured.

The legal heirs of the dead and the injured persons filed suits in the Motor Accidents Claim Tribunal, Baroda for compensation. The Tribunal found the truck driver guilty of rash and negligent driving. In two separate judgements of March 1984 and February 1985 the tribunal awarded a sum of Rs.6.76 lakhs including cost (legal expenses) and interest charges in favour of 12 railway employees and seven outsiders. The amount of compensation of Rs.4.47 lakhs to railway employees and Rs.2.29 lakhs to outsiders was paid in July 1984 and February 1986. The Railway Administration made a payment of Rs.19 thousands in March 1987 towards interest charges on account of delay in payment of compensation. The driver of the truck has been penalised

(July 1988) by demoting him permanently to a lower post.

The following points arise in this case:

(1) The Railway Administration, instead of appointing a regular truck driver, utilised the services of a gangman who had only a driving licence to drive medium goods vehicle .

(2) Despite the fact that adequate labour force was available at the Stores Depot at Derol, labour working under Inspector of Works, Pratapnagar were sent for bringing material from Derol Depot.

(3) 10 outsiders were also carried unauthorisedly resulting in payment of compensation of Rs.2.29 lakhs to them.

(4) The truck procured in February 1982 at a cost of Rs.1.41 lakhs was damaged in April 1982 and has not been repaired so far (October 1988).

3.44 South Central Railway - Over payment of Pay and Allowances due to irregular promotions to chain vacancies

A Committee of the Departmental Council of the Ministry of Railways was set up to review the restructuring of Groups 'C' and 'D' cadres for removing distortions in the cadres that had taken place on account of upgradation by numbers envisaged by the Ministry of Railways in letter No. PC III/74/PS-3/UPG/5 dated 10 May 1976. The Committee's recommendations were accepted and instructions were issued by the Railway Board in January 1979 providing, inter-alia, that the staff positioned against the upgraded posts be fixed in the scale of the upgraded posts from 1 January 1979 and paid arrears of pay and allowances from that date. Cases of restructuring of cadres ordered subsequently by the Railway Board from time to time upto December 1983 were also to be regulated on the same principles.

The South Central Railway, however, decided in September 1979 to extend the benefit of fixation of pay retrospectively from January 1979 also to the staff promoted in chain vacancies arising out of upgradation of posts due to restructuring of cadres although this was nowhere envisaged in the Railway Board's instructions.

The Railway Board clarified vide letter No. PC III/81/FE-II/4 dated 17 March 1983 that the promotions of persons appointed against the chain vacancies released by those appointed against the upgraded posts generated consequent on restructuring of cadre would take effect from the dates and posts were actually filled in . The Railway Administration not only did not review its decision of September 1979 but also allowed the employees fitted against chain vacancies arising from restructuring orders of July 1983 and December 1983 the benefits of retrospective effect and payment of arrears though it was aware that similar benefits had not been allowed by the Central and Southern Railway Administrations.

The total over-payment involved in the irregular promotions in chain

vacancies worked out to Rs.41.38 lakhs for the period January 1979 to December 1985. The overpayments were continuing even thereafter and with the implementation of new scales of pay from 1 January 1986 the rates of overpayments thereafter would be much more. The Railway Administration initiated action in October 1988 for assessment of the overpayments made in order to seek Railway Board's sanction for its waiver. This has not been completed so far (January 1989).

3.45 South Central Railway - Avoidable expenditure due to irregular retrenchment of casual labour

In accordance with section 25-F of the Industrial Disputes Act 1947, workmen who have been in continuous service for not less than one year in any industry should not be retrenched unless they have been given one month's notice in writing indicating the reasons for retrenchment and paid wages in lieu of such notice. Further, such workmen should be paid, at the time of retrenchment, compensation at the rate of fifteen days' average pay for every completed year of service or part thereof in excess of six months. Non-compliance with provisions of section 25-F of Industrial Disputes Act renders the retrenchment invalid and inoperative.

In December 1979, South Central Railway Administration stopped from railway service 14 women casual labourers working continuously for more than one year without giving them the necessary one month's notice or paying them wages in lieu thereof and also the retrenchment compensation, thus, contravening the provisions of section 25-F of Industrial Disputes Act. Having failed to get their grievances redressed even after representing through Organised Labour Union, the affected labourers filed a writ petition in the High Court of Andhra Pradesh in February 1982 praying for declaration of their retrenchment as illegal and for directing the Railway Administration to reinstate them with continuity of service as already agreed to by the Railway Administration in the meeting held with Organised Labour Union in August 1980 which was not, however, implemented.

On hearing the case of the petitioners and respondents, the Honourable Court ordered in September 1984 that the retrenchment of these women workers was illegal and contrary to the provisions of the Industrial Disputes Act and directed the Railway Administration to reinstate all 14 women workers, pay wages from the date of retrenchment upto June 1982 i.e. till the month in which the Railway Administration offered payment of the retrenchment compensation. With regard to the payment of wages from July 1982 to date of reinstatement, the Court reserved its ruling.

As directed by the Court, the Railway Administration reinstated all 14 women workers from 16 January 1985 and paid them in August 1985 arrears of wages from January 1980 to June 1982 amounting to Rs.1.35 lakhs. Pending a decision in regard to the right of these labourers for being paid wages from July 1982 till the date of their reinstatement (16 January 1985) the Railway Administration in terms of Railway Board's general orders issued in September

1986 granted in October 1986 temporary status to these labourers with effect from 1 January 1983 and arrears on this account have not been paid so far (December 1988).

In this connection the following points arise:

(i) Due to non-compliance with the provisions of the section 25-F of Industrial Disputes Act the Railway Administration had to pay an amount of Rs.1.35 lakhs towards wages for the period January 1980 to June 1982 without getting any service from them in return for such payments.

(ii) With the assignment of temporary status to workers with effect from 1 January 1983 the Railway Administration had become liable to pay a further amount of Rs.1.80 lakhs from January 1983 to the date of reinstatement (16 January 1985);

(iii) In August 1980 the Railway Administration agreed in the meeting with Organised Labour Union to absorb these labourers against vacancies in any department of Railways but did not implement the decision. Had this been done the Railway Administration would not have been required to pay Rs.3.15 lakhs to these labourers without utilising their services (Rs.1.36 lakhs + Rs.1.80 lakhs);

(iv) In August 1982 the Railway Advocate advised the Railway Administration to provide employment to these labourers but the Railway did not act on that advice; and

(v) The Personnel Branch directed the Assistant Engineer concerned to investigate and fix responsibility for irregular retrenchment of the petitioners. This is yet to be done (December 1988).

The Ministry of Railways (Railway Board) stated (January 1989) that non-compliance with Industrial Disputes Act has been viewed by the Board seriously and the Railway asked to fix responsibility therefor.

3.46 Eastern Railway - Irregular grant of Provision Passes

The Eastern Railway Free Pass Regulations provide for grant of free Provision Passes to railway employees posted at wayside stations where provisions, etc. are not available so as to enable them to procure the same from the nearest marketing station. The privilege of the issue of such Provision Passes was granted decades ago to employees working in the railway workshops at Kancharapara and Liluah of the Eastern Railway for free journey between Kancharapara and Sealdah and Liluah and Howrah respectively. Both Kancharapara and Liluah having come up with the passage of time as suburbs of Calcutta with fully developed markets, the essential condition governing the issue of Provision Passes, viz., non-availability of facilities at these stations for procurement of provisions ceased to exist long ago. The Eastern Railway Administration is, however, continuing to issue these passes involving a financial implication of about Rs.2.42 lakhs per annum.

The Railway Administration stated in April 1988 that though markets

had developed at these stations they were not on par with those in Calcutta. This is not, however, tenable in view of the fact that Kancharapara and Liluah stations are no longer wayside stations and have fullfledged markets. The Ministry of Railways (Railway Board) stated (November 1988) that a decision had been taken to reduce gradually the number of free provision passes and instructions had been issued to further bring down the number so that the practice of grant of such Provision Passes die a natural death.

CHAPTER IV

EARNINGS

4.1 South Eastern Railway - Non-realisation of Railway dues from Port Trust Railways

In Para 4.22 of the Report of the Comptroller and Auditor General of India for the year ended 31 March 1987 -No.3 of 1988 - Union Government (Railways) mention was made about heavy losses in interchange of traffic with the Port Trust Railways at Mormugao, Bombay and Calcutta ports connected with the South Central, Central and Eastern Railways respectively.

The South Eastern Railway is connected with four Port Railways at Calcutta, Haldia, Paradeep and Vishakhapatnam controlled by the respective Port Trusts. The interchange of freight traffic with these Port Trust Railways is done on the basis of working agreements executed with them in the years 1922 by the erstwhile Bengal Nagpur Railway Company (Calcutta), 1979 (Haldia) and 1977 (Paradeep and Vishakhapatnam), none of which have been ratified by the South Eastern Railway Administration/Railway Board so far.

A review in Audit of the interchange of traffic with these Port Trust Railways revealed that an amount of Rs.1342 lakhs was due for realisation on various accounts as mentioned below.

The working agreement with the Calcutta Port Trust (CPT) Railway provides for apportionment of liability on account of loss and damages to goods between the CPT Railway and the South Eastern Railway. However, debits raised by the South Eastern Railway Administration on account of apportionment of the amount of compensation claims settled and paid by it in respect of traffic to and from the CPT Railway were not being accepted by the latter on the ground that there was no system for joint inspection and checking of the packing condition of consignments coming in open wagons at the point of interchange. An amount of Rs.14.20 lakhs was outstanding for recovery from the CPT Railway on account of compensation claims paid by the Railway Administration during the years 1971-72 to 1987-88 (January 1988). However, the Railway Administration had neither taken any action to enforce the system of joint check at the interchange point as per agreement nor referred the disputed cases to the Traffic Claims Arbitration Committee as per requirements of the Conference Rules.

The working agreement with Port Railways at Haldia, Paradeep and Vishakhapatnam stipulate that hire charges shall be levied and realised in respect of wagons of Indian Railways operating inside the Port Trust area at such rate/rates as may be notified by the Indian Railway Conference Association from time to time and that where demurrage collected by the Port Railways in any month exceeded the amount of hire charges paid by them, the excess amount should be paid to the Railways within a period of three months from the expiry of that month.

The Haldia Port Trust (HPT) Railway started functioning from 1 May 1977. The Railway Administration did not take any action to recover hire charges from the HPT Railway reportedly for want of inadequate infrastructure of staff and absence of provision in the agreement regarding the 'allowed free time'. However, in the year 1985, the Railway Administration decided to recover hire charges and preferred in March 1986 a bill for Rs.7.73 lakhs for the period January 1981 to March 1981. This was turned down by the HPT Railway on the plea that 'free time' for wagons had not been fixed by the Railway. The Railway Administration's claim for Rs.415 lakhs relating to certain periods of 1981, 1982 and 1986 preferred in March 1987 after fixation of the 'allowed free time' in August 1986 was also rejected by the HPT Railway on the ground that the 'free time' had not been fixed in consultation with the Haldia Port Railways.

The amount payable to the Railway on account of hire charges relating to the period from May 1977 to December 1980, April 1981 to December 1981 and the years 1983, 1984 and 1985 in full has not been assessed by the Administration due to non-availability of records for the period. The total amount recoverable from the HPT Railway on account of wagon hire charges upto January 1987 was assessed at Rs.476 lakhs.

On the Paradeep Port Trust (PPT) Railway although loading and unloading of wagons started from 10 December 1975 an amount of Rs.108 lakhs on account of hire charges for the period February 1976 to March 1986 was pending recovery due to disputes in finalisation of the issue of terminal charges to be paid by Railway to the PPT Railway.

The Vishakhapatnam Port Trust (VPT) Railway started functioning in the year 1976. However, bills for wagon hire charges for the years 1980 to May 1987 amounting to Rs.1218 lakhs were preferred by the Railway Administration on various dates out of which the VPT Railway had made payments of Rs.474 lakhs upto 31 May 1987. An amount of Rs.744 lakhs remains to be recovered. The VPT Railway had disputed the rates of hire charges and the free time allowed for detention to wagons within the Port area.

The Railway Administration has not maintained records to keep accounts of the amount of demurrage charges realised by the Port Railways at Haldia, Paradeep and Vishakhapatnam to assess and realise the dues to the Railway as per the working agreements.

Failure of the Railway Administration to operate the provisions of the working agreements with the Port Railways and lack of adequate action to effect recovery of dues have resulted in an amount of Rs.1342 lakhs remaining unrealised for periods ranging between eight to sixteen years thereby rendering the prospects of recovery remote due to non-availability of records, etc. with the passage of time.

4.2 Western, Southern, South Central and Central Railways - Non implementation of Rationalisation Orders

Under the powers conferred on it by the provisions of Section 27-A of the Indian Railways Act, 1890, as amended in 1974, the Ministry of Railways (Railway Board) issue necessary instructions from time to time under Rationalisation Schemes for carriage and freighting of traffic by rationalised routes specified therein so as to optimise the utilisation of available routes and to avoid transhipment of traffic to the maximum extent possible. Once a general order is issued it leaves no option to the consignor or the Railway to book and route the traffic by any route other than the rationalised route.

A review in Audit of the rationalisation orders issued by the Railway Board from time to time revealed cases of omission to include certain routes in the Rationalisation Scheme and non-observance of the routing instructions on the Western, Southern, South Central and Central Railways involving loss of revenue of about Rs.4.19 crores as brought out below:-

4.2.1 Omission of Routes

Western Railway

On Ajmer Division of the Railway Udaipur City and Rana Pratapnagar stations are connected with Ahmedabad by M.G. line via Himmatnagar in the south-west and via Chittaurgarh in the north-east There is a regular POL-traffic in tank wagons from Indian Oil Corporation (IOC) siding, Sabarmati (Ahmedabad) to Udaipur City and Rana Pratapnagar stations for which the shortest and cheapest route is via Himmatnagar.

This route was not operationally fit for movement of traffic on account of steep gradient of 1 in 60 encountered in between the section. The movement of trains between Himmatnagar and Udaipur City being non-controlled, the POL traffic to Udaipur City/Rana Pratapnagar was actually carried on the longer route via Palanpur, Marwar, Ajmer, Chittaurgarh and Mavli rationalised for general traffic. Although there was no other route for carriage of POL traffic from Sabarmati to Udaipur City/Rana Pratapnagar the Railway Board, while issuing the rationalisation orders, did not consider authorising this route for carriage of POL traffic also. In view of this freight charges for the POL traffic booked from Sabarmati were levied and realised for the shortest and cheapest route via Himmatnagar. Subsequently, trials were conducted to move trains via Himmatnagar when the Ajmer-Palanpur route became saturated and the POL traffic was diverted to the shortest route via Himmatnagar with effect from September 1985. Even after that 152 tank wagons were carried in January 1986 by the longer route though booked by the shortest route. These involved undercharges for Rs.295.82 lakhs in respect of traffic in 16,446 tank wagons (in terms of four wheelers) during the period April 1981 to August 1985 and 152 tank wagons during January 1986.

Southern Railway

As per the Rationalisation Scheme effective from 1 March 1982, all traffic in coal for metre gauge destinations on Mysore and Bangalore Divisions were to be booked and routed via Tondiarpet and Bangalore City (Baiyyappanahalli). While extending the Rationalisation Scheme from 1 March 1987, the provisions relating to the above rationalised route were not incorporated in the order issued by the Railway Board. The Railway Administration, therefore, resorted to levying freight charges on coal via the shortest and the cheapest available open route via Maula Ali.

The Southern Railway Administration made a reference to the Railway Board in April 1987 pointing out the omission and stated that there was no change in position regarding routing and charging of coal for metre gauge destinations on Mysore and Bangalore Divisions. In September 1987, the Railway Board issued an amendment to the rationalisation order stipulating that coal from coal fields other than Korea and Rewa to Metre Gauge stations on Mysore and Bangalore Divisions should be booked and routed via Gudur/ Tondiarpet/Baiyyappanahalli.

It was noticed in Audit that coal wagons from stations on Central, South Central and South Eastern Railways received at the siding of a firm served by Harihar station on the Mysore Division were booked and charged by

the cheapest route via Moula Ali but carried by the earlier rationalised route via Gudur-Baiyyappanahalli. This resulted in loss of revenue amounting to Rs.21.73 lakhs during the period from March 1987 to April 1988 including an amount of Rs.6.78 lakhs relating to the period after issue of amendment to the rationalisation order in September 1987.

4.2.2. Non-observance of the provisions of the scheme

A general review in Audit of the implementation of the rationalisation orders on the Railways revealed undercharges of Rs.101.25 lakhs on account of non-observance of the various provisions of the scheme as mentioned below:-

Western Railway

(i) In respect of booking of traffic by routes other than those specified in the rationalisation orders from 11 stations on the Railway there was loss of revenue of Rs.72.81 lakhs on the following accounts during the period from 1 March 1987 to 31 January 1988 as detailed in Annexure-XII.

Sl. No.	Nature of omission	Period	Amount in Rupees
1.	Traffic booked from dual gauge stations to dual gauge stations by all M.G. route instead of by all B.G. route.	1.3.1987 to 31.8.1987	39,48,918
2.	Traffic booked from BG stations to dual gauge stations and charged by BG-cum-MG route instead of by all BG route.	April 1987	97,469
3.	Traffic booked from dual gauge siding to dual gauge stations by all MG route instead of by all BG route.	1.3.1987 to 31.8.1987	22,37,401
4.	Traffic booked from dual gauge siding to BG stations by MG-cum-BG route involving transhipment instead of by all BG route.	1.3.1987 to 31.12.1987	9,97,656
	Total :		72,81,444

(ii) Traffic from Bardoli, a B.G. station on Western Railway, to certain BG/dual gauge stations on Northern Railway was booked and routed on BG-cum-MG route via Samdari-Bhildi instead of by all BG route involving loss of revenue of Rs.0.72 lakhs during April 1987. Some of the traffic booked to the BG stations and carried by BG-cum-MG route involved two transhipments.

(iii) Traffic from Asarva, Kandla Port and Gandhidham dual gauge stations on the Railway to dual gauge stations on Northern Railway and similarly traffic from certain dual gauge stations on Northern Railway to Asarva was booked and routed by all MG route instead of by all BG route, involving loss of revenue of Rs.5.31 lakhs during March 1987 to August 1987.

(iv) Kankaria is a BG station in Ahmedabad area on Western Railway situated within 25 kms. of the dual gauge station, Asarva. However, traffic was booked from Kankaria to M.G. stations of other Zonal Railways and vice-versa instead of from and to Asarva as required under the General Rationalisation Orders. The loss of revenue on this account worked out to Rs.2.20 lakhs in respect of traffic booked during March 1987 to November 1987.

South Central Railway

As per the Railway Board's notifications issued under the 'Rationalisation Scheme' effective from 1 November 1984, goods traffic from one MG station to another MG station was to be routed and charged by all MG route upto the destination MG station. Contravening these instructions, cement traffic booked from Panyam Cement and Mineral Industries Limited siding served by the Bugganappalli station on the Guntur-Dronachalam MG section to Arakkonam MG station on the Southern Railway was routed via MG-cum-BG route with transhipment at Guntakal instead of by all MG route upto Arakkonam. Consequently, the Administration suffered loss of earnings of Rs.13.27 lakhs during April 1985 to February 1987 besides incurring extra avoidable expenditure of about Rs.2.41 lakhs on transhipment of cement consignments at Guntakal, both of which continue to occur.

The Railway Administration stated in September 1987 that this notification was not applicable to the subject bookings as these were made to M/s Southern Asbestos Siding at Arakkonam which is a BG siding. This is not, however, tenable as the Alphabetical List of Stations shows that the Asbestos siding at Arakkonam is having both BG and MG sidings and as per the rationalisation rules factories having both BG and MG sidings are required to book from MG to MG stations and BG to BG stations involving no transhipment.

Central Railway

The instructions issued vide Rationalisation Scheme - General Order No.1 of 1986 and General Order No.1 of 1987 stipulated that goods traffic in foodgrains from Northern Railway to stations on the Chheoki-Jabalpur section of Central Railway should be routed and charged via Chheoki. Contrary to these instructions, food grain consignments from certain stations on Northern Railway were booked to stations on Jabalpur-Chheoki section of Central Railway and routed and charged via Tuglakabad resulting in

loss of revenue of Rs.4.05 lakhs during January 1986 to April 1987.

Solapur is a dual gauge station of which the BG and MG portions are managed by Central and South Central Railways respectively. According to the rationalisation orders mentioned above, all inward and outward goods traffic between Solapur (MG) and various MG stations on Western and Northern Railways are required to be booked and routed by all MG route via Hotgi, Gadag, Khandwa, etc. However, a large number of goods traffic is received at Solapur BG station of Central Railway from the MG stations on Western and Northern Railways duly transhipped at Sabarmati, Delhi, Sarai Rohila and other transhipment points. Similarly, major portion of goods traffic to the MG stations on Western and Northern Railways are booked from Solapur (BG) station via the shortest BG and MG route involving transhipment at various points. This involved loss of revenue of Rs.2.89 lakhs during the period from December 1986 to December 1987.

4.3 South Central Railway - Loss of earnings due to delay in notification of enhancement of the axle load limit

Prior to 1983, the axle load limit in force was 10 tonnes on Mudkhed-Adilabad section and 9.14 tonnes on Gunda Road-Kottur and Bellary-Rayadurg sections of South Central Railway with a loading tolerance of half a tonne per four wheeler and one tonne for bogie wagons.

In February 1983, the Chief Engineer of the Railway reviewed the axle load restrictions and speeds on the various MG sections and suggested to the Chief Operating Superintendent (COPS) and the Divisional Railway Managers a proposed data of speed and axle load (12.2 tonnes) to be incorporated in the working time table to take effect from 1 April 1983. Suitable provision was accordingly made in the working time table effective from 1 May 1983. No action was, however, taken by the Commercial Department of the Railway to advise the enhanced axle load limit to the stations for loading and charging the wagons booked. It was only in January 1986, pursuant to the directions issued by the General Manager in October 1985, that the Commercial Department approached the Engineering Department for examining the possibility and feasibility of enhancing the axle load limits to 12.2 tonnes per axle in the three sections. In reply, it was clarified by the Engineering Department in January 1986 that the review had already been conducted and the COPS and the Divisions were advised in February 1983 for effecting corrections to the working time table. The stations were notified by the Commercial Department of the revision in the axle load limits to 12.2 tonnes with effect from 1 April 1987.

The delay in communicating the revised axle load limit to the stations on the Mudkhed-Adilabad, Gunda Road-Kottur and Bellary-Rayadurg sections resulted in underloading of wagons and consequent loss of earnings to the extent of Rs.70.29 lakhs during the period from 1 May 1983 to 31 March 1987 in respect of the first two sections. There was no wagon load traffic on the third section.

The Railway Administration stated in March 1988 that the matter of confining the load to 12.2 tonnes in general as per provisions of the

Indian Railway Conference Association Rules had been referred to the Research, Designs and Standards Organisation (RDSO) who, in turn, had referred the matter to the Railway Board. and that the limited problem of the three sections was also under their consideration and it was only in March 1987 that a final decision could be taken. The contention is not, however, tenable as the decision of March 1987 in respect of the three sections was taken without knowing the reaction of the RDSO or the Railway Board. Besides, the Engineering and the Operating Departments concerned with the safety aspect had already considered the matter and incorporated the revised axle loads in the working time table effective from 1 May 1983.

4.4 Northern Railway - Loss of revenue due to less recovery of siding charges

The Railway Administration had been using two engines for placement/removal of coal rakes in/from some of the sidings on the Railway since August 1984 but calculation of siding charges for recovery was being made on the basis of the cost of one engine only.

On this being pointed out by Audit in August 1986 the Divisional Railway Manager, New Delhi issued instructions in October 1986 that siding charges at double the rates should be recovered in respect of sidings where double engines were used. The instructions were, however, not implemented and the matter was referred to the Railway Board in March 1987. However, based on a Railway Board's clarification issued in June 1987 on a reference from the Western Railway that the siding charges in such cases should be based on the cost of two engines, the Railway Administration issued suitable instructions effective from 1 July 1987.

Failure of the Railway Administration to levy and realise siding charges at double the rates since the introduction of double headed engines resulted in loss of revenue of Rs.25.49 lakhs in respect of six sidings on the Railway during the period August 1984 to June 1987. The amount of undercharges involved in case of other sidings where two engines were used is not known.

The Ministry of Railways (Railway Board) stated (December 1988) that it has since been clarified to the Northern Railway that the order should have retrospective effect and past dues should be recovered.

4.5 Southern Railway - Loss due to non-realisation of arrear charges for workmen special trains.

Workmen special trains were run for over 40 years by the Railway between Bangalore City and Vimanapura for the Hindustan Aeronautics Limited (HAL) and between Madurai and Tiruparamkundram for M/s Madura Coats Limited (MCL). For running these special trains, which were not open to the public, the Railway Administration had not executed any formal agreement with these two firms. The charges for these services were paid by the firms as fixed and levied by the Railway Administration periodically. As per the last revision done in 1974, charges for running these special trains were being recovered on the basis of cost of operation, the difference between the cost of operation and the fare realised by

sale of season tickets being recovered from the HAL and MCL.

In view of the considerable increase in the operating costs, the Railway Administration served notices on both the firms in April 1977 for the revision of charges to take effect from 1 May 1977. However, subsequently the Railway Administration advised the MCL and HAL in June 1978 and November 1978 that the charges would be revised from August 1978 and January 1979 respectively. No reason for this change was on record. Later, after obtaining the particulars from the Traffic Costing Officer, the Commercial Department made necessary proposals in March 1979 for levy of revised charges and the Accounts Department advised the provisional figures in May 1979 subject to their revision on receipt of escalation factor for coaching services from Railway Board. The parties were also advised on 21 August 1979 regarding the revised charges to be effective from 1 January 1979. On receipt of escalation factor from the Railway Board in August 1979 the Accounts Department communicated their revised rates in November 1979. After protracted correspondence the Accounts Department intimated in July 1981 that the enhanced charges were due from 1 May 1977. The Commercial Department ultimately preferred claims in September 1984 on HAL for Rs.10.61 lakhs and in August 1985 for Rs.6.42 lakhs on MCL towards arrears from 1 May 1977 to 31 December 1978. The firms disputed these claims and expressed their inability to pay the charges on the plea that these had been claimed belatedly and that they would not be in a position to recover the arrears from the workers after a lapse of 7 years as most of them had retired. However, the firms paid the revised charges only from 1 January 1979 and 1 March 1979 respectively.

The failure of the Railway Administration to recover Rs.17.03 lakhs from the firms on account of arrears from 1 May 1977 to 31 December 1978 was attributed by the Railway Administration in May 1988 to non-issue of one month's notice before introducing the revised rates on a new basis as well as to an unreasonable claim for arrear charges with retrospective effect. The Railway Administration also informed (May 1988) that the arbitrary adoption of a new method of working out the cost resulting in an increase of 400 percent in the charges led the firms to have second thoughts about the continuance of the special services which were later cancelled from 1 May 1986 at the request of the firms. No explanation was, however, forthcoming as to why the Railway preferred claims on an unreasonable basis without examining adequately the cost of operation of the services. The Railway Administration is yet to realise the dues (December 1988).

Failure of the Railway Administration to work out the costs periodically in time and prefer the claims regularly resulted in a loss of Rs.17.03 lakhs towards non-realisation of arrear charges besides losing the two services with an annual revenue potential of over Rs.10 lakhs.

4.6 Western Railway - Non-revision of siding charges

The siding charges for placement and removal of wagons at Indian Farmers Fertiliser Cooperative Limited (IFFCO) MG siding, Gandhidham were

fixed provisionally in May 1977 on the basis of engine trip time of 2 hours and 49 minutes from the serving station to the siding and back arrived at after four trials. These charges were treated as final in March 1978. Fresh placement trials were required to be conducted if there were any changes in layout of the serving yards, changes in the system of working or change in the volume or pattern of traffic dealt within the siding.

In May 1983 the necessity to reassess the trip time was brought to the notice of the Railway Administration by Audit. Four fresh trials were conducted by the Railway in May 1985 which showed an average trip time of 5 hours and 15 minutes. The siding owner, however, disputed that the trials were taken under abnormal conditions and "with a prejudice to enhance the trip time". Consequently, the Railway decided in May 1986 to conduct fresh trials. However, no fresh trials were conducted the Accounts Officer concerned felt that they would not satisfy the party who might raise other objections and hence the matter should be resolved in consultation with the Finance Branch at the headquarters office of the Railway.

It was pointed out by Audit in May 1987 that there was short recovery of Rs.0.70 lakh per month due to non-revision of siding charges on the basis of trials conducted in May 1985. The Railway Administration stated in October 1987 that there was no increase in traffic upto 1983 and it was only at the end of 1984, drastic change in the volume of traffic was discernible when MG traffic jumped from about 19 wagons in 1983 to 56 wagons on the average per day in 1984. They stated further that the issue was examined earlier and it was found that the time spent in the siding had increased because of overlapping stock remaining in siding, pilot being utilised for other parties also, sending pilot in advance in anticipation of completion of loading, deterioration in the hauling capacity of diesel shunters and more detentions on Carriage and Wagon account. None of these factors was attributable to the party and hence no fresh trials were conducted till 1985. The average number of MG wagons loaded by the party was 5.2 in 1978, 9.04 in 1980, 18.61 in 1981 and 43.70 in 1982. It fell to 18.82 in 1983 but rose to 55.85 in 1984. Hence the contention of the Railway that the increase was discernible only in 1984 is not tenable. The traffic increased by over 300 per cent in 1981 itself.

The Railway notified in April 1987 that siding charges based on trip timings of 5 hours and 15 minutes would be effective from 1 May 1987 and that siding charges would be recovered on the basis of actual utilisation of engine for the period 8 May 1985 (date of trial) to 30 April 1987. The amount was still to be assessed and recovered. The party, however, advised the Railway in April 1987 that they would not pay the charges at the revised rate.

Due to delay in holding fresh trials of trip timings the siding charges could not be revised. The irrecoverable short recovery for the period 1 February 1980 to 30 April 1985 alone is assessed at Rs.15.83 lakhs.

4.7 South Central Railway - Loss of revenue due to non-revision of minimum weight condition for timber logs and ballies in BG wagons

Timber logs and ballies, when loaded in BG open and covered wagons, are to be charged on a minimum weight of 175 and 185 quintals respectively. Pursuant to the comment made in Para 2(e)(vi) of Chapter I of the Advance Report of the Comptroller and Auditor General of India for the year 1982-83 - Union Government (Railways) highlighting the need for enhancing the minimum weight condition for timber logs and ballies loaded in BG wagons, the Railway Board sought in March 1984 the recommendations of the Zonal Railways by 30 April 1984 duly supported by results of test weighment of atleast ten wagons.

The South Central Railway Administration advised the Railway Board in July 1984 that only three open wagons loaded with timber logs and ballies could be test weighed and stated that based on the average weight of 217 quintals obtained from test weighment of the three wagons, timber logs and ballies could easily be loaded upto 200 quintals in BG open wagons. However, the minimum weight was not enhanced by the Railway Board as the number of wagons test weighed by South Central Railway was not found adequate.

On the Railway Administration taking up the matter in February 1986, the Railway Board enquired in April 1986 whether the Railway would favour enhancement of the minimum weight condition to 215 quintals for open wagons and 220 quintals for covered wagons. The Railway Administration reported in November 1986 that it had no traffic in timber logs and ballies then and that fresh proposals, duly supported by results of test weighments, would be sent as and when the traffic was offered. Final reply to the Railway Board had not been furnished so far (December 1988).

The following comments arise in this regard:

(i) The Railway Administration furnished in July 1984 results of test weighment of only three wagons booked from a station even though there were 27 cases of booking of wagon loads of timber logs and ballies from that station during the period from April to June 1984.

(ii) Of these 27 wagon loads, 21 were weighed at the same station. It was noticed in 15 cases that the consignors had booked timber logs and ballies in excess of the minimum prescribed weight of 175 quintals, the actual weight ranging between 178 and 233 quintals and that the average weight loaded per wagon was 205 quintals.

(iii) Though 9 wagon loads of timber were booked from the same station during the period May 1986 to August 1986, the Railway Administration did not furnish the results of test weighment of these wagons in reply to the Railway Board's enquiry of April 1986 but advised the Railway Board in November 1986 that there was no traffic of timber logs on the South Central Railway.

Thus the Railway Administration did not furnish all the cases of bookings

while advising the Railway Board in July 1984 and November 1986 which, if done, would have justified the enhancement of the minimum weight condition to 200 quintals for BG open wagons.

Non-revision of the minimum weight condition as above for the bookings of timber logs and ballies from the South Central Railway resulted in a loss of Rs.13.47 lakhs during the period October 1984 to March 1988 in respect of timber logs booked from Rajahmundry and Vishakhapatnam port stations including an amount of Rs.4.83 lakhs in respect of bookings from the Vishakhapatnam port station since transferred to the control of South Eastern Railway from 1 April 1987 onwards.

4.8 Western Railway - Loss due to non-levy of special surcharge on Naphtha booked from Mathura Refinery

With a view to meeting the cost of empty haulage of tank wagons from Kandla to Mathura Refinery the Railway Board issued a notification in June 1982 that a special surcharge of fifty per cent of freight on Naphtha in tank wagons booked from Mathura Refinery to Kandla area for export should be levied.

A test check in Audit of the records of Kandla Port conducted in March 1986 and of Khari Rohar Road station later in February 1987 disclosed that in respect of Naphtha booked in tank wagons from Mathura Refinery to the Indian Farmers Fertilizer Co-operative Limited siding, Khodiyar and then rebooked to Kandla Port and Khari Rohar Road station (Kandla area) the special surcharge of fifty per cent was neither levied by the rebooking station nor collected by the destination station at the time of delivery on the ground that the special surcharge was leviable on the traffic booked only from Mathura to stations in Kandla area and not from any other station.

On the undercharges on this account amounting to Rs.6.24 lakhs and Rs.3.34 lakhs being pointed out by Audit in August 1986 and February 1987 respectively only the Chief Goods Superintendent, Khari Rohar Road station preferred a claim on the Indian Oil Corporation for the latter in February 1987. The claim, however, was repudiated in April 1987 on the ground that it was not preferred within six months as per Indian Railway Codal provisions.

The Railway Administration in June 1987 referred the matter to the Railway Board explaining that it was possible that the traffic was booked from Mathura Refinery in two spells to get the benefit and avoid payment of special surcharge of fifty per cent of freight and, therefore, requested the Railway Board to amend the order to avoid further loss. The Railway Board accordingly issued orders in January 1988 for levy of the special surcharge from 1 March 1988 on Naphtha booked in tank wagons from Mathura Refinery to stations not located in Kandla area and then rebooked to Kandla area.

Failure to visualise at the time of issue of notification in June 1982 such possibilities of avoidance of

payment of special surcharge through rebooking resulted in a revenue loss of Rs. 9.58 lakhs.

4.9 Northeast Frontier and Western Railways - Loss due to late issue of routing circulars

Consequent upon conversion from MG to BG of the Katihar-Barauni MG section on North Eastern Railway goods traffic from and to Northeast Frontier Railway being routed on this section was diverted through Katihar -Purnea-Saharsa-Mansi-Samastipur-Barauni MG route with effect from 15 May 1985 involving an extra lead of 60 kms. The revision in the distance due from 15 May 1985 was notified by the North Eastern Railway on 6 June 1985.

It was noticed in Audit that there was considerable delay on the Northeast Frontier and Western Railways in issuing suitable notifications of the revised chargeable distance by the longer route. Northeast Frontier Railway Administration issued the notification on 22 January 1986 only. The resultant undercharges were calculated by the Administration at Rs.6.47 lakhs upto December 1985 in respect of outward consignments. For inward consignments on the Northeast Frontier Railway, advice of undercharges of Rs.0.80 lakh had been received from other Railways and action was being taken to raise necessary debits for the same.

The Western Railway Administration notified the increased chargeable distance only in June 1986. During review by Audit of the records of five MG stations on the Railway (Gandhidham, Chirai, Alwar, Bharatpur and Beawar) it was noticed that there was a further delay upto July 1987 (except Gandhidham) in implementing the revised distance. The short recovery of freight on this Railway was of Rs.1.74 lakhs for the period from 15 May 1985 to July 1987.

The Northeast Frontier Railway Administration stated in August 1988 that the revised chargeable distances could not be notified earlier for want of intimation from the North Eastern Railway. The Western Railway Administration, however, attributed the delay to system failure.

Delay in issuing necessary notifications for the revised chargeable distance thus resulted in a loss of earnings of Rs.9.01 lakhs.

4.10 North Eastern and Northern Railways - Loss due to non-realisation of passenger fares by the route actually travelled

In para 29 of the Advance Report of the Comptroller and Auditor General of India for the year 1981-82 - Union Government (Railways) it was mentioned that the practice of charging passenger fares by shorter routes to stations reached by alternative routes involved loss of revenue to the Railways and that implementation of the instructions issued by the Ministry of Railways (Railway Board) in July 1981 to charge fares by the routes actually travelled was under consideration. While advising the corrective/remedial action taken in the matter the Ministry of Railways (Railway Board) stated in December 1983 that instructions had been issued to the Railways in July 1983 and August 1983 for implementation of the instructions of July 1981 in three phases viz., Phase - I where distance exceeded 75 kms. from 1 September 1983 and

Phases II and III comprising distances between 50 and 75 kms. and below 50 kms. respectively from 1 January 1984. Phases II and III were, however, allowed to be implemented from 1 April 1984 positively.

The North Eastern Railway Administration belatedly notified in August 1984 an increase on actual basis of 12 kms. distance for charge between Howrah and Barauni Junction via Bandel Main Line and Sitarampur - Kiul forming part of the route for 19 UP/20 DN Howrah-Gorakhpur Express with effect from 1 January 1984. It was, however, noticed in Audit that the passenger fares in bookings from Gorakhpur, Chapra, Siwan, Pusa Road and Bachhwara stations of the Railway to Howrah via the above mentioned route were realised without taking into account the increased distance of 12 kms. This resulted in undercharge of Rs.5.41 lakhs during the period January 1984 to August 1987.

On the Northern Railway the orders were implemented with effect from 1 September 1983 for Phase I and from 1 April 1984 for the remaining two phases as scheduled. However, during audit of Jammu Tawi station conducted in May 1987 it was noticed that the passenger fares ex-Jammu Tawi to Howrah by 174 DN and ex-Jammu Tawi to Gaya, Asansol, Varanasi and Mughalsarai by 52 DN continued to be charged by the alternative shorter routes instead of by the routes actually travelled. This involved short realisation of passenger fares amounting to Rs.1.16 lakhs during December 1983 to May 1987.

Non-observance of the Railway Board's instructions on the North Eastern and Northern Railways resulted in undercharges of Rs.6.57 lakhs.

4.11 North Eastern Railway - Loss in booking of POL traffic

In Para 40 of the Report of the Comptroller and Auditor General of India for 1984-85 - Union Government (Railways) mention was made of the loss of revenue due to short calculation of distance of about seven kms. and non-revision of siding charges for haulage over the BG byepass line of POL traffic booked from the Indian Oil Refinery Siding (IORS), Barauni worked by Eastern Railway to BG destinations on the Samastipur-Barabanki section of North Eastern Railway.

While revising the siding charges in the course of action taken on the above paragraph the Railway Administration omitted a segment of 2.810 kms. between Garhara Central Yard and Barauni Junction from the total distance for calculation of siding charges. Subsequently in May 1987, although the Railway Administration admitted the need for inclusion of 2.810 kms. in the total distance for calculation of freight charges payable from the IORS, it issued instructions for revising the chargeable distance for charge only with effect from 1 July 1987.

A review in Audit of the outward invoices of the IORS, Barauni for traffic booked to Muzaffarpur and Raxaul stations of the Railway revealed that the non-inclusion of the distance of 2.810 kms. in the total distance for charge resulted in undercharges of Rs.5.05 lakhs during 1985-86 and 1986-87 in respect of these two stations. Similar under-

charges, if any, in respect of traffic booked from this siding to other destinations are yet to be assessed.

4.12 Eastern and Southern Railways - Loss due to incorrect recovery of demurrage charges from loco coal and ash handling contractors

In accordance with Railway Board's instructions of December 1974, the concessional rate of demurrage charges enjoyed by the goods handling agencies was to be extended to loco coal and ash handling contractors if there was no specific stipulation in the agreement for recovery of demurrage charges at public tariff rates. However, on one of the Divisions of Eastern Railway, despite specific provision in the agreements to recover the demurrage charges at public tariff rates, the recovery was made at concessional rate between December 1974 and November 1983. The matter having been taken up in Audit in October 1983, the Administration effected recoveries from December 1983 at public tariff rates.

The loss sustained due to irregular extention of concessional rate during the period December 1974 to October 1980 could not be assessed for want of records. The loss from November 1980 to November 1983 was assessed in Audit at Rs.3.58 lakhs.

On the Southern Railway, it was noticed that the higher rates of demurrage brought into effect in the notification of January 1973 and January 1981 as prescribed for public were not applied to the fuel handling contracts and the short recovery on this account was Rs.1.39 lakhs. Of this a sum of Rs.1.38 lakhs was written off.

4.13 Eastern Railway - Loss due to misappropriation of cash, non-availability of records and non-recovery of Admitted Debits in Budge-Budge goods office

Mention was made in Para 38 of the Report of the Comptroller and Auditor General of India for the year 1871-72 - Union Government (Railways) that investigation into a case of theft in the Budge Budge goods office had revealed misappropriation of cash amounting to Rs.1.78 lakhs during the period November 1969 to March 1971 by showing the inward freight charges paid in cash by the siding holder as outstanding in the Railway records and that the Ministry of Railways (Railway Board) had issued instructions in October 1972 to have an enquiry into the case conducted by Divisional Officers.

Results of this enquiry revealed the following major irregularities:-

(i)	Amount misappropriated	Rs. 3.41 lakhs
(ii)	Amount not misappropriated but records not available	Rs. 4.11 lakhs
(iii)	Error sheet debit against Mr. 'X' transferred to admitted side	Rs. 2.04 lakhs

Out of the misappropriated sum of Rs.3.41 lakhs only an amount of Rs.20,701.50 had been recovered from the persons responsible. Due to inordinate delay in finalising the enquiry, recovery of Rs.2.04 lakhs due from Mr. 'X' could not be made on account of his death in January 1979.

The Ministry of Railways (Railway Board) stated (December 1988) that write off proposal had been initiated in February 1988 and was under processing.

(G.M. MANI)
Additional Deputy Comptroller and Auditor General of India (Railways)

New Delhi
Dated the 22 APRIL 1989 / 2 VAISHAKH 1911

Countersigned

T.N. Chaturvedi

(T.N. CHATURVEDI)
Comptroller and Auditor General of India

New Delhi
Dated the 22 APRIL 1989 / 2 VAISHAKH 1911

ANNEXURE I

(cf. Para 1.3)

Summary of salient indicators of the financial and operating performance of the Railways for the Years 1983-84 to 1987-88

	1983-84	1984-85	1985-86	1986-87	1987-88
1. Capital-at-charge at the end of the year (Rs.in crores)*	7,567.80	8,285.65	9,078.07	10,373.10	11,622.22
2. Total Block assets (Rs. in crores)	9,401.40	10,377.15	11,931.03	13,836.59	15,807.17
3. Revenue Receipts (Rs. in crores)	5,089.06	5,469.09	6,590.67	7,683.08	8,679.46
4. Revenue expenditure	4,701.11	5,198.99	5,904.80	7,002.24	7,956.31
(of which amount appropriated to funds) (Rs.in crores)	1,044.26	1,084.09	1,212.44	1,630.92	1,872.51
5. Net revenue including subsidy (Rs. in crores)	378.95	270.10	685.87	680.84	723.15
6. Net revenue excluding subsidy (Rs. in crores)	285.95	169.67	557.73	536.93	549.59
7. Revenue surplus after providing for dividend due (Rs. in crores)	(-) 44.75	(-) 195.59	178.83	101.99	84.29
8. Return on Capital-at-charge (reckoning subsidy-percentage of item 5 over item 1)	5.01	3.26	7.56	6.56	6.22
9. Return on Capital-at-charge (without reckoning subsidy-percentage of item 6 over item 1)	3.78	2.05	6.14	5.18	4.73
10. Return on Block assets (Percentage of item 5 over item 2)	3.91	2.52	5.75	4.92	4.57

11. Return on Block assets (Percentage of item 6 over item 2)	2.95	1.58	4.67	3.88	3.48
12. Total indebtedness (Rs. in crores)					
a) On account of shortfall in dividend liability	349.57	545.16	428.44	428.44	428.44
b) On account of deffered divident payable in respect of new lines which have completed moratorium	60.05	63.49	58.48	60.67	60.25
C) On account of short fall in Development Fund	273.75	336.36	336.36	348.17	401.96
Total (a to c)	683.37	945.01	823.28	837.28	890.65
13. Revenue earning goods traffic in million tonnes	230.12	236.44	258.55	277.75	290.20
14. Total traffic (million tonnes)	258.00	264.17	286.38	307.31	318.50
15. Passenger Kilometres (in millions)	222,935	226,582	240,614	256,467	269,389
16. (a) Goods earnings (Rs. in crores)	3,353.50	3,602.42	4,376.38	5,133.24	5,839.23
(b) Passenger earnings (Rs.in crores)	1,353.55	1,458.82	1,719.68	1,940.96	2,060.06
17. Fuel consumption by locomotives per thousand gross tonne kilometres					
(a) Passenger Service					
(i) Coal (kg)	77.3	82.3	81.9	81.0	78.9
(ii) Diesel (Litre)	5.40	5.25	5.27	5.37	5.27
(b) Goods Services					
(i) Coal (Kg)	98.5	97.0	99.8	105.4	107.6
(ii) Diesel (Litre)	3.6	3.6	3.5	3.48	3.46

18. Number of staff (thousands)	1,593	1,603	1,613	1,612	1,617
19. Average annual wages per employee (Rupees)	12,890	14,797	16,883	21,076	24,808
20. Operating ratio (percent)	93.5	96.3	90.6	92.2	92.5

* Excludes expenditure on Metropolitan Transport Project.

ANNEXURE II

(cf Para 1.11.1)

Details of Audit Objections issued up to 31 March 1988
but outstanding on 31 August 1988.

Sl. No.	Railways & other Units	Money Value Known							Money Value Not Known					
		Part I Audit Notes and Special letters				Part I Inspection Reports			Part I Audit Notes and Special letters			Part I Inspection Reports		
		No.	Items	Amount (Rs.000)	Oldest pertains to	No.	Items	Amount (Rs.000)	Oldest pertains to	No.	Items	Oldest pertains to	No.	Items	Oldest pertains to
1.	Central	50	71	85299	85-86	76	181	167853	83-84	4	8	85-86	12	43	83-84
2.	Eastern	30	34	161933	78-79	184	420	503409	80-81	12	13	80-81	50	114	82-83
3.	Northern	305	320	159310	82-83	303	585	48990	83-84	996	1053	75-76	302	1781	78-79
4.	North-Eastern	167	183	101768	76-77	664	3746	543453	74-75	113	143	78-79	472	2802	77-78
5.	Northeast-Frontier	185	212	127469	75-76	197	1098	137785	71-72	514	652	67-68	1094	8476	70-71
6.	Southern	73	100	123719	85-86	12	71	7830	86-87	277	517	83-84	39	154	86-87
7.	South-Central	171	268	65271	79-80	131	339	81043	81-82	50	114	76-77	104	346	78-79
8.	South-Eastern	166	179	190365	75-76	275	658	983231	76-77	24	24	75-76	57	82	76-77
9.	Western	109	137	71849	78-79	255	1048	121279	82-83	44	115	78-79	138	523	83-84
10.	Chittaranjan Locomotive Works	27	28	101713	76-77	105	231	178825	76-77	4	5	82-83	86	203	77-78
11.	Diesel Locomotive Works	40	50	19418	76-77	32	77	216165	77-78	37	37	84-85	106	189	77-78
12.	Integral Coach Factory	3	5	2331	81-82	-	-	-	-	59	146	85-86	37	136	82-83

13. Metropolitan Transport Project, Calcutta	4	5	1761	86-87	15	34	14213	84-85	1	1	87-88	5	32	84-85
Total	1330	1592	1212206		2249	8488	3004076		2135	2828		2502	14881	

Note:- Audit Notes and Inspection Reports - Part-I deal with more important matters.

Special Letters deal with individual irregularities of important and serious nature.

ANNEXURE III

(c.f. Para-2.1.7)

Statement showing the delays in different stages in the installation of advanced computers, cost overrun and avoidable payment of maintenance charges

Sl.	Railway	Delay by Railway Administration				Delay by CMC/ other agency (In months)	Idling of computer		Delay in months	Cost overrun/ Avoidable expenditure (In lakhs of rupees)	Avoidable payment of maintenancecharges for IBM computers	
		In signing agree-ment	In handing over site (In months)	Other reasons	Total		Month of receipt	Month of commi-ssioning			Months	Amount (In lakhs of rupees)
1.	Eastern	2	3	-	5	5	October 1986	February 1987	4	-	6	2.54
2.	North Eastern	5	-	-	5	-	September 1986	January 1987	4	10.59	6	1.81
3.	South Eastern	-	-	-	-	6	December 1986	June 1987	6	20.24	6	1.98
4.	Northern	8	-	-	8	3	September 1986	December 1986	3	-	6	1.81
5.	Northeast Frontier	-	-	-	-	5	July 1986	September 1986	2	-	6	1.81
6.	Southern	-	-	-	--	-	August 1986	October 1986	2	34.24	6	1.81
7.	Central	8	-	-	8	-	August 1984	September 1985	13	3.97	19	5.32
8.	Western	8	57	-	65	-	June 1986	June 1987	12	25.18	13	3.39
9.	South Central	-	-	-	-	-	February 1984	August 1984	6	11.55	7	7.50

10. Production Units

(a)	CLW	-	-	-	-	2 to 20	November 1986	February 1987	3	65.98	6	1.81
(b)	DLW	-	-	-	-	52	July 1986	January 1987	6	44.97	6	1.81
(c)	ICF	-	-	24	24	-	January 1984	October 1984	9	85.97	20	4.30
(d)	WAP	-	-	-	-	7	September 1985	December 1985	3	0.95	-	-
Total										303.64		35.89

ANNEXURE - IV
(cf Para - 2.2.7)

Statement showing loss of earning capacity due to higher turn-round of BFR/BRH wagons on Indian Railways

Year	Targeted turn round in days	Average turn-round achieved during the year in days	Excess days	Average loading during the year in terms of 4 wheeler	Wagon days lost	Loss of earning capacity (Rs. in crores)
1982-83	21.80	39.16	17.36	2,13,525	36,27,925	70.02
1983-84	21.80	45.25	23.45	1,68,500	38,75,500	83.32
1984-85	21.80	43.50	21.70	2,02,575	44,56,650	98.03
1985-86	21.80	40.24	18.44	2,21,281	39,80,416	113.04
1986-87	21.80	43.00	21.20	1,96,187	39,23,740	131.84
1987-88	21.80	35.66	13.86	2,43,550	34,09,700	114.57
						610.82

ANNEXURE - V

(cf para - 2.2.8)

Number of BFR/BRH wagons remained idle over and above the permissible limits per month

Year	Excess percentage	Average ownership	Wagons remained idle over and above	Wagons remained idle during the year (per month x 12)	In terms of 4 wheeler units (conversion ratio 2.5)
1982-83	2.3	9719	224	2688	6720
1983-84	2.6	9940	258	3096	7740
1984-85	2.8	10396	291	3492	8730
1985-86	3.3	10739	354	4248	10620
1986-87	3.4	10783	367	4404	11010
1987-88	4.1	10751	441	5292	13230

Loss of earning capacity during the respective years

(Rs. in crores)

1982-83	=	3.89
1983-84	=	4.99
1984-85	=	7.43
1985-86	=	9.04
1986-87	=	11.10
1987-88	=	13.34
		49.79

ANNEXURE - VI

(cf para - 2.2.17)

Statement showing loss of earning capacity due to higher turn-round of BFR/BFT wagons (MG) on Indian Railways

Year	Targeted turn round in days	Average turn-round achieved during the years in days	Excess days	Average loading during the year in terms of 4 wheeler	Wagon days lost	Loss of earning capacity (Rs. in crores)
1985-86	7	109.5	102.5	7629	7,81,972	7.33
1986-87	7	88.2	81.2	6661	5,40,873	5.50
1987-88	7	73.1	66.1	7574	5,00,625	5.33
					Total	18.16

ANNEXURE VII

(cf Para 2.3.8)

Statement showing Transit and Handling losses of Coal on Railways

(In Tonnes)

Railway	1984-85		1985-86		1986-87	
	Shortage loss	Percentage	Shortage Loss	Percentage	Shortage Loss	Percentage
Central	67,862	5.61	57,623	5.24	43,913	4.35
Eastern	1,72,241	11.43	80,326	5.93	83,675	7.40
Northern	73,730	4.00	60,092	3.20	32,841	2.10
North Eastern	40,296	3.17	38,430	3.10	25,714	2.30
South Central	15,679	1.91	10,876	1.42	9,433	1.45
South Eastern	NA	NA	55,306	7.09	27,742	4.14
Western	1,26,136	11.16	1,09,840	10.03	74,105	7.87
Total :	4,95,944		4,12,493		2,97,423	
Rate per: tonne	Rs.303		Rs.303		Rs.335	
Value:	Rs.15.03 crores		Rs.12.5 crores		Rs.9.96 crores	

ANNEXURE VIII

(cf Para - 2.4.8)

Delay in commissioning of machines

Sl. No.	Name of the machine	Cost (Rupees in lakhs)	Consignee (Railway)	Date of receipt	Date of commissioning	Time taken for commissioning from the date of receipt (in months)	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1.	Combination Turret Lathe	4.81	Central	10.4.1982	26.10.1982	6½	Non-completion of foundation work
2.	C & W Wheel Lathe	65.00	Central	24.4.1982	31.12.1982	8	- do -
3.	Combination Turret Lathe	3.58	South Eastern	26.6.1982	3. 2.1983	8	- do -
4.	Horizontal Boring Machine	12.86	South Eastern	14.6.1984	8. 3.1985	8	- do -
5.	Electric Furnace	1.89	Western	29.5.1983	2. 4.1984	7	No specific reasons recorded
6.	Radial Drilling Machine	1.57	Eastern	4. 5.1981	2. 2.1982	9	Non-completion of foundation work
7.	Axle Journal Turning and Burnishing Lathe	34.15	Central	20.12.1982	1. 2.1984	13	- do -

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
8.	C & W Wheel Lathe	55.46	Eastern	2.3.1982	19.4.1983	13½	-do-
9.	Combination Turret Lathe	2.24	South Eastern	10.4.1982	6.8.1983	15	-do-
10.	Shaping Machine	2.14	South Eastern	19.9.1981	2,8.1982	10½	Control panel was received in damaged condition
11.	Centre Lathe	2.07	South Eastern	20.11.1981	18.11.1982	12	Delay in installation was due to late receipt of relevant challenge packing flat for verification. The original having been lost in transit
12.	Slothing Machine	2.65	Central	20.9.1982	6.5.1983	7	Delay was due to extra time taken by the firm's Engineer to visit the consignee
13.	Centre Lathe	2.07	Eastern	11.5.1982	7.12.1982	7	
14.	Horizontal Machining Centre for M.G. Frame	99.00	C.L.W	6.12.1986	Not commissioned till August 1987	8	Reasons not recorded

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(7)	(8)
15.	Horizontal Machining Centre for M.G. Frame	99.00	C.L.W	6.12.1986	-do-	8		Delay due to non-finalisation of site plan and
16.	2000 Kg. Open Die Forging Hammer	61.00	C.L.W.	24.3.1985	-do-	27		foundation drawing in time, defective engineering foundation,
17.	V.M.C.	19.29	C.L.W.	30.9.1986	-do-	11		delay in firm's engineers to report for commissioning of the machines, etc.
18.	V.M.C.	19.29	C.L.W	30.9.1986	Non commissioned till August 1987	11		Delay due to non-finalisation of site plan and
19.	Precision T/R Lathe	2.50	C.L.W.	16.1.1986	-do-	19		foundation drawing in time, defective engineering foundation, de
20.	P&T type Furnace	9.56	C.L.W.	5.7.1986	-do-	13		lay in firm's engineers to report for commissioning
21.	P&T type Furnace	9.56	C.L.W.	-do-	-do-	13		of the machines etc
22.	Vertical Drilling Machine	5.71	Central	18.3.1982	22.10.1982	7		Delay due to non completion of Civil
23.	Combination Turret Lathe	3.24	Central	26.3.1982	3.3..1983	11		Engineering Works, non-receipt of some accessories, non-availability of service
24.	Semiautomatic Wheel and Tyre Boring Machine	46.33	Central	26.5.1983	3.12.1983	6½		Engieers, etc.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
25.	Radial Drilling Machine	22.70	Central	12.11.1981	14.5.1984	Over 2 years	-do-
26.	Electric Furnace (Tempering)	1.75	Western	29.3.1983	2. 4.1984	7	No specific reasons recorded.
27.	Motor Lorry 5 tonnes	1.47	Western	12.2.1981	19.10.1981	8	
28.	Plate Straightening Machine	3.52	Western	31.7.1984	4.3.1985	7	Due to delay in foundation, electric connection, etc.
29.	Short Peaning Machine	6.24	Western	September 1984	December 1985	15	The machine could not be commissioned due to non-availability of shots
30.	Surface Grinder	8.58	Eastern	27.2.1983	4.4.1984	13	Reasons not recorded
31.	Mono Box Goliath Crane	19.00	Eastern	23.6.1985	19.11.1986	16	Crane could not be used extensively for want of load and for working in the restricted track
32.	Induction Tyre Heater Machine	4.60	Eastern	30.8.1985	5. 3.1987	18	Reasons not recorded

Total : Rs.632.83 lakhs

ANNEXURE - IX

(cf. Para - 2.5.5)

Tonnage originating of parcel traffic on various Railways during the period 1982-83 to 1986-87

(Figures in thousand tonnes)

Year	RAILWAYS									Total
	Central	Eastern	Northern	North Eastern	Northeast Frontier	Southern	South Central	South Eastern	Western	
1982-83	472	192	594	167	71	329	253	353	330	2761
1983-84	349	164	612	150	68	338	248	326	315	2570
1984-85	349	187	604	150	59	354	254	343	317	2617
1985-86	405	183	749	154	59	357	295	403	331	2936
1986-87	380	182	634	171	62	354	439	426	345	2993

ANNEXURE - X

(cf. Para 3.28)

Statement showing absorption rate of creosote oil and furnace oil

Year	Absorption rate of oil mixture cubic metre kgs (oil mixture)	Creosote oil per cubic metre kgs.
1975-76	119.70	59.85
1976-77	129.73	64.865
1977-78	131.78	60.89
1978-79	124.08	62.04
1979-80	114.07	57.035
1980-81	114.33	57.165
1981-82	114.60	57.30
1982-83	104.63	52.315
1983-84	95.94	47.97
1984-85	96.90	48.45
1985-86	96.00	48.00
1986-87	The cost analysis report for the year has not been prepared so far (June 1987).	

ANNEXURE XI

(cf para - 3.28)

Statement showing extra consumption of oil mixture and resultant extra expenditure in Clutterbuckganj Plant

Year	Sleepers treated (in cum.)	Rate of absorption per cum. (in kgs)	Minimum average required (in kgs)	Difference per cum. (in kgs.)	Per MT average rate of creosote and oil	Quantity of mixture consumed extra (in MT column 2 X 5)	Extra expenditure as per column 7 (in lakh (in lakhs of rupees)
1	2	3	4	5	6	7	8
1975-76	21142	119.70	96 kgs.	23.70	Rs.633	501.06	3.17
1976-77	14862	129.73	as per	33.73	Rs.633	501.20	3.17
1977-78	15230	131.78	Report of	35.78	Rs.973	544.92	5.30
1978-79	16041	124.08	Committee	28.08	Rs.973	450.43	4.38
1979-80	10613	114.70	on use of	18.70	Rs.1393	198.46	2.76
1980-81	17193	114.33	treated	18.33	Rs.1393	315.14	4.39
1981-82	12845	110.60	wooden	18.60	Rs.3151	238.91	7.52
1982-83	20391	104.63	sleepers	8.63	Rs.3151	175.97	5.54
1983-84	16323	95.94	(1972)	-	-	-	-
1984-85	9456	96.90		-	-	-	-
1985-86	12587	96.00		-	-	-	-
1986-87	Preparation of cost analysis report is awaited.						
				Total		2926.09	36.23 (Approx.)

ANNEXURE - XII

(cf. Para - 4.2.2)

Statement showing loss of revenue on account of booking of traffic by incorrect route.

(a) (i) Traffic booked from Dual gauge Stations to Dual gauge Stations by all MG route instead of by all BG route during 1 March 1987 to 31 August 1987.

Name of Station	Movement of traffic	Amount of under-charges in Rupees
Kandla Port	Local Outward	80,783
	Foreign Outward	32,61,170
	Foreign Inward	80,179
Gandhidham	Foreign Outward	48,638
	Foreign Inward	2,90,839
Ratlam	Foreign Outward	5,555
	Foreign Inward	52,586
Indore	Foreign Outward	53,253
	Foreign Inward	56,136
Ujjain	Foreign Outward	2,512
Sawai Madhopur	Foreign Outward	275
Viramgam	Foreign Inward	16,992
	Total	39,48,918

(a) (ii) Traffic booked from BG stations to Dual Gauge stations and charged by BG-cum-MG route instead of by all BG route during April 1987.

Name of Station	Nature of Traffic	Amount of Undercharges in Rupees
Viramgam	Food grain (FCI)	97,469

(b) (i) Traffic booked from Dual gauge siding to Dual gauge Stations by all MG route instead of by all BG route during 1 March 1987 to 31 August 1987.

Name of Station	Movement of Traffic	Amount of Undercharges in Rupees
IFFCO Siding (MG), Gandhidham	Local Outward	65,638
	Foreign Outward	11, 88,265
IFFCO Siding, Kalol	Foreign Outward	9, 83,498
Total		22, 37,401

(b) (ii) Traffic booked from Dual gauge siding to BG stations by MG-cum-BG route involving transhipment instead of by all BG route during 1 March 1987 to 31 December 1987.

Name of Station	Movement of Traffic	Amount of Undercharges in Rupees
IFFCO Siding, Kalol	Foreign Outward	9, 97,656
Grand Total		72, 81,444

Say Rs. 72.81 lakhs

ERRATA

Page No.	Column No.	Line No.	For	Read
22	1	16	Aduit	Audit
23	2	16	Stabliser	Stabiliser
34	1	39	necessasry	necessary
37	1	11	Jaipur	Jodhpur
44	1	6	achived	achieved
54	1	5	infrigement	infringement
81	2	5 from bottom	trnsport	transport
88	2	3	Railways the last five	Railways during the last six
94	2	27	manufacutre	manufacture
104	1	10-11	consideratаion	consideration
107	2	30	postion	position
126	2	19	condtion	condition
127	1	34	electrication	electrification
129	1	12	Salex	Sales
132	1	12	indentical	identical
140	1	38	encahsed	encashed
142	1	10	foundary	foundry
143	2	16	depolying	deploying
144	1	last line	post	part
149	2	13	Add the word "facility"	after "fighting"
151	2	7	Raod	Road
151	2	12	dealy	delay
160	2	31	and	the
172	1	27-28	insert the word 'as' between 'conducted' and 'the'	
177	1	29	extention	extension
177	2	12	1871-72	1971-72
180	-	9	deffered divident	deferred dividend
189	-	2	c.f. Para 2.3.8	c.f. Para 2.3.5.4