FORTY-FIFTH REPORT

COMMITTEE ON PUBLIC UNDERTAKINGS

(1987-88)

(EIGHTH LOK SABHA)

BHARAT EARTH MOVERS LIMITED

(MINISTRY OF DEFENCE—DEPARTMENT OF DEFENCE PRODUCTION AND SUPPLIES)

सत्यमेव जयते

Presented in Lok Sabha and

Laid in Rajya Sabha on 23-4-1988

LOK SABHA SECRETARIAT
NEW DELHI

April, 1988/Vaisakha, 1910 (Saka)

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(1987-88)

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STUDY GROUP III ON OIL AND NATURAL GAS COMMISSION (CONSTRUCTION, FABRICATION OF OILWELLS PLATFORMS AND PROCUREMENT AND UTILISATION OF RIGS); INDIAN OIL CORPORATION LTD; BIECCO LAWRIE LTD; COCHIN REFINERIES LTD; FERTILIZERS AND CHEMICALS (TRAVANCORE) LTD; ROURKELA STEEL PLANT; STEEL AUTHORITY OF INDIA LTD; IMPORT OF DEFECTIVE BILLETS; BHARAT EARTH MOVERS LTD; BHARAT GOLD MINES LTD.

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*Ceased to be Member of the Committee consequent on his retirement from Rajya Sabha on 2-4-1988.

INTRODUCTION

I, the Chairman, Committee on Public Undertakings having been authorised by the Committee to present the Report on their behalf, present this Forty-Fifth Report on Bharat Earth Movers Limited.

2. The Committee's examination of the working of the Company was mainly based on the Report of the Comptroller and Auditor General of India, 1985, Union Government (Commercial) Part V.

3. The Committee took evidence of the representatives of Bharat Earth Movers Ltd. on 25 and 26 November and 22 December, 1987 and also of the representatives of the Ministry of Defence (Department of Defence Production and Supplies) on 6 January, 1988.

4. The Committee considered and adopted the Report at their sitting held on 21 April, 1988.

5. The Committee wish to express their thanks to the Ministry of Defence (Department of Defence Production and Supplies) and Bharat Earth Movers Ltd. for placing before them the material and information they wanted in connection with examination of the Company. They also wish to thank in particular the representatives of the Ministry of Defence (Department of Defence Production and Supplies) and the Undertaking who appeared for evidence and assisted the Committee by placing their considered views before the Committee.

6. The Committee also place on record their appreciation of the assistance rendered by the Comptroller and Auditor General of India.

NEW DELHI;
April 26, 1988
Vaisakha 6, 1910 (*S*)

VAKKOM PURUSHOTHAMAN
Chairman,
Committee on Public Undertakings.

PART I

BACKGROUND ANALYSIS

CHAPTER 1

HISTORICAL BACKGROUND

1.1 The Bharat Earth Movers Limited was incorporated on 11th May, 1964. The Company started functioning from 1st January, 1965 when the Heavy Earth Moving Equipment Project which was under implementation alongwith the Railcoach Division was transferred from Hindustan Aeronautics Limited, Bangalore. The Crawler tractor manufacturing programme which was being carried out by the Director General, Ordnance Factories (DGOF), was entrusted to the Company in December, 1965. The Company had two production units at the time of incorporation *viz.*, the Railcoach Division at Bangalore manufacturing Railcoaches, Heavy Duty Trailers and certain earth-moving equipments (Scrapers, Motor Graders and Cranes) and the Earth Mover Division at KGF manufacturing a wide range of earth moving equipments (Tractors, Haulpak Dumpers, Front end loaders, Track shovels and Hydraulic Excavators) under foreign collaboration arrangements as well as from its own design. A Research and Development (R&D) Cell was set up in 1968-69. Subsequently, a new factory at Mysore for production of wheeled earth moving equipment started functioning from 1985-86. The authorised capital of the Company was progressively increased from Rs. 7.50 crores in 1964-65 to Rs. 30 crores in 1982-83. The paid-up capital at the end of 1986-87 was Rs. 30 crores

CHAPTER II

CORPORATE PLAN

2.1 According to Audit, the Board of Directors approved in December, 1976 a Corporate Plan, covering *inter alia*, environmental influences, mission, objectives, Corporate strategies and functional strategies as well as an action plan comprising details year-wise targets for 1976-77 to 1980-81 and broad projections for the subsequent five year periods ending 1985-86 and 1990-91.

2.2 Some of the important objectives, strategies and action plans as reported by Audit are as follows:—

(a) Supply quality equipment and ensuring continuity of operation by providing the highest feasible level of after sales-services necessary for achieving complete customer satisfaction.

(b) Make available spare parts at competitive prices and within a reasonable time.

(c) Strive to achieve organisational development by formulating appropriate personnel policies, procedure and systems.

(d) Ensure that engineering capability for development and production of critical assemblies requiring high technological competence is established in the country.

(e) Contribute to the national resources by generating surplus through continued improvements in productivity and efficiency.

(f) Restructure existing production facilities and set up new units at a cost of Rs. 166 crores involving manufacture of critical items like hydraulics, transmissions and castings and production of only crawler equipment at the existing factory in KGF and a new factory to commence manufacture of wheeled earth-moving equipment from 1982.

(g) Achieve higher production and turn-over levels of equipment in the Railcoach Division, Earth Mover Division

(KGF) and the new factory (wheeled EM equipment) as under:—

	By 1980-81		By 1985-86		By 1990-91	
	Production (Numbers)	Sales (Rs. in crores)	Production (Numbers)	Sales (Rs. in crores)	Production (Numbers)	Sales (Rs. in crores)
Rail Coach Division						
Rail Coaches . .	300		300		300	
Trailers . . .	100		100		100	
Heavy Vehicles	95		200		300	
TOTAL	495	48.72	600	78.06	700	121.96
Earth Mover Division KGF						
Crawler Tractors .	420		630		930	
Dumpers . . .	230		..			
Misc. equipment .	190		375			
Transmissions . .	..		60		300	
TOTAL	840	105.43	1065	156.42	1230	165.21
Wheeled Equipment at New Factory						
Dumpers . . .	..		375		530	
Mis. Equipments	..		..		545	
	..		375	102.88	1075	344.06
Spares						
All divisions .		21.00		53.00		94.00
TOTAL		175.15		390.36		725.23

(h) Archieve a return of 15 per cent on investment.

(i) Undertake the manufacture of several new equipments to be introduced during 1977 to 1985 (1 in 1977-78, 2 each in 1978-79, 1979-80, 1981-82 and 1985-86).

(j) Achievement by 1985-86 of certain operational indicators of efficiency and performance as detailed below:—

1	Sales to capital employed	1.5 times
2	Sales to gross block	2.7 times
3	Working capital to sales	45%
4	Purchase of raw materials and components—as number of months sales	3.5 months
5	Receivables—as number of day's sales	66 days
6	Value added per worker	Rs. 56,000
7	Profit after tax to net worth	15.3%

(k) Export a few carefully chosen products and components to selected areas to the tune of Rs. 14 crores by 1985-86 and Rs. 26 crores by 1990-91.

(l) Establishment of a centralised R and D set up, development of a sound technical base, use of imported knowhow only on a selective basis, ensuring availability of full facilities for testing and product evaluation, and increasing the R and D expenditure progressively to Rs. 4 crores by 1985-86 and Rs. 7.50 crores by 1990-91.

2.3 It has been reported by Audit that, the Company has not made a comprehensive review of achievements against the various strategies, action plans, etc., laid down in the Corporate Plan, but only reviewed in April 1980, the action plans relating to introduction of new equipment in production, year-wise production/sales of equipment and certain indicators/ratios of performance and efficiency. The Company proposed in March 1984 to undertake a comprehensive review in 1985-86.

2.4 The Committee enquired as to why a comprehensive review of achievements against various strategies, action plans etc. was not made by the Company till 1985-86 even though the yardsticks for evaluation were incorporated in the Corporate Plan itself. The

Chairman and Managing Director, BEML informed during evidence:—

> "So far as the review of the Corporate Plan is concerned, we review it at our level, at the Board level every year at the time of review of the budget preparation, budget approval of the Company. Our submission is that we have been doing it almost every year at the time of the preparation of the budget.... We reviewed this in a full-fledged manner in 1980-81 and we reviewed again and made a representation to our Ministry in 1985. At the higher level, it is done after every four or five years."

The witness added:

> "We prepare a monthly plan for a year for all the production divisions and all other research and development marketing divisions, personnel divisions. For each one of them we have budget plan for every year which is divided into months and it is reviewed every month by myself and my Directors alongwith the concerned Executive Directors and General Managers. We also pay a visit to every unit, at least every month and other functional Directors pay a visit to review the performance of the division 2 or 3 times per month."

2.5 When asked whether the review of the Corporate Plan conducted by the Board could be considered as comprehensive, the BEML in a written note stated that the Board had been regularly reviewing the performance and achievements of the Company in the background of the strategies and action plan spelt out in the Corporate Plan even though a specific review might not have been undertaken as a comprehensive, distinct and independent exercise since the growth rate, by and large, had been in consonance with the Corporate Plan. The first bench mark wherein details in financial terms had been spelt out in the Corporate Plan was 1980-81 and a review at the Board level was done in April 1980. The next bench mark was for evaluation in 1985-86, which had been done, again at the Board level.

2.6 The Committee enquired as to how the Ministry had been assessing the performance of the Company in the absence of any comprehensive review of achievements against the Corporate Plan.

The Secretary of the Department of Defence Production and Supplies during evidence stated:—

> "With your permission if I may submit, the plan prepared by the Company in 1976 was a corporate plan and the 1985 plan was a perspective plan. These two words have been carrying different meanings and different connotations for different persons. The terms are, however, interchargeable in common parlance..... The first plan was prepared in 1976 commenting on the external and internal environment relevant to the company and the company's strategy, goals, and plan of action. A 15 year plan is never taken as a target. This is only an internal appraisal and heart-searching for knowing their weaknesses, knowing their strength, which way they would like to go or to look at the future market pattern, the national economic growth and so on."

2.7 Asked whether the corporate plan prepared by the Company was approved by the Government, the witness stated:—

> "The 1976 corporate plan does not appear to have come to the Government at that time or approved by them."

2.8 Subsequently in a written note furnished after evidence, the Department of Defence Production and Supplies have *inter alia*, stated that Bureau of Public Enterprises had suggested in a d.o. letter dated 20-6-1974 that the following procedure may be adopted for processing the Corporate Plans of the Public Enterprises:

(a) Drafting of the Corporate Plan by the company concerned taking into consideration its past history, its objectives, and its future growth potential. (The "National Objective of public sector" and the Five Year Plan would in general, provide the boundary and the goal of these Corporate Plans).

(b) Draft Corporate Plan to be discussed with relevant officers of the Ministry concerned and with the Bureau of Public Enterprises before being submitted to the Board of Directors of the Company.

(c) Corporate Plan to be sent to Government in the Administrative Ministry for formal ratification. Before granting such formal ratification the administrative Ministry should obtain the formal concurrence of the Ministry of Finance (Bureau of Public Enterprises) and the Planning Commission. Bharat Earth Movers Ltd. had prepared a Corporate

Plan in 1976 with the assistance of Indian Institute of Management. Ahmedabad, for a period of 15 years. This plan was put up to the Board of Directors and approved by it on 4-12-1976. As the composition of the Board included Government Directors and also in view of the fact that a copy of the agenda was sent to the Ministry no separate reference for approval of the Corporation Plan was made to the Government, BEML had also sent a copy of their corporate plan to the Bureau of Public Enterprises. The old records available in the Ministry do not suggest that the Corporate Plan of BEML was formally ratified by Government. The Corporate Plan approved by the Board of Directors, which included Government Directors, had been the guiding document in preparation of the annual production/investment plans of the company keeping in view the changed market conditions from time to time.

2.9 According to the Ministry, in the matter of Corporate Plan the Public Enterprises are in a better position to assess their potentials and shortcoming *vis-a-vis* market demand. The Government has been, as an investor, analysing the same while granting loan assistance and making investments in the Company.

2.10 The Committee enquired as to whether any fresh appraisal of the Plan for the period 1986-87 to 1990-91 has been taken up. In a written note, the BEML informed the Committee that review of Plan projection was continuous and the annual plans drawn up by the Company took into account the results of such review. Further, for the period ending 1990-91, they had identified the following areas of growth:

(1) Increasing share of Defence Production by Producing:—

(a) Transmission for BMP Vehicles of Army,

(b) Aggregates for Main Battle Tanks for Army,

(c) Mine Ploughs—

(d) Higher capacity Trailers

(e) 12 T Heavy Vehicles (KT).

(2) In respect of Railways—

(a) Introduction of OHE Cars,

(b) Railway Track Laying Equipment.

(3) In respect of Construction and Mining Equipment—

(a) 120 T Dump Trucks

(b) 10 CM Rope Shovels

(c) Walking Drag Lines

(d) Longwall Underground Mining Equipment.

2.11 In this connection, the Secretary, Department of Defence Production and Supplies also stated during evidence:

> "For the year 1985-86 to the year 1990 we requested all our public undertakings to prepare a five-year perspective plan. BEML has also made such a plan. They had made a presentation to the Ministry and an active interaction took place. In August 85 we sent the views which emerged out of that interaction along with Ministry's comments and modifications to BMEL plan. This perspective plan is in operation in the company."

2.12 In this connection, the Committee wanted to know about the models not yet produced by the Company as per the Corporate Plan and their likely year of introduction. In reply, the CMD, BEML stated during evidence:—

> "The models that have not been produced till 1986-87 and the plan for introduction in the production line are as follows:—
>
> Heavy vehicles of 12 tonne capacity is planned for introduction during the current financial year, *i.e.* 1987-88. The 120 tonne Rear Dump Truck is planned for production in 1988-89. So far as Hydraulic Cranes are concerned, we don't have any immediate plan for introduction because we have found that the market is not adequate."

2.13 Asked as to why the pattern of production projected in Corporate Plan not achieved in respect of many major items, the witness stated:—

> "It is our submission that when a corporate plan is drawn, it is an indication of the areas of growth. It is not a budget as if it were to be considered; it is generally done on a long term basis, for a period of 15 years in our case. It is not always possible to forecast with pin-point accuracy as to what will happen in future. You will also kindly appreciate that it all depends upon how the demand

grows. Sometimes, the customers turn up all of a sudden and some other times when it is projected, it does not materialise."

2.14 A review of the progress of introduction of new equipments envisaged in the Corporate Plan conducted by Audit, revealed the following:—

— 3 new equipments *i.e.* 3.5 Cum Front End Loader, 32 ton Bottom Dumper and D-355 (410 HP) Crawler Tractor were introduced during 1977-78 to 1979-80 as envisaged in the Corporate Plan

— In respect of 40 ton Pipe Layers meant for Mines and Petroleum producers, though the Corporate Plan envisaged completion of drawings by January 1977, production of proto-type by November 1977, trials by August 1978 and production in 1979-80, only development work, involving an expenditure of Rs. 22.48 lakhs, had been completed by March 1985.

— Production of heavy vehicles meant for Defence Department due for introduction in 1978-79 in Railcoach Division, with an envisaged production level of 95 numbers by 1980-81 had not yet been taken up as the question of entering into a collaboration agreement with Czechoslovakian Government was still under consideration and the proto-type tractor was under trials (December 1985). In the meantime, 45 vehicles were imported by the Defence Department in 1983 at a cost of Rs. 21.86 lakhs each.

— One of the new equipments proposed for introduction as per the corporate strategy for serving existing customers or new markets, consistent with available skills and expertise, was the Hydraulic Crane. Though the Plan envisaged Government's approval for the project by June 1979, placement of orders for plant and machinery during January 1978 to July 1979 and commencement of production by October, 1979 even the first stage *i.e.* Government's approval, had not yet been reached (December, 1985)."

2.15 In this connection, the Management informed Audit in April, 1985:—

"The Heavy Vehicles were particularly planned to be manufactured for use by the Army and the delay in the production of the proto-type and taking up commercial production was primarily due to the fact that clear indications as

to the magnitude of the Army's requirement and specifications were not available. However, during 1984 the Company had produced 2 proto-types which are under rigorous trials. As regards Pipe Layers, even though the necessary development work had been completed, the market demand did not pick up as was anticipated at the time of the formulation of the Corporate Plan. Likewise commercial production of Hydraulic Cranes was also not taken up for want of adequate and sustained market demand."

2.16 When the Committee desired to know about the basis of assessment of demand for 40 ton Pipe Layers at the time of formulating the Corporate Plan, the CMD, BEML stated during evidence:—

"We expected orders mainly from the Oil and Gas field areas. These orders have not materialised, to the extent we had thought of, but last year we produced two nos. of 40 ton pipe layers and supplied to the customers and we are making efforts for more orders. These 40 ton pipe layers are more of a variant of one of the types of bull dozers which we are already producing."

2.17 Asked as to whether the assessment was based on some market research etc., the witness stated:—

"Our market research and sales people go across to our customers and in this case they found that there was likelihood of a requirement of this."

2.18 In this connection, subsequently the BEML in a written note stated that in the assessment of the likely demand for a particular product, the Company was guided by the following factors:

(a) Opportunities which were likely to arise in the environment;
(b) Market survey;
(c) Available skills, expertise in the areas so identified; and
(d) Commercial dictates.

2.19 The market survey conducted by the Company revealed that there was a potential demand for 40 T Pipe Layers to meet the requirement of Oil and Coal Sectors. It was further stated by BEML that the Pipe Layers was only a modified version of D80 Crawler Tractor (which has been under regular production) with an attachment for laying pipes and did not need any specific capital investments.

2.20 Asked about the factors responsible for the market demand not picking up as anticipated, the BEML in a written note stated that

the following factors were responsible (to the best of their knowledge) for the market demand not picking up as anticipated:—

(a) Continued use of lower diameter pipes which do not warrant mechanical handling;

(b) Contractors engaged in the pipe laying activity might have continued to use available fleet of used equipment without going in for new equipment;

(c) In view of the abundant labour available in the country, the concerned authorities/contractors continued to use manual labour instead of switching over to mechanical handling;

(d) Transportation of coal through slurry pipelines did not materialise as envisaged earlier.

2.21 When enquired whether any specific commitment was obtained from ONGC for placing orders on BEML for 40 ton pipe layers, the CMD, BEML during evidence stated: "No; they did not give....We do not have any such document to prove that because we had discussions across the table with them."

2.22 In connection with the demand for 40 ton pipe layer not picking up, the Committee enquired as to whether ONGC fulfilled their requirements from any other sources. In reply, the witness stated:—

"....ONGC and the Gas Authority of India have placed orders on foreign parties—foreign contractors—for erection of complete HBJ pipeline where pipes are being laid. These foreign contractors have already got in their stock in their own country or in the third country such equipment/pipe layers. As one of the clauses of the contract was that they were allowed to bring in those equipments—pipe layers—into India and use that for laying of pipelines whether for HBJ or for any other such contracts."

2.33 Asked whether the capability of BEML to supply these equipment was brought to the notice of the ONGC and Gas Authority of India Ltd., the witness stated:—

"We did approach the contractors. I am more specifically talking about the HBJ pipelines. We did approach those foreign contractors to give us an opportunity to supply those equipments and the spares which are required for this project.

So far as pipe layers are concerned, they informed us that they had adequate quantity available with them abroad which they would like to use and then bring it to India and for using it here."

2.24 When the Committee pointed out that the matter should have been taken up with the Government or the Public Undertakings rather than the contractors, the witness stated that their Directors met the Technical Director of the Gas Authority of India in this regard but he expressed his inability to intervene because the whole contract had been given to foreign party with a clause incorporated saying that whichever equipment they were using could be brought to India and taken back after the completion of the contract.

The witness also added:

".....I would like to clarify the position a little further that contracts similar to HBJ pipeline are also being awarded in respect of hydro-power projects, thermal power projects to foreign contractors and in that connection, foreign contractors are allowed to bring such equipment and re-export them after the project is completed and the contract is over. I myself have gone personally to the Secretary, Power, and also written to him and the Chairman NHPC, CWC and CEA, all the concerned authorities who are concerned with the power projects, big dams, multi-purpose projects. I have written to each one of them that hereafter we should be allowed to ask the foreign contractors to use our equipment and if any spare parts are required we would be able to supply them."

2.25 Asked as to when did the CMD, BEML wrote to Public Undertakings/concerned authorities in this regard, the CMD, BEML stated in evidence that "About two months ago." When pointed out that this could have been done much earlier, the witness stated:—

"Well, for that, we will take up the matter with foreign corporates....."

2.26 In regard to the delay in production of heavy vehicles for the Army as envisaged in the Corporate Plan, the Committee desired to know whether the Army was consulted at the time of approval of the production plan in respect of these vehicles. The CMD, BEML during evidence stated as follows:—

"The whole process of purchase of sophisticated equipment like heavy duty trucks etc. by the Army may be divided

into three stages. One is the conceptual stage; second is when specifications are drawn; GSQR as it is called in army jargon, after which trials and tests are carried out on the equipment. The third stage is when bidding and supplying of equipment is involved. At the conceptual stage, normally an organization like ours is not involved. At the second stage, when GSQR has been issued, we are definitely involved. However, even at this stage, there is no commitment regarding quantities or the time frame. In fact, this is equally valid for various other customers also. However, important customers like army do involve us, while the tests and trials are carried out. The third stage is of ordering and supplying the equipment. At that stage, definitely, the orders are placed through the Ministry and we are fully involved at that stage."

2.27 In this connection, the representative of BEML during evidence also stated:—

"As far as the Defence Ministry is concerned, from the beginning we have been aware of the requirement of heavy vehicles. They do identify BEML as one agency in the country which should be in a position to take up this type of production. To that extent, our company has been involved by the Army authorities in terms of various trials that have been conducted with heavy duty vehicles like MAN.....The Army authorities were experimenting with various types of heavy duty vehicles. They have not been able to come to a definite conclusion as to which is the particular type of vehicle in which they would be interested. So, on an *ad hoc* basis, now and then, they have been importing. At one time we were asked to consider a possible collaboration with MAN, which was also not proceeded with because there was lack of decision in relation to the final equipment. Independently the Government went and obtained, and has been obtaining, from Czechoslovakia a 12-tonne capacity truck which has been strandardised as one of the models of heavy duty trucks in the Indian Army. The Defence Ministry, as long as in 1983, told the Czechoslovakian authorities that they will not be permitted to continue to sell their equipment just by exporting it to India, and that they will have to manufacture it locally in collaboration with some party in India. Since 1983, we have been in dialogue with them for the manufacture of this particular equipment. It

is only during 1986 that final conclusions on the terms and conditions of the collaboration could be fructified. That is one reason for taking up the production during the current year. In the mean time, since the decision in relation to the type of vehicle to be manufactured was getting delayed due to some factor or the other, we thought that through our R&D we would make an attempt to develop a prototype of our own. That was decided only in 1984. We decided this because infrastructure in the country for attempting development of such heavy duty vehicles was available. So, through our R&D, we were able to put through a prototype."

2.28 When the Committee pointed out that being aware of the GSQR of the Army as to why the Company could not develop the heavy vehicles required by them and allowed their imports in 1983, the representative of the BEML stated during evidence:—

"Regarding the specific query about 45 equipments which had been imported by the Army, what are called heavy duty recovery vehicles, and not heavy duty trucks which we have put in the corporate plan. The heavy duty recovery vehicle is one of the variants, and the exact model in which the Army is finally interested, has not yet been finalized by the Army. As an interim measure, they have made some import from Germany. They are now evaluating another heavy duty recovery vehicle which is part and parcel of the collaboration agreement with Czechoslovakia for manufacture, provided that this model is finally accepted by the Army. But since the Army has not finalized its decision on the model and type, they have, as an interim measure. done the import."

2.29 In this connection, the Secretary, Department of Defence Production and Supplies also stated during evidence:—

"The heavy vehicle referred to in the Audit Report and the number of imported vehicles in 1983, as far as I have been able to make out, pertain to two different categories. The heavy vehicle which the BEML wanted to introduce was prime mover while the vehicle imported was heavy duty recovery vehicle. The heavy vehicle which BEML wanted to introduce and developed as per GSQR sometimes in 1984 was given to the defence services in 1984 for their evaluation and trials. The results of those trials are yet to be received by us."

2.30 As regards meeting the requirements of the Army, the Committee enquired as to how did they meet their requirement after 1983. The CMD, BEML stated during evidence:—

> "Till today they are importing. Hereafter, on the understanding between the Indian Army and BEML, through the Defence Department they are not allowed to import the vehicles."

2.31 Asked about the reasons for delay in evaluation and trial of the heavy vehicles given to the Army by BEML in 1984, the Secretary of the Ministry informed during evidence:—

> "I have personally discussed the progress of evaluation with the then Chief, the present Chief who was then Vice-Chief and the concerned Principal Staff Officer who is really monitoring the trials. What they said was right also to a considerable extent. They said that out of the total period taken for the trials so many months are attributable to the company for carrying out rectification or replacement of components during the process of trial. When you develop a new product, some components may fail and it does take time to change the components. The trials do take time for which the users also have their own limitation. The manufacturers also have certain problems. That we have not formally pursued the matter does not mean that we have not been able to pursue, because we do not formalise our interaction. It is more like a family affair."

2.32 When enquired as to how much time will be taken to evaluate the vehicles given by the Company for trials, the witness stated:-

> "The first time the question of futuristic vehicles for the army was initiated in 1972 and now we are in 1988. But final view has not yet emerged. These are matters which involve huge financial implications, change in technology, change in pattern, and fuel efficiency. We have recently also set up a licensed production for some special purpose vehicles, which were earlier being imported. The Defence Minister is going to inaugurate the delivery of those vehicles to the Army shortly."

CHAPTER III

PROJECT IMPLEMENTATION

A. Mysore Project

3.1 It has been reported by Audit that the restructuring of production facilities in the existing factory at KGF, so as to limit it to the production of only crawler equipment and setting up of a new factory at Mysore at an estimated cost of Rs. 61 crores to commence manufacture of wheeled equipment from 1982, were among the strategies under the Corporate Plan. The new factory set up at Mysore, however, started commercial production only from 1985-86 and 174 numbers of equipment were planned for production during that year, as against 375 envisaged in the Corporate Plan. The actual production during 1985-86 and 1986-87 was, however, 170 and 402 equipments respectively. As against the estimated cost of Rs. 61 crores for Mysore Project, actual expenditure upto 1985-86 was Rs. 9.43 crores only.

3.2 The Committee enquired as to how was it possible to commence production of wheeled equipment in the new factory at Mysore in 1985-86 by incurring only about 15 per cent of the estimated cost. The CMD, BEML during evidence stated:

> "We did not complete the project worth Rs. 61 crores at Mysore because we found that there was not a sufficient market demand at all, but in order to rationalise our operations, we decided that we would continue to have the track type of equipment consisting of excavators, bulldozers etc. at KGF and we would shift the production of wheeled equipment to Mysore. We also decided that at KGF we would retain the production of the sophisticated aggregates like transmissions, hydraulics etc. from where we could feed not only the production divisions at KGF but also Mysore and Bangalore divisions. Secondly, we decided to establish the factory at Mysore by making use of the funds which were available on small, small projects and achieve our objective of smooth transfer of production from KGF to Mysore and thereby rationalise our ope-

rations. Upto 1986-87, we have spent Rs. 20 crores and produced in 1986-87 in Mysore 402 pieces of dump trucks (wheeled equipment) worth Rs. 167.46 crores. We have been able to effect a smooth transfer from KGF to Mysore, with encouraging turnover."

3.3 Subsequently in a written note, the BEML informed the Committee that the Company was able to establish a new factory at Mysore with an investment of Rs. 20.72 crores utilising the existing project sanctions.

3.4 Asked about the transport charges incurred on the transfer of complete knock downs from KGF to Mysore during 1985-86 and 1986-87, the CMD, BEML during evidence stated:—

"Regarding transport charges, during the year 1985-86, we incurred Rs. 4.66 lakhs and during the year 1986-87, Rs. 25.39 lakhs."

3.5 When the Committee pointed out that the transport charges were quite substantial, the witness explained:—

"Compared to the turn over of Rs. 167 crores, it is not much. It would not be justifiable for us to create additional and separate machinery at Mysore to produce comparatively smaller quantities of hydraulic equipment which we want to consolidate and concentrate at KGF, thereby achieving the advantages of quantities, volume of production and also the expertise which we have developed at the KGF. We wanted to rationalise our production, keeping in mind that in future we want to have wheeled type of equipment which consists of dump trucks, loaders, motor graders, scrapers, etc. On the other hand, we also produce excavators, bulldozers, etc. and we are going to produce in future some more type of equipment for which we thought it would be better for the company to have one type of products at KGF and other types at Mysore."

3.6 On the question of creating new facilities for manufacturing wheeled equipment at Mysore by transporting CKD's (Complete Knock-Downs) from KGF, the Committee enquired as to why these facilities were created when it was possible to manufacture the

equipment at KGF itself. In reply, the representative of BEML during evidence stated as follows:—

> "While drawing the Corporate Plan, we had taken note of the need in future for bifurcating the facilities from KGF to another factory at Mysore where there are a lot of growth prospects. We thought that at one place if we start doing it, it will not be a streamlining operation, because the number of workers will be around ten to twelve thousand at one place."

3.7 Asked whether the transporting the CKD's from KGF to Mysore would increase the cost of production of equipments, the witness stated:—

> "This is not more than 0.01 per cent of the cost of production. For example we take certain engines to KGF all the way from Pune, just because Pune is situated at such a far away distance, we cannot think of not getting the engines from Pune, just because Pune is situated at such a far but important factor. That is the shortage of water at KGF. At one stage we had a real problem and we were afraid that the factory would have to be closed. But luckily rains came and we were saved. Keeping all these in mind only, we launched this bifurcation at Mysore. In fact, we need a little commendation for the work we had done."

3.8 In regard to restructuring of production facilities in the existing factory at KGF, the Committee desired to know as to when the Company expected to complete it. The CMD of BEML during evidence stated:—

> "After reviewing and reassessing our market potential and market conditions, we felt that there was no need to restructure in full measure the facilities at KGF. We have only rationalised it. The production of sophisticated amenities like transmission, hydraulics, is to be concentrated at KGF and we shifted the wheeled equipment to Mysore. Out of the wheeled equipment, we have shifted only the rear dump trucks."

3.9 Subsequently, giving details of restructuring of KGF Factory, the BEML in a written note have stated that the restructuring of facilities at KGF Factory envisaged in the Corporate Plan comprised of the following:

> (a) An additional investment of Rs. 10 crores for increasing the capacity from 650 equipment to 870 equipment including introduction of D 355 Dozer in the production line.

(b) Centralising the production of Crawler equipment at KGF Complex.

(c) Centralising the production of Axles/Transmissions at KGF Complex.

(d) Setting up of production facilities for Transmission at KGF Complex.

(e) Invest Rs. 18 crores for additional production of Crawler equipment and Transmissions.

The production capacity has since been increased from 650 to 890 equipment by making an additional investment of Rs. 8 crores towards EM Project (completed in 1983-84) and Rs. 4.10 crores towards D 355 Project (completed in 1985-86). All the Crawler equipment production has been centralised at EM Factory. The production of Transmissions, Axles/Final Drive Assemblies and Hydraulics has been centralised at KGF.

Investment of Rs. 18 crores for additional production of Crawler equipment and Transmissions has not been made keeping in view the demand pattern for these equipments.

A separate project at an investment of Rs. 30.90 crores is also being implemented at KGF for the manufacture of Transmissions and allied assemblies of Infantry Combat Vehicles required by the Army.

3.10 Regarding the delay in setting up the new factory at Mysore the Management intimated Audit in April 1985 that "Since due to recessionary trends in the International field of earthmoving industry and the slow growth of the national economy the market demand pattern did not behave in consonance with the expectations, it was considered prudent to adopt a cautious and careful approach lest the Company is burdened with a heavy unutilised capacity."

3.11 The Committee wanted to know when did the recessionary trends in the international field of earthmoving industry and slow growth of national economy set in. The CMD, BEML, stated during evidence that, "Sir, the recessionary trend was noticed in the begining of 1983...." Elaborating in this regard, the BEML in a written note furnished after evidence have stated that the recessionary trend in the International field of earthmoving industry is a part of the general recession in the entire Engineering Industry, world-wide, which was essentially due to oil crisis of 1979. In this context, the following extract from the Economic Survey—1982-83 published in the Commerce Weekly dated 5th

March, 1983 is relevant. "For the world economy, the last few years have been extremely difficult. Unemployment in industrial countries has reached unprecedented levels and growth rates have declined to near zero levels. Until lately, the rates of inflation were also high. The oil importing countries have been the most severely affected by these and other developments. There current account deficits, which had reached alarming levels, after the escalation in prices of oil in 1979, have further deteriorated because of a decline in the prices of their exports. Development plans in many countries have had to be drastically curtailed. Sustained price stability has proved elusive, and growth rates have declined." An extract from the 1983 Annual Report of M/s. Dresser's USA who are one of the internationally renowned manufacturers of Heavy Engineering Equipments is reproduced below:

> "World markets for mining and construction equipment were adversely affected in 1983 by depressed economic activity and a retrenchment in large-scale energy related projects. In some markets, conditions were worst since the recession of 1930's due to reduced demand and severe price discount. Also, export sales were hit by the weakened financial condition of the major oil producing and developing countries, strong US Dollar and aggressive foreign competition"

3.12 When enquired as to what in their opinion were the reasons for the restrictive growth rate in the demand for Earthmoving equipments, the Secretary of the Ministry stated during evidence:

> "Sir, the growth rate in the Indian engineering industry in the recent past has not been up to expectations. There has been a recession both in the internal growth of demand as well as exports so far as India is concerned. So, general recession in the Engineering industry can be one reason for the restricted growth in the demand for earth moving equipment. Secondly, the outlays in the sectors may not be available in adequate measure for purchase of such equipment. For example, in the Irrigation Department, the outlay has been concentrated on projects in hand rather than taking up new projects, or the outlay is utilised more on other services. This could be another reason. The growth of the sectors in which this equipment is used would be another factor. In short, first, general recession in the engineering industry, secondly, the outlays available to the customers and their priorities and thirdly, the financial position of the Government from

time to time may be in terms of foreign exchange or may be in terms of budgetary allocations or in terms of priorities between core sectors and non-core sectors, but the fact seems to have been that the growth in the sector has been affected and the general reasons to me appear to be I am not an economist—general recession in the engineering industry, lack of adequate demand in the sectors in which this equipment is used, and the financial constraints in those sectors as well as the overall budgetary position. For example, to substantiate my proposition, I would submit the current year's position. Because of the drought, because of the need to control deficit financing, economies are being effected by all Ministries and all Departments and all sectors. Therefore, orders from our customers are not forthcoming. So, it will affect, the demand."

3.13 Asked whether the trends of recession and slow growth of economy had since been reversed and if so, would they justify the present pace of activity in the new factory. The BEML in a written note have stated that no appreciable growth in the market demand has been noticed. The world economy continues to be affected by the recession. The growth in the National economy also continues to be sluggish. As regards the pace of activity in the new factory it may be mentioned that there is no cause for anxiety as the management had already curtailed substantially the investment originally envisaged at Mysore. The company's plan for creation of new facilities have always been dovetailed in relation to the growth pattern for Earth Moving and other equipments in the range of Company's production capability. The emphasis of the Government in the expansion of the Coal Sector is primarily the justification for the present pace of activity in the Company.

B. Earth Moving Equipment Project

3.14 According to Audit, Government appointed (October 1964) A. T. Kearney International Inc., a U.S. firm of Consultants, to prepare an integrated Project Report for an earth-moving equipment factory. Based on the Consultant's Report (May 1965), Government approved (July 1965) the setting up of an integrated project for earthmoving equipment for the manufacture of 1075 wheeled equipments and crawler tractors every year. The estimated capital outlay was Rs. 19.56 crores, which was revised to Rs. 25.33 crores in June 1967 owing to rise in prices, devaluation of Rupee and difficulties in securing foreign exchange. In June 1968, the estimate was reduced to Rs. 22.69 crores based on recommendations of the Study

Group set up by the Government. The number of equipment to be manufactured was reduced from 1075 to 800 and facilities likely to be available in Heavy Vehicles Factory at Avadi, Madras and in Mazagon Dock Limited were also proposed to be utilised for some years, till the Company built up its own facilities. Government approved the estimate in July/August, 1968.

3.15 In September 1969, Government also approved the setting up of a Project for the manufacture of 50 Tigar 120 SK wheeled tractors per annum, in collaboration with Radoje Dakic of Yugoslavia, subject to the condition that the total expenditure on balancing machinery should not exceed Rs. 15 lakhs, in view of the uncertainty regarding sustained demand.

13.16 In August, 1974, the Company conducted a detailed review of additional facilities required for production of 850 numbers of equipment of 9 models for the revised product-mix. As it was found that under the existing sanction together with 10 per cent extra authorised by the Board, it would at best be able to attain production of only 650 numbers of equipment with an average indigenous content of 78 per cent, Government was approached in June 1975 for sanction of an additional expenditure of Rs. 8 crores for the Earth Mover Project (excluding the expenditure sanctioned for Tigar Tractors). The additional facilities were necessitated due to (a) non-availability of the expected assistance from Heavy Vehicles Factory, Avadi and Mazagon Dock Limited, (b) increase in the range of models, (c) the necessity of extra machining facility in view of poor quality of castings, (d) higher burden on plant capacity due to rationalisation of specifications and sizes of raw materials, (e) provision of plant and machinery for development work, (f) cranes/material handling equipment and service facilities for Commercial Divisions not envisaged earlier and (g) rise in prices since 1967 due to increase in customs tariff and inflationary trends. Government approved an additional outlay of Rs. 7.99 crores in June 1978. Subsequently, another review (December 1980) showed that the earlier sanction (which included provision for material handling facilities) did not cater to the requirements of critical material handling facilities. The Board approved (December 1980) a further additional expenditure of Rs. 60 lakhs on this account, thereby bringing the overall Earth Mover Project sanction to Rs. 31.28 crores (excluding the expenditure of Rs. 15 lakhs sanctioned for Tigar Tractors).

3.17 The Audit have also reported that the Company set up production facilities progressively at K.G.F. to keep pace with requirements, phasing out the capital investment over a period of 19 years from 1965-66 to 1983-84. The expenditure incurred to end of March

1984 was Rs. 31.29 crores. The U.S. Consultants suggested (May 1965) that a more detailed and a specific programme be drawn up for implementing the Earth Mover Project. But the Company neither prepared a detailed and a specific programme nor laid down a time schedule for implementation of the Project so as to monitor the implementation on the basis of accepted techniques such as PERT and CPM. The fact, however, remained that no time schedule was drawn up by the Company for implementing the Project and recognised monitoring techniques such as PERT/CPM were not adopted to watch its implementation.

3.18 The Committee enquired about the reasons for not drawing up any time schedule for implementation of the Earth Moving Equipment Project. The CMD, BEML during evidence stated:

> "We have gone through the records and we find that the situation was very fluid both from the point of view of market demand and also from the point of view of availability of resources....."

3.19 Elaborating about the reasons, the BEML in a written note have stated that the following are the reasons for not drawing up any schedule for implementation of the Earth Mover Project:

(i) Demand for Earthmoving equipment:—

> At the time of initial approval for the project, the posposal was to establish facilities for manufacture of 1075 earthing equipment per year. However, the actual demand for earthmoving equipment was not anywhere near this figure. In fact, the total number of earthmoving equipment produced by the Company upto 1974-75 was only 3210. Hence, Company had to carefully weigh the options before entering into any definite commitment which in turn would have facilitated drawing up of schedule for completion of the project; but created idle facility.

(ii) Product-mix:—

> The product-mix for which the capacity was proposed to be created was changing from time to time with each pro-

ject revision as could be seen from the following table:—

	July, 1965	July/Aug. 1968	Sept. 1969	June, 1975
Haulpak LW 50	275	120	120	20
LW 35				150
LW 25				50
Scraper	150	80	80	60
Motor Grader	150	100	100	50
Wheeled Loader/Tigar	..	..	50	50
Crawler Tractor				
D50—15	..	..	..	200
D80—12	300	300	300	150
D120—18	200	200	200	120
TOTAL	1075	800	850	850

In view of the above and also in view of fact that the demand was not growing as anticipated, Company had to perforce go slow in the creation of facilities. Although no project should be implemented without having any time schedule for implementation, in this particular case the execution of the project in phases and to the extent necessary and required for meeting the demand has helped the Company in avoiding building up of idle capacity. But by resorting to close monitoring of progress of the project, Company was able to create facilities for manufacture of a variety of models of earthmoving equipment which could meet not only the domestic demand but also to a certain extent overseas market.

(iii) Resources Crunch:

In the initial years, the country faced the problem of foreign exchange availability, devaluation of rupee and other recessionary trends. Consequently, Company was constantly required to review the requirement of the project and bring down not only the capital outlay but also the foreign exchange component thereof. To a certain extent, the uncertainties involved in the availability of

foreign exchange and the difficulty in getting the sanction also contributed for the Company not drawing up specific schedule of implementation.

(iv) Necessity for keeping the capital outlay to as low a figure as possible:

In order to overcome the constraints in resources, Company was also compelled to review the facilities likely to be available with other public sector undertakings such as, Heavy Vehicles Factory, Avadi and Mazagon Dock Ltd. Attempt was also made for farming out the requirement on firms which have already been established/likely to be established. As a result Company could not draw any definite schedule for implementation of the project.

Under the above circumstances, the sanction for the EM Project has been available in a piece-meal fashion. The consequent phasing of capital expenditure has been kept in pace with the actual growth in demand and has resulted in the Company being in a profitable position right through the years.

3.20 In view of the review of the American consultants Report by the Company and Government, thereby reducing the number of equipments to be manufactured by BEML from 1075 to 800 in 1968, the Committee enquired whether the Report given by American Consultants was realistic. The representative of BEML during evidence stated:

"We are not saying, it is unrealistic. When it was drawn up, our people were also associated a little because no foreign consultancy can do any report without involving our people also. But the problem was, when it came for consideration, a lot of changes were made. We had not luckily rushed with the project and with investment. One such particular equipment is now selling at 1/10 of its value. Probably, by phasing it out, we have derived some advantage. At least, some off shoot is there. It was realistic. It was definitely well thought-out report. But because of the devaluation, the Government, had to necessarily ask us whether we can prune down the cost. So, it took some time. First we asked for Rs. 3 crores. Later on, we had to go for another Rs. 8 crores because the basic equipment was to be inducted. That was incidental and managed from the internal resources of the company. We have not taken any equity for that purpose."

3.21 Asked as to why the Ministry had not insisted upon drawing up of a time schedule for implementation of the Earth Mover Project, the Secretary of the Ministry during evidence stated:—

> "I find that there have been two reasons for not insisting on a time schedule. Firstly, this project was sanctioned piecemeal. To give you the exact dates, first sanction was issued on 21st April, 1964 for an amount of Rs. 10.50 crores. Next sanction was issued on 16th July 1965 for an amount of Rs. 19.56 crores which also mentioned that project loan from the EXIM bank has been requested for. The first phase of civil works were approved on 28th August, 1966. Procurement of machinery and plant for first phase was approved on 5th September 1966. Taking up of industrial water supply was approved on 23rd December, 1966. Civil works of a total cost of Rs. 3.34 crores were approved on 7th July. In August 1968 the project cost was revised to 22.69 crores and on 23rd June 1978 a further revised cost of Rs. 30.68 crores was approved."

3.22 As regards monitoring of the implementation of this project, the Committee enquired as to why the recognised monitoring techniques like PERT/CPM were not adopted. The CMD, BEML during evidence stated:

> "PERT and CPM techniques were not frequently used in those days. They were lesser known and they are of recent use in India. I can assure you, Mr. Chairman and the other hon. Members that all projects are now being monitored according to the PERT, CPM and other techniques."

3.23 In this connection, the Secretary of the Ministry also stated during evidence:

> "I am not ruling out the possibility of a PERT monitoring mechanism even on piecemeal sanction, but its utility and its effectiveness in my opinion is bound to be very poor if the project requirements are not sanctioned at one go. One does not know what will be the civil works and the sources of financing. So, in such a fluid situation preparing a PERT network and CPM network is not a satisfactory solution. This is one point. Secondly, I wanted to submit that during those days when this project was sanctioned or initiated in the Government or in the Government undertakings, either the awareness of these techniques or

the desirability of introduction of such techniques did not exist. For the first time the BPE issued instructions on this vide their circular dated 30th March, 1970. Before that, I have not been able to find out any advice or instruction from the BPE to the public sector undertakings to use these techniques for monitoring the progress of projects. Thirdly, though these are improved and desirable techniques, it would be difficult for me to concede that in the absence of these techniques you cannot have a project implementation in the scheduled time."

3.24 The Committee enquired about the machinery in the Ministry for monitoring the implementation of projects, the witness stated:

"As regards the mechanism which the Ministry has, particularly in the recent years, what we do now is that for all projects costing Rs. 20 crores or more which go to the Cabinet Committees for their approval, we get the monthly progress reports both in terms of physical targets and financial targets. They come to us to say what has been the cumulative expenditure, what has been the expenditure during the month vis-a-vis the targets. This we get every month for all projects in our Department, costing Rs. 20 crores or more. These are seen and analysed by me and I submit them to State Minister and Cabinet Minister and whatever observations are made, that are passed on to the company. In addition to the monthly report, we get quarterly report also on similar line, with a little more detailed informations such as break-up of plant & machinery component into four categories, preparation of specifications, inviting of tenders, placement of orders and commissioning, what are the bottlenecks, what is the help needed from the Ministry or from other sources. Apart from being analysed separately, they are also discussed in the quarterly performance review meeting. In addition to that, as a process of this scrutiny, if I or J.S. comes across something of an urgent nature, we discuss it personally with the Chief Executive either on telephone or when he comes and meets us. We may say to him, this is an area which is lagging behind and ask him to look into those things. And then, both the Joint Secretaries on the Board also review that. They also contribute to the best of their ability for effective moni-

toring. The Minister himself reviewed all the projects of the Department of Defence Production, for the period ending 30th September, 1987 in a uniform format. I put up for the consideration and perusal of the Minister, the progress of the projects in terms of time schedule and cost. Some had slippages; some had problems beyond their control. Some had internal management problem, and we try our best and eliminate or reduce, at least, the adverse effect of any slippages."

3.25 Asked when these formats were introduced, the witness stated that, "These formats we have started about more than 18 months back. Earlier they were being reviewed on quarterly basis."

3.26 The Company (July 1983) and the Ministry (March 1984) had intimated Audit that constant monitoring of the project was effected through annual capital budgets and revised estimates. The Committee enquired about the concept of constant monitoring. The Secretary of the Ministry during evidence stated:

"I would like to submit that, I emphasised this thrust. I am not eliminating the other mechanism. For example, the other mechanism, was the capital budget. But it is primarily a mechanism which is not self-contained. It says, 'I need so much of money for financing my capital budget and the sanctioned cost was so much. I spent so much till the end of the last financial year; I have spent so much till the last previous two months. I need so much of budgetary support for financing these projects in the next financial year.' At that time, it does not give us the detailed progress in terms of physical input-output."

3.27 When pointed out that monitoring through capital budgeting was only fulfilling the requirement of financial needs of the Company, the witness stated:

"It is a part of monitoring also, for the simple reason, the cash flow of the project in gestation period—first year, you would spent 10 per cent, second year 40 per cent, third year 60 per cent and so on. At that time, by scrutinising the actual expenditure, one is able to find out whether he is going as per the cash flow statement or not. But that is not a comprehensive analysis. But that is

one part. The monthly report is another part. Quarterly report is another part. Discussion among the Board of Directors about the progress made is another part. Site visits either by the Minister or Joint Secretary or Secretary or Chairman is another part; and with the result. I can only submit to the hon. Members that while I would never say, we have resolved all the problems or ensured that all the projects come up in time. But certainly we notice considerable improvement in the awareness at the lower levels in the execution of the project with greater expedition and more consciousness about costs. But there are certain things which are not within the control of either the project management or may be of the Department. For example, I need foreign exchange to place an order and open LC for import of certain equipment. If foreign exchange to place an order and open LC for import of certain equipment is not released, we can only go on discussing, persuading the Finance Ministry. They may have overall constraints regarding foreign exchange reserves of the country as a whole. This is something beyond our control."

3.28 Asked about the monitoring of physical targets by the Ministry, the witness added:—

"It is only one component. Therefore, we have this mechanism of physical and financial progress vis-a-vis targets on monthly and quarterly basis. Earlier, it was being done on a quarterly basis in the progress review meeting in the prescribed format, at the level of PM, when he was looking after Defence. When Raksha Mantri and State Minister are there, they see it on monthly and quarterly basis. PM takes the quarterly review himself. So, the thrust of emphasis has been shifted to micro level which has resulted in awareness and improvement. Some companies have the reputation of completing all the projects always within time. This company is one of them. They are running two projects now and they are ahead of schedule. HAL on, the whole, for example also works within the time schedule and cost. On the other hand, there are certain companies which have not done well. It depends on ethos, environment, historical problems. There has to be a fundamental restructuring which takes time. We have all sorts of situation."

3.29 When the Committee pointed out the modern techniques like PERT/CPM would be useful for monitoring the various projects. The Secretary of the Ministry admitted in evidence:

> "I entirely agree. I would not dispute the importance and contribution of these techniques to any management practice and in all such big new projects, the companies do prepare a network which is monitored by the Project Management Board or a streering committee but such a chart can be prepared only when all inputs are available. Otherwise, it could not be worthwhile. At that time, the overall awareness in India of all these techniques was not there. Instructions were issued much after the project had been sanctioned."

C. Captive Steel Foundry Project

3.30 According to Audit, in the context of inadequacy of existing indigenous sources for supply of castings and to increase production of equipment with higher indigenous content, a Project Report was prepared (August 1972), envisaging a capital outlay of Rs. 355.75 lakhs (revised to Rs. 599.17 lakhs in June 1975), for establishing a captive foundry with an installed capacity of 3600 tonnes per annum, capable of being further augmented by 1000 tonnes per annum after providing additional marginal facilities. The cost per tonne of in-house manufacture of castings and forgings was estimated at Rs. 10,081, Rs. 9,074 and Rs. 8,470 at capacity utilisation of 60 per cent, 80 per cent and 100 per cent respectively as against the estimated purchase price of Rs. 11,238 resulting in cost advantage to the Company. The actual expenditure incurred to end of 1974-75 was only Rs. 11.73 lakhs on the pattern shop building meant for the foundry, which is, however, being used for housing the Hydraulic Shop catering to R&D activities.

3.31 Government of Karnataka proposed in July 1975 to entrust to the Company a private foundry run by Vignyan Industries Limited (VIL), Tarikere, set up in 1970 and remaining closed since December, 1974 because of mismanagement and shortage of funds. The estimated production capacity of VIL, was 1500 tonnes of steel castings per annum subject to rehabilitation and augmentation of plant and machinery (estimated cost Rs. 106 lakhs). The VIL was rehabilitated with the assistance of financial institutions and became a deemed Government Company under Section 619(B) of the Companies Act, 1956 with effect from January 1975; it resumed working from November, 1975.

3.32 Government of India, however, approved (April 1983) conversion of VIL into a subsidiary of the Company by purchase of shares to the extent of at least 75 per cent of the total shareholding at an approximate cost of Rs. 16.45 lakhs. During October 1984 to March 1985, the Company purchased 9810 preference shares and 24511 equity shares of Rs. 100 each (75.48 per cent of total paid-up capital) for Rs. 16.51 lakhs.

3.33 Thus as per Audit, proposal to establish a captive foundry took more than a decade to materialise. Meanwhile the Company purchased from open market during 1974-75 to 1983-84 steel castings to the extent of 14,881 tonnes (including 2763 tonnes from VIL) at the average purchase price of Rs. 13,375 per tonne. Thus, due to delay in either establishing a captive foundry or taking over of VIL, the expected cost advantage was lost by the Company.

3.34 The Committee observed that the Company had envisaged as early as 1972 the need for 3600 tonnes of castings per annum. The actual consumption in the 10 years from 1974-75 to 1983-84 was only 14881 tonnes i.e. an average of less than 1500 tonnes per annum. In this connection, the Committee desired to know about the basis for assumption of 3600 tonnes per annum of consumption. The CMD, BEML during evidence stated:—

> "Taking an average of 1500 tonnes over a long period is not correct. What was envisaged was the progressive development, progressive requirement or an increase in requirement and castings of 3600 tonnes. That has been achieved in the year 1983-84 and subsequently we have been using castings to the tune of 4000 and odd tonnes and when this 3600 tonnes was mentioned in the report, it was based on the 85 per cent envisaged level of 850 pieces of equipment and 400 railway coaches."

Elaborating, the representative of BEML added:—

> "When you think of setting up a foundry, a lot of factors have to be taken into consideration such as what should be the investment, and the specific time required for setting up a foundry, what sort of equipment should be obtained, etc. The fact that the present consumption pattern which has stabilised over 4000 tonnes/annum during the last 2 years shows that the assessment for the project has been correct. The average figure taken for the last 10 years

gives a feeling that our estimates of the project was wrong. 3,600 tonnes/year is our stabilised requirement and this steady requirement of steel casting is proved by the fact that we are now buying more than 4,500 tonnes of steel casting per year."

3.35 In this connection, subsequently in a written note, the BEML have stated that the need for 3600 MT of castings per annum was envisaged in early 1972 based on the production level of 850 earth-moving equipment (at stabilisation, level) land also for a production of 400 Railcoaches per annum. This figure is for planning a Captive Foundry Project and this level of output from a new foundry can be achieved only on stabilisation of the foundry itself. The figure quoted is cumulative for a period of 10 years upto 1983-84 and the resultant average is not a yard stick for comparison. The requirement of the steel castings by BEML has already exceeded the capacity envisaged in 1972 as can be seen from the following table:

Year	Consumption (in MTs)
1984-85	3700
1985-86	4100
1986-87	4100

3.36 When the Committee enquired as to what considerations weighed with the company for buying a foundry having a capacity of only 1500 tonnes/annum castings much less than the estimated requirement of 3600 tonnes/annum of the Company. The representative of BEML during evidence stated:

"It has not got only 1500. The installed capacity of that foundry is around 3000 tonnes of steel castings. But we know that our requirement will be even more than that and that was going to be our mainstay supplemented by other established sources in the country."

Explaining further the witness added:—

"I want to make a distinction between the capacity and what they are actually producing. When you talk of taking over a foundry we talk in terms of its capacity. There it is still 3,000 tonnes. But when proper power is given that foundry even today is capable of producing 3,000 tonnes."

3.37 Asked as to how had the Company satisfied itself that the production capacity of M/s. VIL would take care of the Company's requirements, the CMD, BEML stated during evidence:—

> "When we took over, production was less than 1500 tonnes. It was of the order of 1,000 tonnes, or even less. We have based this figure of 3,000 tonnes on the main equipment, *viz.* arc furnace. Surely, in order to achieve a 3,000-tonne capacity, besides the requirement of adequate quantity of electricity supply—which is a must for any foundry plant—it is very essential for us to put in balancing facilities at different stages."

3.38 Elaborating in this regard, the BEML in a written note have stated that the licenced capacity of VIL is 3000 MA of steel castings. VIL had a 6 Ton Electric Arc Furnance, which if efficiently used for three shift operation, can yield saleable castings to this extent. Before considering the take over of VIL, an Expert Committee had studied the condition of the plant and machinery at VIL and estimated that with an expenditure of Rs. 106 lakhs, the foundry can be rehabilitated to yield 1500 MT of steel castings per year. BEML planned to supplement this production by continuing to procure from other established sources. The Committee noted from the Annual Report (1985-86) of BEML that M/s. Vignyan Industries Ltd. was able to operate only at 20 per cent of its capacity due to shortage of power and hence continued to incure losses. To end of 1985-86 the subsidiary incurred a loss of Rs. 512.39 lakhs as against the paid up capital of Rs. 45.47 lakhs. When enquired about the reasons for purchasing such a losing concern, the representative of BEML stated during evidence:—

> "The VIL has very good potential... This is only due to the power cut. It was not really thought of in such a big way The State Government were still persuing to make an exemption because that was not requiring very high power. We will make up if the delivery of power is good and in fact the power is a country wide problem more so in Karnataka. If that problem is sorted out then we will be able to achieve the full capacity. Otherwise the capacity is 3000 and we are getting it on a very low investment. If only power was not a problem we would have made it viable in the matter of 4, 5 or 6 years back. Right now because of the power it is able to produce 1,200 and 1,300 tonnes only."

3.39 When asked about the efforts made by the Company to obtain adequate power for M/s. VIL, the CMD, BEML stated during evidence:—

> "Regarding power in Karnataka, I want to say something. The situation is well-known that there is an acute shortage of power. Regarding our Vignyan Industries Ltd. (VIL), during the last few years. I had myself approached the Chief Minister. I have approached the Chief Secretary and tht Chairman of the Electricity Board. We have also taken up the matter through our Minister—hon. Raksha Rajya Mantri. He had also wrote to the Chief Minister. Subsequently, they have agreed to give a little bit more based upon the experiment which was conducted in July—August, 1987. What we were getting earlier was something like 2.6 lakhs Unit per month, now they have agreed to give a little over 4 lakh units per month, while our minimum requirement is of the order of 6-6½ lakh units per month before making the unit viable."

3.40 As regards cost of production of castings produced by M/s. Vignyan Industries Ltd., the Committee wanted to know as to whether the Company had estimated the cost of production of castings in M/s. VIL for comparing the same with purchase price before deciding upon its take over. In reply, the CMD, BEML stated during evidence:—

> "The purchase price compares very favourably because in those days when we prepared the Report, we were paying the vendors @Rs. 15 per kg. while the projected cost in VIL was Rs. 13.86 per kg. 13.86 versus Rs. 15/- per kg. which we were paying in the market. This is what we have projected at the time of take over."

3.41 On the same subject, the representative of BEML also elaborated:—

> "I would like to clarify and elaborate a little. The question here is, when we have made our report to the Government for take over, what was the cost we have anticipated etc. At that time, we were expecting that full power will be available. It can straightaway produce 2000 tonnes which will make it really viable and in 5-6 years time, all the old losses will be wiped out. So this Rs. 13.86, which the Chairman had mentioned was in the context of before deciding to take over. So this was the estimate.

But subsequently as we have mentioned earlier, the power was not available because the state was passing through a very bad power shortage. So against 2000 and odd tonnes which we thought of, we could produce much less from that unit. So last year, it had produced only 1000 tonnes. It is because they have re-assessed or given less power. This year we may produce 1400 or 1500 tonnes, but it is still under loss. Their cost will be higher than what we are paying them. But as a policy, we never paid them anything more than what we have paid to the competitor even in the private sector. Simply because their costs are higher, we are not paying them. The company itself is a subsidiary and they will show that loss, we are not going to foot the bill."

3.42 The Committee noted that the loss to M/s. VIL during the years 1985-86 and 1986-87 was respectively Rs. 87.24 lakhs and Rs. 57.34 lakhs. In view of heavy losses incurred by the M/s. VIL, the Committee enquired as to how do the actual cost of castings from M/s. VIL compare with those purchased from outside sources. The representative of BEML, while comparing the prices paid for castings to M/s. VIL vis-a-vis other outside sources stated:—

"I would say because I am paying only to what I paid to other competitors. That is why this loss. Otherwise, there would not be any loss. It is treated as a separate company. It is a subsidiary company and not wholly owned by us. We have majority of shareholdings. I treat it as a different company. I do not pay him more than I pay to his competitors. If I had given the full cost, then there would not be any loss. We would have shown at least 2000 break-evens. We are not giving them any facility."

CHAPTER IV

RESEARCH AND DEVELOPMENT

4.1 The Company had set up a nucleus Research and Development (R&D) Cell in 1968-69 to undertake design and development of new equipments, to effect improvements in the models under production and also to assist in rapidly indigenising the manufacture of all components. The total revenue and capital expenditure incurred on R&D upto March 1987 was Rs. 1973.36 lakhs and Rs. 1294.24 lakhs respectively.

4.2 According to Audit, during the period April 1971 to March, 1984, the Company undertook 43 development projects comprising equipments, transmissions, attachments, modifications etc., with a view to meeting certain specific user requirements, product refinement/improvement and for import substitution as well as to enter the field of sophisticated technologies in power shift transmission, etc. An expenditure of Rs. 344.14 lakhs was incurred thereon to end of 1983-84. Of these, 27 projects were completed to end of 1983-84 at a cost of Rs. 208.23 lakhs; 7 projects were completed by the target dates, 2 were completed after delays of 1 and 6 months and the remaining 18 projects were completed after delays ranging from 16 to 76 months. Only 8 of the 27 completed projects, covering 6 equipment and 2 attachments were brought into production. The 19 non-productionised projects (development cost Rs. 130.71 lakhs) included 8 projects developed for the purpose of import substitution.

4.3 The present position with regard to 27 completed projects as furnished by the Ministry (August 1987) is as under:

No. of projects productionised : 19

No. of projects not productionised : 8

Out of 8 projects not productionised three were for development of attachments to be in line with reputed international manufacturers and the remaining five were study projects for understanding technology development. No immediate production was contemplated in respect of these 8 projects.

4.4 In regard to performance of the R&D Department, the Committee desired to know as to what extent the R&D Department had contributed towards import substitution programme of the Company. In reply, the CMD, BEML stated during evidence:—

> "Our R&D is now very well equipped. We have developed a large number of models and only in a very selective basis, we are entering into collaborations. Where the size of the equipment is very large and the technology is new—only in those specific cases, we are going in for collaboration."

4.5 Subsequently, the BEML in a written note have added that R and D has contributed towards import substitution programme by way of in-house design and development of equipment and also providing import substitution of collaborated products in a phased manner.

4.6 On an enquiry about the impact on production and induction of equipments in the civilian sector as a result of R and D efforts of BEML, the Secretary Department of Defence Production and Supplies stated in evidence:—

> "We have produced models of our own, we have produced aggregates of our own design. For example, the company has achieved a fair degree of self-reliance in High Pressure Pumps; Hydraulic Cyclinders; , Fluid Power Transmissions; final Drive and Planetary Axles; etc. It has successfully produced 8023 Track Shovel, 5013 Track Shovel, 3035 Front End Loader, 1420 Front End Loader, 3032/3040 Bottom Dumper, Water Sprinkler etc.

4.7 The Committee enquired as to whether the Company had drawn up a schedule of import substitution projects for execution after the establishment of R and D Department. The BEML in a written reply stated that when the Research and Development Department was set up in 1971, Company gave priority for absorption of technology available through collaboration and indigenisation of collaboration products. Import substitution projects were taken up later with reference to market demands. In view of this at the time of establishment of R&D, no specific schedule of import substitution projects was drawn up. However, as many as three import substitution projects were taken up in 1971 for development of 8023 Track Shovel, 5013 Track Shovel and 3035 Front End Loader.

4.8 When asked whether the Company was now drawing up schedules for import substitution projects undertaken in respect of new models of equipment introduced subsequently the CMD, BEML stated during evidence:—

> "The company's R&D division these days draws up schedules for both development of products and import substitution. We are able to monitor this closely. Besides some of the main products which we have developed in the past, and some more new ones we are developing now, we are also developing aggregates like transmissions, hydraulics etc. We are able to monitor each one of these projects by adopting techniques like CPM and PERT. They are time-bound. At the level of Directors and myself, we monitor it every month. They are also monitored at the level of the Board every quarter, when performance review takes place with the Secretary, and the Minister, Progress is reviewed there also. So, at all levels there is a review of the performance of our R and D activities."

4.9 The Committee desired to know about the mechanism in the Ministry for monitoring expenditure incurred by BEML on various R and D projects and also evaluation of results achieved by the Company. The Secretary' Department of Defence Production and Supplies admitted during evidence as follows:—

> "Sir, to the best of my knowledge, we in this Ministry have not evolved any special mechanism for monitoring R and D projects of defence public sector undertakings. I concede that this is an area where we need an improvement over what we have been doing in the past. As an *ad-hoc* measure, we do look into it at the Ministry level, but there is no regular system. The Management prepares quarterly reports which go to the Board and the Board examines it and also gives suggestions and directions. In this Board, there are two representatives of the Ministry one from the administrative side and the other from the finance side. Apart from this, Additional Secretary, Defence Research and Development is also the Director in the Board who has taken keen interest in the R and D projects of the company. We would evolve in the Ministry, a regular monitoring mechanism for R and D projects. It does not exist at present. But whatever monitoring is there, it is at the Board level. For example, earlier quarterly reports were not being put up to the Board. But

now, they are putting up and a comprehensive presentation was also made. Now a sense of direction has emerged. I will concede that this has been a weak area as far as Ministry level is concerned."

4.10 When asked as to whether there was any monitoring of R and D Projects at the manufacturing stage. The witness stated:

"That is there. But that is related to two or three aspects. If it is product improvement made by the company, the company itself incorporates it and productionalies it. If it is a conceptual R and D work, it depends, to what extent they relate to new equipments, what is the market pattern and what is the reaction of the user. All these aspects would come into it. But I won't rule out the theoretical possibility of results of R&D becoming obsolescent or infructuous. It may be because the pattern has changed, the requirements have changed. But normally, with the type of R and D project which this company takes up, the possibility of such a wastage is rare."

4.11 On being enquired about the basis of selecting the R and D projects and the extent of their application in production and induction both into military sector as well as the civilian sector, the Secretary of the Ministry explaining about application of R and D projects in Defence sector stated during evidence:—

"BEML is in the area of manufacturing rail coaches and earth moving equipments. Now they are going into the two specific projects of defence application. Their share of production for defence at the beginning of 1985-86 was 8 per cent. With the turn-over being increased by more than 100 per cent in five years, in terms of absolute figures it will go up substantially; but in terms of percentage it may not change significantly. To the extent they have taken up a project for Defence application, they have initiated some active interaction with the users, not necessarily formally in all cases, for drawing inspiration from their plans with the help of the Ministry or on the specific GSQRS given by the users, as in the case of heavy duty truck. Similarly, the Kolos Tatra is a licenced manufacturer from Czechoslovakia from where we have a technological collaboration. We are supposed to indigenise to the maximum extent, as per the DGTD scheduling. In this company the entire results of R and D for

Defence have not fructified as yet. For example, the Heavy Duty Vehicle. But to some extent we have learnt the skill and technology. Even it can be made use of in our existing projects. But some sort of redundancy will be there."

As regards civilian sector, the witness added:—

"With regard to civilian application also, firstly we are making a certain models which initially we started with foreign collaboration. We have introduced the improvement for functional performance on our own. Now the collaborator has produced a higher duty and better performance equipment. Now we have choice that either we can go on importing the technology on a continuous basis or go in for indigenised modifications to the existing models. We, in this company, certainly would like to evolve the latter situation. This company has designed its own model already. If we have to remain in the market we have to get the users. We have certain companies which exist only for Defence, like the Ordnance Factories. But this company competes with efficient private sector companies like L and T, TELCO, Hindustan Motors etc. Even then BEML have a 70 per cent share of the Indian market in the range of equipment which they manufacture and they still make money.

So, the possibility of redundancy of R and D expenditure cannot be ruled out. It happens everywhere whether is Defence or civilian side, though it is not a total loss. The gains get recycled or reused in some form or the other. It may turn out to be a commercial proposition or only an exercise of intellectual capability."

4.12 Asked whether the R and D projects meant for Defence sector application were being utilised in the civilian sector also the witness stated:—

"If the question is whether we have designed and developed any equipment for Defence and are making use of that in the civilian sector, the answer is 'Yes'."

4.13 In regard to application of R and D efforts in the Defence Sector, the Committee pointed out that due to relay in finalisation of GSQR by the Army, as was the case with the heavy duty trucks, there was a danger that the product developed by the Company for the Army may become redundant and efforts of the Company may

go waste and consequential import by them. The Secretary of the Ministry stated:—

> "The practice in the Defence Ministry is that wherever the users are thinking of a new equipment or a new store, before finalising the requirements they interact with the Defence R and D and in some cases, with potential manufacturers also. And then the QRs are finalised. About the responsibility for design and development. There is a separate mechanism as to who will be entrusted with the job. It may be the Defence R and D; it may be Defence public sector undertaking; it may be any other laboratory in the country which may be entrusted with that job. And the possible production agency is to be associated at the stage of fabrication of proto-type so that the time lag between the lab development and production is minimised.
>
> Then, before production, the technical evaluation as per the GSQR, users trials and drawing a trial report is completed."

4.14 Explaining further on the GSQR for heavy duty trucks, the witness added:—

> "The first part is that if the technology changed, the GSQR can also change. In this case also, draft GSQR were revised. Major changes in GSQR were introduced. That takes care of the technological change."

4.15 Though the Corporate Plan emphasised self-reliance in the fields involving sophisticated technology neither any appreciable progress has been made nor effective action taken in fulfilment of this important Corporate strategy even after a lapse of 8 years. The Committee enquired about the reasons for it. The BEML in a written note have stated that the sophisticated technologies involved in the Earthmoving equipment are:

(i)	High Pressure Hydraulics	
(ii)	Power Shift Transmission	
(iii)	Final Drive and Planetary	Both concerned with
(iv)	Dynamically loaded structures	Gearing manufacturers
	Axles	

A fair degree of self-reliance has been achieved by the Company's R and D in all the above areas, resulting in successful indigenisation of various components/assemblies embracing these technologies. Technology available through the collaboration agreements has been effectively absorbed by the Company's R and D engineers and it is on account of this, the Company has been able to develop and productionise a number of complete equipment systems.

4.16 Explaining the reasons for non-achievement of self-reliance in the fields involving sophisticated technology the Secretary, Department of Defence Production and Supplies also during evidence stated:—

> "The pitfalls involved in the indigenisation is a general issue. I seek the permission of the Chair to convey that this is something which cannot be envisaged. There may be pitfalls, there may be delays. Regarding indigenisation of the equipment they are producing, the Ministry is more than satisfied.
>
> Initially, the progress was not very fast. During the last 3-4 years or so, the progress has been quite fast. The indigenisation achieved has been very satisfactory. The production has been quicker than in many other companies. I took up this matter in May 1987 and I wrote to each of my chief executives about their performance in the previous year and the areas of concern of the Ministry. In that letter. I congratulated BEML for exceeding their targets for 1986-87 and also mentioned about the areas of concern which required attention. One of them was indigenization."

CHAPTER V

PRODUCTION PERFORMANCE

A. Hydraulic Components

5.1 One of the Corporate strategies laid down in the Corporate Plan of 1976 was to establish engineering capability for development and production of critical assemblies with high technological components like power shift transmissions and hydraulics, etc., with a view to achieving self-reliance in these fields involving sophisticated technology. According to Audit, Hydraulic Shop was set up in 1976 by regrouping the available facilities and transferring certain machine tools and equipment (value: Rs. 23 lakhs) to produce hydraulic components required for the production of earthmoving equipment.

5.2 During 1977-78 to 1985-86 only certain items of hydraulic components were developed and produced (value of the output: Rs. 493.83 lakhs). But the in-house production was only a small fraction of the total requirements, which were mostly met through indigenous purchases (Value of purchases during 1981-82 and 1982-83: Rs. 1332.28 lakhs—figures for other years are reported to be not readily available). The Committee enquired about the year-wise details of in-house production and outside purchases of hydraulic items from 1980-81. The BEML in a written note have furnished the following details:

(Rs. in lakhs)

Year	Inhouse manufacture	Outside purchases
1980-81	10.20	Not available
1981-82	27.00	438.39
1982-83	43.00	893.89
1983-84	114.82	678.00
1984-85	126.64	607.01
1985-86	171.81	684.03
1986-87	402.84	697.58

5.3 When enquired about the reasons for sudden spurt in in-house production of hydraulic during 1986-87 as compared to earlier years, the CMD, BEML during evidence stated:

> "We really improved our share of production of hydraulics by taking certain measures. During the last six to seven years, we have been getting more from outside and we have been producing less in our own organisation. Now, we have organised ourselves in a better manner and during the last years, we have produced little over Rs. 4 crores. By the end of November 1987, we had already crossed this figure and by the end of the current financial year, we expect to reach Rs. 7 crores. In future also, we are going to increase more and more our share of production of hydraulics as compared to what we buy from outside."

5.4 Asked whether R & D of the company was utilised for development of technology of hydraulics, the witness stated:

> "Hydraulics is one of the sophisticated type of technologies and we use it in different type of equipment. In the initial stages when our R & D was not established, we were importing a lot. Subsequently, we have developed indigenous suppliers who are able to give us hydraulics. Also, we started about six or seven years ago, an effort of our own in R & D and last year we achieved a level of Rs. 4 crores in our own factories. This year we are increasing from Rs. 4 crores level to over Rs. 7 crores. This shows that our effort is now in the right direction of establishing on our own. So, it is not a question of mere adoption of technology given to us by our collaborators. Our own R & D team has also established control valves, cycliners and many other items of hydraulics."

5.5 In this connection, the representative of BEML also added:

> "For hydraulics, we are having a small in-house facility where we have not invested much. This was started by us to develop the technology and pass on the know-how to R & D. Consequent to it, we have already developed sources in the country through various vendors of acceptable products. The supplies, as you would see, from the private sources have been steady. That is why our developed sources are not being stopped. For further and additional requirements we are more and more depending

on our own production. So, consequently, our production today has gone up to Rs. 4 crores while the outside bought up things remain steady around Rs. 6 crores. Our plan is to increase it further to Rs. 7 crores. So, we cannot stop the sources that we have already developed within the country."

5.6 To another query as to whether the private manufacturers were charging anything for the R and D passed on to them by BEML; the witness stated:

"They will not add any development charges. It is only the manufacturing cost that they will put. Part of the technology is available to them through our own R & D If it is without any support of ours, then they will add upon, but in this case they will not add upon."

5.7 Asked about the number of sources in the country for the supply of hydraulic components and the rates charged by them in comparison to the rates of in-house products, the BEML in a written note have stated that there are 5 to 6 dependable sources in the country for these items. They respond to the Tender Enquiries The purchase price of most of the items compare favourably with the in-house manufacturing cost.

B. Diesel Engine Project

5.8 In regard to manufacture of diesel engines required for various equipment manufactured by the Company, the Ministry intimated Audit (December, 1985) "BEML's proposal for having its own captive Diesel Engine Plant is in final stages of approval. In fact the collaboration agreement with Komatsu, Japan has been taken on record by Government. This project has gained urgency as there have been a number of complaints in regard to the performance of engines from the major customers like Coal India, etc."

5.9 The Committee desired to know about the reasons for delay in sanctioning of this project. The BEML in a written note furnished after evidence have stated that the Project Appraising Authorities have felt it necessary to carry out an indepth analysis of existing manufacturing potential in the country and also the scale of investment proposed. Subsequent to this, the CCEA has desired a further examination of already established capacity to see if it meets the Company's requirements. This has since been done and the case is under re-submission to CCEA. Their approval is expected shortly.

5.10 In this connection, the Secretary, Department of Defence Production and Supply during evidence stated:

> "The delay in sanctioning this project has been primarily on account of the objection of the Ministry of Industry. The DGTD and the Ministry of Industry were of the view that indigenous capacity existed in the country. We worked out the capacity and capability of each one of those manufacturers which the DGTD mentioned....We discussed the issue with the DGTD. Ultimately when nothing happened we organised a meeting between the Ministers concerned. Now the Ministry of Industry has agreed. We have submitted a supplementary note for the consideration of the CCEA which is at present with the Finance Ministry for the approval of the F.M."

5.11 Asked as to how many indigenous sources were there at present for the supply of Diesel Engines, the BEML in a written note have stated that only M/s Kirloskar Cummins Limited are manufacturing Engines that can be used on BEML equipment and that too not covering the full product range.

5.12 To another query about the nature of complaints in regard to engines fitted in equipment supplied by BEML to its customers, the BEML have stated in a written note that on almost all the BEML equipment on which KCL engines are fitted, BEML had to face a number of complaints from customers regarding quality deficiences and in every case of new equipment the period of stabilisation has been unduly long resulting in growing customer dissatisfaction Some of the serious performance deficiencies observed and recorded on KCL engines are:

(i) Block Burst and Engine Seizure,
(ii) Engine over-heating,
(iii) Excessive lube oil consumption,
(iv) Cold starting problem,
(v) Early Air cleaner chocking,
(vi) Engine not taking load,
(vii) Relatively short life between overhauls.

5.13 In view of the complaints received against M/s. KCL diesel engines fitted in most of the equipments manufactured by BEML, the Committee enquired about the efforts made by the Ministry in getting this project cleared by CCEA at the earliest. The Secretary

of the Ministry during evidence stated that, "We have been pursuing the matter as best as we could. Now, I hope, it will go through"

5.14 As regards collaboration agreement for the manufacture of diesel engines with M/s. Komatsu, Japan, the Committee enquired whether it has since been approved by Government. In a written note, the BEML have informed the Committee that the collaboration arrangement with M/s. Komatsu has been approved by PIB and taken on record on 15-7-85. The agreement is for a period of 10 years and royalty at 4.5 per cent of the net ex-factory price payable over a period of 7 years. The technical know-how fee of 50 million Japanese Yen per series of engine is payable, out of which 29 million japanese yen will be deducted from the accrued royalty. There are five licensed products covering 90 to 1200 HP. BEML can also export engines to Nepal, Bhutan, Sri Lanka and Afghanistan and export to other countries with permission of Komatsu. The licensed products cover most of the equipments manufactured by BEML and are specifically designed for application on earth moving and construction enquipments.

C. Rated capacity

(i) *Earth Mover Division*

5.15 As reported by Audit, although regular production commenced in 1968-69, the rated capacity of Earth Mover Division has not been fixed either in terms of physical output or in standard man-hours after taking into account the production facilities progressively set up. The extent of capacity utilisation from time to time could not therefore be established.

5.16 The Audit Board enquired in October 1983 as to how, in a situation of changing product-mix and varying indigenisation levels, the capacity utilisation was being ensured and whether it would not be desirable to fix the capacity at least in terms of Standard Man Hour (SMH) taking into account the production facilities established. The Company representatives stated that this could not be done in view of the criticality of load centres/machines, a multiproduct-mix situation and varying indigenisation levels for the products. The management further stated in November, 1983 that "with variations in product-mix year after year and at different levels of indigenisation, reference to plant capacity as of 890 equipment would not be accurate. However, in the absence of known better method of designating the capacity, this is being adhered to." The Ministry also stated in March 1984 that "the capacity envisaged to bet net

up in BEML is for 890 equipment of stipulated equipment-wise indigenous content....In practice, due to changing market demand, the actual equipment produced vary both in number and in product-mix. 890 equipment envisaged involved a work content of 39.5 lakhs SMH. Therefore, this work content together with the number of equipment and the constraint of types of facilities involved for different product-mix can be taken as a guide for Rated Capacity."

5.17 The Committee enquired as to how the Company were satisfied that there was no better method of fixing the rated capacity either in terms of physical output or standard manhours (SMH), other than taking as a guide for rated capacity the work content involved in the envisaged production of 890 equipments. In its reply, the BEML in a written note have stated that BEML is manufacturing a variety of heavy duty engineering equipments with very little commonality between them in regard to size and time taken for processing of components. The production is being achieved mostly by using General Purpose Machines using different jigs and fixtures for different equipments. The number and variety of equipment produced vary from year to year depending upon the market requirements. Under these circumstances, in the Company's opinion there is no other guide for rated capacity than an assessment of the work content involved in terms of standard manhours for the originally envisaged product-mix at the optimum level of indigenisation.

5.18 To a similar query from the Ministry, the Secretary, Department of Defence and Supplies during evidence stated:

> "As regards standard manhours, capacity has been fixed and revised upwards keeping in view the additions to the plant and equipment from time to time. I can read out the figures for your information. Standard manhours capacity for equipment manufactured was 28.83 lakh manhours in 1979-80; in 1980-81 and 1981-82, it was less because of the strike; it was 36.26 lakhs in 1982-83; 39.18 lakhs in 1983-84; 40.23 in 1984-85; 41.31 lakhs in 1985-86 and 44.90 lakhs in 1986-87. This shows that the capacity in terms of SMH is fixed and is also revised with the additions of facilities. I am prepared to concede the point that may be it was not formally documented in the records. But the capacity is known in terms of SMH."

5.19 Touching upon related questions in regard to capacity utilisation like machine utilisation, shop-floor utilisation, utilisation of

capacity in physical terms or the standard manhours, the witness added:

> "In the case of a multi-product engineering company, there are always serious difficulties in fixing capacities. Even the BPE guidelines do not help us in this matter. If it is a multi-product company and if it is also an engineering company, fixing up capacity is a problem. But the management has to know their capacity, their potential and how much they can produce and sell. This the company has been doing by the number of equipments. Now, the number of equipments is also a mix. Some equipment require less time and some require more. Some have more indigenisation and some less, capacity will change, the need will change and shop-floor to shop-floor management will change. So, these are the real difficulties. But the number of equipment even of a certain mix, can be converted into standard manhours based on industrial engineering studies. It may not have been formalised and documented. This is only a question on how you look at it."

5.20 Asked about the actual capacity available from 1979-80 to 1986-87, the BEML in a written note have stated that in view of the difficulties expressed by BEML in stating in categorical terms the Rated Capacity of the Plant (other than taking the work content of the sanctioned product-mix as an yard-stick) ready figures on Rated capacity, year-wise, are not available. However, based upon a proportional working in relation to the progressive expenditure on plant and machinery actually made from time to time and working backwards from the year of completion of the project for 890 equipments *viz.*, 1985-86, the National capacity available from 1979-80 to 1986-87 is as under:

Year	National capacity SMH (in lakhs)
1979-80	28.83
1980-81	22.48*
1981-82	27.70*

1	2
1982-83	36.26
1983-84	39.18
1984-85	40.23
1985-86	41.31
1986-87	44.90

*Adjusted for 9 months working.

**Adjusted for 10 months working.

5.21 On being enquired as to whether the large scale imports of components resulted in under utilisation of capacity available with the Company, the BEML in a written reply stated that the imports of components resorted to by the company during 1982-83 etc. years (to meet the market demand) did not result in under utilisation of the capacity as could be seen from the following table:—

Year	National Capacity in terms of SMH	Actual SMH generated (including spares)	Percentage of capacity utilisation
1979-80	28.83	23.14	80.26
1980-81	22.48*	16.78	74.65
1981-82	27.70**	26.02	93.94
1982-83	36.26	36.49	100.63
1983-84	39.18	36.25	92.52
1984-85	40.23	34.73	86.33
1985-86	41.31	43.70	105.79
1986-87	44.90	44.84	99.87

*Adjusted for 9 months working.

**Adjusted for 10 months working.

5.22 According to Audit, the equivalent work content of 37.20 lakhs SMH, corresponding to the approved product-mix of 850 equipment, had been arrived at taking into account only the production requirements of the main equipment. As the plant and machinery had been installed to cater to the manufacture of the normal expected spares support also, this capacity should also be added to work

out the total installed capacity. The Ministry is, however, reported to have stated in December, 1985 that it was not possible to specify in terms of SMH the capacity for spares, as the intention was to produce the spares depending upon the demand by tapping additional machine capacity if necessary, by extra shift working. Therefore, in judging the capacity utilisation, the SMH output in respect of main equipment production was only taken into account.

5.23 The actual output of spares manufactured by the Division, rework undertaken, etc., in terms of SMH during 1979-80 to 1983-84 as furnished by Audit, was as follows:

	(In lakh SMH)
1979-80	1.52
1980-81	1.10
1981-82	1.77
1982-83	2.35
1983-84	3.07

5.24 When enquired about the reasons for not fixing the capacity for spares, the BEML in a written note have stated that in a product like Earthmoving machinery, the bulk of the requirement of spares is for components of functional assemblies like engines and transmissions, which were planned to be procured from outside sources at the time of formulation of the project. Since the work content involved in manufacture of complete equipment is relatively much higher than that required for production of spares, which are mostly confined to moving and wearing parts, there is no need to specifically create additional capacity for spares and the requirement can be met by resorting to overtime work etc.

5.25 Asked about the opinion of the Ministry in regard to non-fixation of capacity for spares, the Secretary of the Ministry during evidence stated:

> "When we produce an equipment, we will also produce spares. It is because the company earns more money on spares than on equipments. The basic question which the audit is putting is that, why are you not fixing the capacity for the production of spares? The company's answer is that we have never created any capacity as such for spares. This was the answer given to me when I was

discussing with the management. Therefore, we cannot fix it. It is the view point of the company. I am not saying that I accept it or that it should be accepted. Therefore, the viewpoint at the time of planning and execution of the project was that we have not created any specific capacity for spares. So the question of fixing the capacity for spares does not arise. If it is so then they have a valid argument. The question is, if they do not have the capacity, how are they producing the spares? If you use your commonsense, the answer would be "whatever capacity exists for producing the equipment is as good for the spares." If the total production of SMH is not significantly more than the SMH capacity, then the problem does not arise. SMH capacity in terms of the capacity available and SMH generated both for the production of equipment and spares does not differ significantly. Therefore, they have produced spares within their overall capacity. They could have also indicated their capacity for producing equipment and spares separately, depending on the demand. I personally feel—apart from the argument and the logic thereof—and I would also suggest to the company that they should give a re-look to this problem and come out with alternatives which are possible and also how to tackle it. I propose to write to them immediately after my submissions before the hon. Committee as to what are the possibilities; how best we can try to satisfy the audit. We would try to find a realistic solution."

5.26 When pointed out that Ministry of Defence on 23 June, 1978 wrote a letter to Chairman and Managing Director *inter-alia* pointing out that, "The proposed investment in balancing facilities by BEML are first directed towards meeting production gap in spares." Reacting to it, the Secretary of the Ministry during evidence stated:

"There is no contradiction in this. Let me take a concrete example. I want to produce 100 number of this equipment. This is the capacity I want to create. When I go for machine tools or process machines for producing various components or sub-assemblies or assemblies of these equipments, it is not necessary that the machine capacity which I am buying or which I can buy, can exactly produce 100 equipment. If it can produce 120, it is okay. Whether it can produce spares or not, I will

have to produce the equipment. It is not a totally mathematical exercise."

5.27 Elaborating about the reasons for non-fixation of capacity for spares, the witness added:

"If I am producing the spares, I must have some capacity. If you ask the company, why don't you fix the capacity? The company's answer would be, they never created any separate capacity for spares. Therefore, we cannot fix it separately. If you ask them, how are you producing it. They will say that the total capacity in SMH which I have—I am using both for equipment and spares. But still I am saying that I will request the company to have re-look and examine the various alternatives and then come back to the Ministry. We will try to find a solution to the best of our ability which may serve the management well. These days whenever we sanction a project for manufacturing so many original equipment, the percentage of spares is also mentioned. This is so in ordnance factories."

5.28 The Committee enquired as to whether the argument that the intention was to produce the spares depending upon demands by tapping additional machine capacity, if necessary, by extra shift working, apply in general to the main equipment also and if so, what was the consideration for fixing capacity in respect of equipment. In a written reply, the BEML have stated that in their opinion, the production of main equipment are not to be resorted to during Third Shift for the following reasons:

(a) The normal industries practice (of Engineering Industries) is to work only on two shift basis;

(b) Productivity in third shift will not be as high as in other two shifts;

(c) The quality of equipment may be adversely affected.

(ii) *Railcoach Division*

5.29 At the time of the formation of the Company (May 1964), the rated capacity of the Division was reported to be 270 railcoaches per annum. Based on an expansion project for increasing the capacity to 400 coaches annually approved by Government in December, 1970 at an estimated cost of Rs. 213.65 lakhs the Company increased

the capacity to 400 coaches by 1975-76 at a cost of Rs. 211 lakhs. Though the Railway Board intimated in April 1974 a cutback on orders for railcoaches due to budgetary constraints, the Company went ahead and raised the plant capacity to 400 railcoaches on the ground that bulk of the commitments on civil works, plant and machinery were already made. The Company did not, however, purchase jigs and fixtures and also did not employ manpower for the additional capacity. The actual number of railcoaches manufactured by the Division during 1979-80 to 1986-87 was 236, 184, 300, 305, 335, 350; 326 and 338 respectively.

5.30 The lower utilisation of the Division is stated to be due to curtailment by the Railway Board of the off-take of railcoaches. It has also been reported by the Audit that with a view to utilising the plant capacity rendered surplus owing to shortfall of orders for coaches, the Division took up the manufacture of Heavy Duty Trailers (for Defence) and spares|miscellaneous items from 1975-76 certain wheeled earthmoving equipment from 1981-82 and Camp Houses from ONGC from 1983-84.

5.31 The Committee enquired about the country's annual total requirement of rail coaches. The BEML in a written reply have informed the Committee that BEML manufactures only II Class Broadgauge Railcoaches. The Railway Board has been placing orders on BEML for 300 to 350 broadgauge rail-coaches per annum. In addition, ICF supplies about 650—700 broadgauge II Class coaches per annum. It is presumed that the total requirement of the type of railcoaches manufactured by BEML is being met by these two manufacturing units.

5.32 When the Committee pointed out that the Railways was establishing another Rail Coach Factory at Kapurthala for manufacturing railcoaches and enquired whether it would affect the production of Railcoach Division of BEML, the CMD, BEML during evidence stated:

> "We have been in touch with the railway authorities. I met the Chairman and have also been meeting Member, Mechanical, during the last two and a half years and they gave us an indication that they would be placing orders on us of the same order. This is because the total demand in the country is going up. They will place orders on those factories first, but will also give us a certain share."

5.33 In this connection, the representative of BEML also added that "there is enough demand, but the question is whether they will have the required money."

5.34 Asked whether the additional facilities created for manufacturing railcoaches would be fully utilised in case no orders were received from the Railways,

the CMD, BEML during evidence stated:

> "Yes, Sir, we are diversifying our production. We have got an order from the Indian Railways for overhead electrification inspection cars for which we had to compete with the Mitsubishi of Japan. There were open global tenders."

D. Production in excess of capacity

5.35 As against the sanctioned capacity for the manufacture of 850 earthmoving equipment upto 1980-81 and 890 thereafter, the Earth Mover Division produced 950 equipment in 1981-82, 1131 in 1982-83 and 930 in 1983-84. The producton in the subsequent years was 1004 in 1984-85 and 924 in 1985-86 respectively.

5.36 The Audit have pointed out that in regard to the production of 950 equipment in 1981-82, it was stated in the Director's Report, "In view of the heavy backlog of orders at the beginning of the year 1981-82, the Company took several steps including import of more components on selective basis to increase production during the year. Similarly during 1983-84 also, higher production was achieved by the company due to increased usage of imported bought out components as would be seen from the following table:

(Rs. in crores)

	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87
Consumption of raw materials and components :								
(a) Imported components	25 06	17.92	73.39	101.48	120.03	105.96	133.65	92 32
(b) Boughtout components	21.63	13 03	31.13	45.00	40.33	52.07	64.56	109.21
(c) In-house manufactured components	8.35	7.99	15 03	20 21	16.48	19.17	19 56	22.40
TOTAL	55.04	38.94	119 55	166.69	176.34	177.20	217.77	223 93

(Percentage)

Percentage of total consumption of :								
Imported components	45 53	46.01	61.39	60.88	67.87	59.80	61.37	41 23
Boughtouts	39 30	33 47	26 04	27.00	22 81	29.39	29 59	48.77
In house manufacture	15.17	20 52	12.57	12.12	9.32	10 81	9.04	10.00

5.37 According to Audit, the expenditure in foreign exchange incurred on the import of components and spares during 1979-80 to 1983-84 was as high as Rs. 216.63 crores. The utilisation of high percentage of components from outside sources to achieve higher rate of production, also resulted in under utilisation of production facilities established in the Company.

5.38 During the subsequent years the expenditure in foreign exchange (incurred on import of components) was stated to be as follows:—

	(Rs. in crores)
1984-85	62.60
1985-86	62.55
1986-87	66.03

5.39 The Committee enquired about the reasons for increased usage of imported components in the Earth Moving equipments manufactured by BEML. The CMD, BEML during evidence stated:

> "This is the percentage of import content alongwith duties paid to the material consumption. We personally feel that this is not the normal way of review. The normal way is that a cif of the import content which is really the foreign exchange outgo from the country is compared with either the production or the sales turn-over of the company."

5.40 In this connection, the CMD, BEML furnished the following figures in regard to percentage of imports to total value of production:

Year	*Percentage of imports to total value of production*
1982-83	21.02%
1983-84	20.4%
1984-85	15.95%
1985-86	14.75%
1986-87	15.52%

The witness further added:—

> "What matters really is what is the outgo of foreign exchange while importing some of the components and materials

For instance, certain types of steel, high strength steel and components like bearings are not produced. We are using bearings of larger sizes which are not produced in the country.

It is not a correct way of comparing the total expenditure including foreign exchange and import duty etc. with the material consumption. What is fair to compare is the cif of the imported components with the production of the turn-over of the company. This is normally what is adopted by everybody."

5.41 When the Committee pointed out that the percentage of imported bought out components ranged between 41.27 per cent to 67.87 per cent between 1979-80 to 1986-87, the representative of BEML during evidence stated:

"I would like to say that what the Audit Report was pointing out was relating to the earlier years when I was producing less. The proportion of imported material cost was 40 and odd per cent. When we started producing more, the proportion of imported components has gone up to 60 per cent and it looked as though we are taking a very wrong decision and spending a lot of foreign exchange. Our submission is that you have to see it in the context of what is my value of production or turn-over. When the turn-over has gone up, there is a limit up to which I can go within my facilities. I cannot increase it suddenly. So, the real test will be whether I have taken steps to see that whether contribution is remaining static or less or the other way. If that is, there will be criticism. But our value of production has gone up very heavily. I will just read out the figures. For the year 1977-78, 1978-79 and 1979-80, the value is Rs. 58 crores, 67 crores and 88 crores respectively....In 1979-80, I produced Rs. 88 crores worth of goods. In 1983-84, it was Rs. 243 crores."

5.42 The Audit have pointed out that the consumption of imported components, boughtout components and in-house manufactured components have risen from Rs. 25.06 crores, Rs. 21.63 crores and Rs. 8.35 crores respectively in 1979-80 to Rs. 133.65 crores, Rs. 64.43 crores and Rs. 19.69 crores in 1985-86 i.e. the level of consumption in 1985-86 was 533 per cent, 296 per cent and 236 per cent of the level in 1979-80. The Committee enquired as to whether the increase

in level in respect of imported components *vis-a-vis* the increase in levels of others call for a very close monitoring of the imports equipment wise. The BEML in a written note have stated that in their opinion, comparison of absolute figures of 1985-86 with that of 1979-80 is isolation and by ignoring the growth in sales turnover|value of production is not realistic. The increase in value of production between 1979-80 and 1985-86 was 401 per cent. Company has been continuously monitoring and restricting the import content of each equipment to the maximum extent possible keeping in view the facilities available not only with the Company but also elsewhere in the country and giving the minimum necessary time for successful indigenous developments of new components with the requisite consistency in quality. Every year, maximum efforts are made to increase the indigenous content of each model of equipment under production. Further, in certain cases the Director General of Technical Development (DGTD) is also involved in clearing of imports in respect of equipment.

5.43 Notwithstanding the above, the actual value of imported components has been increasing due to the following reasons:—

(a) Introduction of newer and updated versions of equipment to suit the needs of the customer which necessarily calls for certain higher level of import content in the initial years;

(b) In respect of existing models which are already under production line, though the import content as such is less from year to year in terms of absolute figure (value), there is an increase owing to adverse fluctuation in exchange rate;

(c) The increase in the number of equipment produced in a year also vitally affects the value of imported components (in terms of absolute figures). In 1979-80 the production of EM equipment was only 661 Nos. and in 1985-86 the production was 864 equipment.

5.44 In regard to need for a very close monitoring of the imports equipment wise, the BEML have added in the written note that BEML is in full agreement with the view that very close monitoring of import—equipment-w'se is absolutely essential. If the Company had not resorted to higher production, the customer requirement would have been met by import of complete equipment with a relatively larger outgo of foreign exchange from the country or the busines would have gone to the Company's competitors. In the case of earthmoving equipment, if a customer gets a particular type

of equipment, generally repeat procurements are confined to that type only from logistic considerations and hence the loss of business to the Company will tend to become a recurring one.

5.45 When the Committee enquired from the Ministry whether utilisation of high percentage of components from outside sources has not resulted in their opinion in under-utilisation of production facilities established in the Company, the Secretary, Department of Defence Producton and Supplies stated during evidence:—

"The basic philosophy of each major engineering industry is to concentrate on the assembly operation and to purchase parts from outside as much as they can. The policy in this company from the very beginning has been—we in the Ministry support it fully—that whatever somebody else can make in the country for them, they should not try to invest for producing the same item; their capacity should be concentrated on those items which are so critical quality-wise that either others are not able to supply them or in terms of technology, they would like to keep this technology in house or where their not producing will result in under utilisation of capacity or capacity has been planned keeping in view that such and such a thing will not be produced and would be purchased from outside. As regards increase in absolute terms, in the case of imported value, a number of factors would account for this increase. The first one is the exchange variation. The second is to create and sustain a market share. Initially the import content is higher depending on the phased manufacturing programme; and the phased manufacturing programme is spread over a period of five years. When we enter into foreign collaboration, the DGTD decides about the import content, how much it will be in the first year and so on. So, if a company enters into a new collaboration agreement then 3-4 years following that agreement, the import content will be more. But as they reach the fifth year, it will be nominal or may become zero. So, quoting of figures in a particular period would not give us the correct increase. But we have analysed equipment-wise what is the import content and we find on a macro basis, it is less than 20 per cent. My opinion is that this cannot be considered as large."

The witness added:—

"Even if you import the same component, its value today would be much higher If you look at the absolute for-

eign exchange outgo figure you will find that it certainly would give an impression that imports are going up. But if you go into each item of production and see what is the level of indigenisation, then the picture will not be so adverse. We have compared the prices of a number of items imported with the prices of a number of items produced in the country. In most of these cases, the prices are lower than the prices of the imported items. If the import is connected with indigenisation—first year, second year, third year—then since we are not able to produce that item within the country we have to import it. and if we have to import, then we have to pay for it. So, our possible failure or delay in indigenisation upto the required quality needs for going into diversification and new models, all this would have an impact on absolute term on the quantum of foreign exchange. But if we go product by product, the position would be more clear and perhaps it will not be considered unsatisfactory. We are very much concerned that foreign exchange outgo should be as little as possible and in no case we should encourage it. I have been writing letters to the Chief Executives on foreign exchange myself and discussing with them how to improve this position.

Their foreign exchange budget I personally scrutinise. So, we feel that the import content should be brought down to as little as possible. We have given a new thrust to the Company and the Chairman has readily accepted it. He said, 'let us try an experiment to complete in three years or three and a half years what would normally be done in five years and if we succeed in that the imported content will come down earlier than before."

E. Indigenisation

5.46 According to Audit the Company initially started production of earthmoving equipments with low indigenous content to be increased progressively with the assistance of collaborators. In some cases the agreements were extended specifically to attain this objective. Several products developed by the Company were also produced with low indigenous content initially and progressively increased thereafter. Details regarding indigenisation levels achieved upto 1978-79 and the year-wise indigenous content (including prototype) in various equipments, produced during 1979-80 to 1986-87 are as follows:—

Sl. No.	Name of Equipment	Year of commencement of production	Year by which maximum indigenisation to be achieved	Levels achieved							
				Upto 1978-79	1979-80	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87
1	2	3	4	5	6	7	8	9	10	11	12
				(Per cent)							
(a)	*EARTHMOVER DIVISION*										
I.	*Wheeled equipments*										
1	Haulpak LW 50 . .	1972-73	1977-78	55.16	62.32	72.16	56 77	67.82	78.06	81.60	91.96
2	Haulpak LW 35 . .	1965-66	1977-78	90.08	90.12	90.69	90.14	90.80	91.57	91.60	97.49
3	Haulpak LW 25 . .	1972-73	1977-78	NA	90.12	NP	NP	NP	..	..	..
4	Haulpak LW 85 . .	1981-82	..	..	..	19.81	19.81	29.42	50.89	..	..
5	C Scraper 229F . .	1964-65	1977-78	85.49	85.49	NA	NP	NP	..	..	..
6	C Crane	1972-73	1977-78	NA	NA	NP	NP	NA	..	..	..
7	3032/3040 Bottom Dumper	1978-79	NA	NA	NA	NA	NP	NP	..	..	..
8	3035 Front End Loader .	1977-78	NA	NA	NA	70.56	70.768	80.76	80.76	90.43	90.74
9	1420 Front End Loader .	1981-82	NA	NA	NA	70.56	69.10	70.56	70.56	76.35	76.72
10	440 Motor Grader . .	1966-67	1977-78	86.90	86.90	NA	NP	NP	..	..	..
11	Tigar 120 SK Tractor. .	1969-70	1974-75	71.62	71.62	71.62	71.62	NP	..	..	..
12	D 31								30.03	42.60	42.60

13 HD 785								49.51	49.76	42.99
14 WA 200								..	..	40.03
II. *CRAWLER TRACTOR*										
15. D120 A-18 Dozer	1969-70	1974-75	81.18	81.18	81 18	81.18	NP	..	..	..
16. D80 A-12 Dozer	1970-71	1974-75	85.14	85.57	88 61	82.73	88.10	88.93	94 41	95.81
17. D50 A-15 Dozer	1969-70	1974-75	86.56	86 56	94.69	88 14	88.14	90.13	95.75	96.14
18. D355 A-3 Dozer	1980-81	1985-86	..		23 97	26.50	38 96	70.91	71.62	85.56
19. D155 A-Dozer	1981-82	..	..	..	21.96	28 49	59.49	67.79	71.97	86.64
20. 8023 Track Shovel	1974-75	NA	NA	NA	NA	81 50	87.07	87 92	94 41	95 81
21. 5013 Track Shovel	1978-79	NA	NA	NA	78.60	86.72	NP	90.13	95.75	96.14
22. PC 650 Hydraulic Excavator	1983-84	..	..	..	..	..	NA	30.00	39.99	39 99
23. PC 300								13 84	13.84	38.47
24. PC 220								..	..	35.65
(b) *RAIL COACH DIVISION*										
Wheeled equipments										
1. C Scraper 229 H	1981-82	..	..	..	NA	67 39	67 39	83 76	84.74	84 74
2. BEML 25 Rear Dumper	1982-83	..	..	..	..	NA	NA	..	..	..
3. GD 605 R1/R2 Motor Grader	1982-83	..	..	..	..	37 00	34.37	59.37	57.51	77.52
4. C Crane	1972-73	NA	NA	NA	NA	NA	NA	..	..	..

1980-81 left out as it was affected by strike.

NA : Not Available NP : No Production.

5.47 The Committee on Public Undertakings in their Second Report (1971-72—Fifth Lok Sabha) had observed that progress as regards indigenisation lagged far behind the target and that pace thereof needed acceleration. Government stated in reply (February 1973) that the shortfall was mainly due to delay in sanctioning| implementation of the earth-moving equipment part of the project and that the need for accelerating the tempo of indigenisation had been emphasised to all Defence Public Sector Undertakings at the highest level. It was also proposed by Government to keep a special watch on indigenisation progress of the Company.

5.48 In spite of this, there was delay in achieving the expected indigenisation level of 85 per cent for some of the equipment. The Ministry intimated Audit in March, 1984, "Certain slippages in the level of indigenisation planned were due to the inability of the indigenous industry to develop and supply intricate castings and forgings. The specification and degree of sophistication in respect of these items had necessarily to conform to international standards and this often involved delay". The low achievement in respect of LW 50 Haulpak was primarily attributed by the Ministry to the limited orders received for the equipment.

5.49 The Committee enquired about the special watch kept by Government on indigenisation progress of the company. The BEML in a written note have informed that indigenisation progress is closely monitored as under:—

(a) Review by CMD and the Directors on monthly basis.

(b) Fixing of time bound targets for the production Division.

(c) Report to the Board of Directors on half yearly basis.

(d) Report to the Ministry on Quarterly basis.

(e) Monitoring of approved phased manufacturing programme by DGTD before import clearance of CKDs and components.

Consequent to the above measures the increase in indigenous content over the years for different models has been significant. For new models of equipment being introduced by the Company during the last two or three years the initial indigenous content itself is at an appreciably higher level compared to the past years. As a result of such constant monitoring at different levels, not only levels of indigenisation are accelerated but also the FE outgo has been kept to the barest minimum.

5.50 Asked as to why the factor of degree of sophistication was not taken into account in fixing the target year for maximum indigenisation, the BEML have stated that while fixing the target (year) for maximum indigenisation, Company was aware of the fact that intricate/sophisticated components were to be developed by venders to achieve the targets. However, Company adopted an optimistic approach with a view to reach higher levels of achievement.

5.51 The Audit have reported that the collaboration agreement for wheeled equipment concluded with WABCO in October 1962 had to be extended from November, 1972 twice by a period of 5 years each, as the expected level of indigenisation (85 per cent) was not achieved. Out of 8 models taken up for production, 4 models were discontinued by 1983-84. Out of the remaining 4 models which were still production, the expected level of indigenisation has not been achieved in respect of 2 models by March, 1985 *viz.* Haulpak LW 50 and LW 85.

5.52 The Ministry informed Audit in December 1985. "The low level of indigenisation in respect of LW 50/LW 85 was due to the fact that the existing automobile ancillary industry in the country could not develop intricate components of high degree of sophistication to conform to international standards and their un-willingness to develop on account of low off-take of equipment during the year."

5.53 The Committee desired to know the latest position in regard to achievement of envisage 85 per cent level of indigenisation of Haulpak LW 50/LW 85. In a written note, the company informed that the level of indigenisation achieved in respect of LW 50 was 91.96 per cent as of 30-9-87. In case of LW 85, an indigenisation level of 50.89 per cent was achieved in 1984-85 after which date this equipment had not been produced for want of orders.

5.54 When asked about the reasons for not achieving the envisaged 85 per cent level of indigenisation in respect of other equipments also, the representative of BEML during evidence stated:—

> "It is true that in certain of the products, we are not able to reach that level of 85 per cent indigenisation which definitely has been our overall objective. We want to achieve not only 85 per cent indigenisation but 95 per cent to 100 per cent. But the problems are of slightly different nature. The quantitative demand is not of the same magnitude for the products that we are manufacturing in

the country. If you take equipments like the 35 tonnes dump truck or D 80 Dozers, certainly there is a demand to the tune of 200 pieces in a year. We are able to manufacture them. There are economies of scale in production. If we want to achieve indigenisation or to attract vendors to make them in our country, there are two conflicting requirements. One is the sophisticated specification and these are not components which are manufactured to the general automotive specifications but a higher level of specification.

The other constraint is that the quantities that are involved have been definitely less. The industries like the forging industry on whom we depend, the steel foundaries etc. are essentially first targeted to the automotive industry which has got a recurring and higher quantity of demand. Our requirements are of larger sizes, smaller quantities, higher degree of specification. Unless the infra-structure in the country develops to the expectations which were envisaged at the time of preparation of the corporate plan, it is not possible to make them. Otherwise, we have to create all those facilities indoor and if such facilities are created inhouse, then the optimum exploitation will not be there. That is the reason why there have been difficulties for us particularly in respect of equipments where the quantity bought is less. Last year, we have introduced equipment with as high as 45 per cent indigenous content. Notwithstanding dependence on the automotives, indigenous vendors also have a good volume of business with us now on account of higher turnover. Sometimes make pattern equipments at our cost and get these items developed. The capacity to be achieved is 85 per cent today. We are starting with 40 per cent today. A few years back, the supporting infrastructure in the country had not been to this extent."

5.55 As regards non-achievement of 85 per cent level of indigenisation in respect of some equipments within the stipulated period, the Department of Defence Production and Supplies have stated in a note furnished after evidence that on account of lack of suitable infrastructure in the country for the supply of heavy duty castings, forgings. Hydraulic pumps, cylinders, transmissions etc., the pace of indigenisation of BEML's products was slow till about 1980. The problem was aggregated due to the stringency of the specifications on the one hand and the limited off take by BEML on the other. With the progressive development of the Company's own manufacturing facilities for various type of gears, transmissions, hydraulic

system components like cylinders, pumps etc., and also the progressively increasing quantitative off-take, it has been possible in the recent past to give a greater thrust towards indigenisation. While in earlier years it used to take 10—12 years to achieve an indigenisation level of 80 per cent today's thrust of the Company is in achieving this level within a period of 5 years, and a commitment to this effect is given to the DGTD in respect of all new equipments taken up for manufacture. In fact the new items are being introduced with initial indigenisation level between 35 to 40 per cent which is fairly high.

5.56 When enquired about the foreign exchange savings as a result of indigenisation during the last five years, the Department furnished the following figures in this regard:—

Year	Rs. in crores
1982-83	69.90
1983-84	81.50
1984-85	132.10
1985-86	154.80
1986-87	187.50

5.57 In regard to future programme of indigenisation, the Committee enquired about the future plans of the Company. The Company in a written reply have stated that for all new equipment introduced, the Company was committed to DGTD for a phased manufacturing programme to achieve around 80 per cent level of indigenisation gradually within a span of 5 years and was actually striving to perform better than this.

5.58 Asked as to what efforts were being made by Company for achieving maximum level of indigenisation within shortest time possible, the CMD, BEML during evidence stated:

> "We are reviewing every month at our level and every quarter at the level of the Board and at the level of the Ministry in respect of each one of the models."

5.59 When enquired about the machinery in the Ministry for monitoring the progress of indigenisation programme of various equipment manufactured by BEML, the Department of Defence Production and Supplies in a note furnished after evidence have stated

that the progress of indigenisation, against the pre-set targets, is reviewed on quarterly basis at the Corporate level (i.e. by the Board of Directors). Aspects of production relating to indigenisation are also discussed in the performance review meeting taken by RM|RRM. Besides this while examining the proposals for the release of foreign exchange to meet the production requirements, the plans and achievements of indigenisation are subjcted to a detailed examination.

F. Machine Utilisation

5.60 According to Audit, the product-mix for each of the year is determined on the basis of the Marketing Division's assessment of customers' requirements. On the basis of the product-mix so determined, the load impinging on various machine centres|work centres is examined and the indigenisation level planned. On this basis, a load analysis (shop-wise and machine centre-wise) is prepared and further examined based on availability of capacity in critical machine|work centres. Details of the total machine capacity in the 3 manufacturing shops in each of the Earth Mover and Railcoach Divisions and the unutilised capacity, on the basis of the estimated load as per the load analysis during 1979-80 to 1986-87 (as furnished by the Company and the Ministry) are as under:

Particulars	Total machine capacity (Hours in lakhs)	Unutilised capacity	Percentage of unutilised capacity to total machine capacity
1	2	3	4
1. *Earthmover Division*			
Machine Shop			
1979-80	11.92	5.53	46.40
1980-81	11.91	5.93	42.64
1981-82	11.77	2.51	21.33
1982-83	11.77	1.95	16.57
1983-84	8.42	0.70	8.32
1984-85	8.42	0.51	6.06
1985-86	8.78	0.44	5.01
1986-87	10.08	0.61	6.05

1	2	3	4
Gear Shop			
1979-80	4.68	2.98	63.68
1980-81	4.75	2.93	61.69
1981-82	4.82	2.02	41.91
1982-83	4.82	2.05	42.54
1983-84	4.43	2.17	48.99
1984-85	4.43	0.71	16.03
1985-86	4.54	0.92	20.27
1986-87	4.43	0.89	20.09
Plate Shop			
1979-80	0.58	0.09	15.52
1980-81	0.61	0.11	18.04
1981-82 . . .	0.58	0.02	3.45
1982-83 . .	0.58	0.08	13.80
1983-84 . . .	..	..	..
1984-85	2.52	0.44	17.49
1985-86	2.52	0.21	8.33
1986-87	2.27	0.10	4.41
II. *Railcoach Division*			
Machine Shop			
1981-82	4.57	1.28	28.01
1982-83	4.57	0.42	9.19
1983-84	4.57	0.39	8.54
1984-85	4.61	0.05	1.08
1985-86	4.64	(–) 0.16	(—)3.45
1986-87	4.25	0.01	0.24
Sheet Metal Shop			
1981-82	1.84	0.66	35.87
1982-83	1.84	0.47	25.55
1983-84	1.84	0.35	19.03
1984-85	1.84	0.20	10.87

1	2	3	4
1985-86	1.76	0.14	7.95
1986-87	1.48	0.12	8.11
Material Preparation Shop			
1981-82	0.94	0.39	41.49
1982-83	0.94	0.15	15.96
1983-84	0.94	0.21	22.34
1984-85	0.94	0.15	15.96
1985-86	0.79	0.00	..
1986-87	0.86	0.12	13.95

NOTE: Unutilised capacity represents difference between total machine capacity and the estimated load as per load analysis.

5.61 It would be seen from the above table that the unutilised machine capacity in the Earth Mover Division during 1979-80 to 1986-87 ranged from 5 to 46 per cent in the Machine Shop, 16 to 64 per cent in the Gear Shop and 3 to 18 per cent in the Plate Shop. Similarly, in the Rail Coach Division the unutilised capacity during 1981-82 to 1986-87 ranged from (-)3.45 to 28 per cent in the Machine Shop, 8 to 36 per cent in the Sheet Metal Shop and 14 to 42 per cent in the Material Preparation Shop.

5.62 In this conection, the Ministry intimated Audit in March, 1984 ".....Taking into account the inevitable problems of capacity balancing in different work centres for a multi-product situation as this and the achievable labour efficiency, a utilisation of 60 per cent to 65 per cent of the capacity is considered an efficient capacity utilisation."

5.63 The Committee enquired whether the problems of capacity balancing in different work centres and fixing norms for achievable machine utilisation were insurmountable. The BEML, in a written note have stated that in contrast to a process industry, in the heavy engineering industry, particularly, of the nature of BEML where only batch production is resorted to and a variety of equipments have to be produced in relatively small quantities annually, certain amount of imbalance in the plant capacity amongst the different work centres is inevitable on account of the fact that a number of processes are involved in the manufacture of any particular component and the load impinging on different work centres

is not uniform. The Company's efforts are always directed towards full exploitation of high costs work centres. Notwithstanding this, there are certain inevitable situations where equipments have to be installed even if there is no full workload on account of the fact that the concerned process happens to be an intermediate one between other processes and due to non-availability of such suitable facilities in the vicinity of the main plants. In view of this, complete balancing of the facilities in an industry of our type is difficult.

5.64 Asked about the comments of the Ministry in this regard, the Secretary of Department of Defence Production and Supplies during evidence stated:

> "I have given thought to this problem. In a multi-product engineering company I do not think it is possible to fix shop floor wise capacity. I also tried to find out if there are any technical guidelines available somewhere. In the short time available to me I have not been able to find them. Moreover, we must also see whether the effort would be commensurate with the result. The Plant and equipment in any factory consist of a variety. Some are tools. There will be no 100 per cent utilisation of tools. Even if you need a tool for making only one item, you have to get it. In regard to maintenance machines also the utilisation cannot be 100 per cent. The same will apply to jigs and fixtures. So, in my opinion, to fix a shop-wise capacity in an engineering company is not feasible."

5.65 According to Audit, as the Company does not generate machine-wise/machine centre-wise utilisation data, to enable comparison with the planned load as per the load analysis, the actual utilisation of the available machine capacity could not be ascertained.

5.66 The Ministry also intimated Audit in March, 1984: ".... The planned load is based on available capacity, and imports/ indigenous purchase of components is resorted to only in respect of items which are not developed and for which facilities are not available. Thus, if planned targets are realised, it would *ipso facto* signify an optimum utilisation of available machines. Still, however, the Company is planning to introduce a system of compiling utilisation data in respect of high value and critical machines."

5.67 The Committee enquired whether the Company has since introduced a system of ascertaining the actual load shop-wise to

have a realistic percentages of machine utilisation. In reply, the BEML in a written note have stated that the Company had introduced machine idle time analysis cards on which is recorded details of machine idling due to various reasons including machine break downs, power failures, want of operator, want of load etc. The Management has been utilising the resultant data for analysing the utilisation of the machines and taking necessary corrective action. However, it is accepted that this card does not give details of actual machine utilisation but is an indicator of the availability of the machine for utilisation, which has always been compared in relation to the load impinging on each work centre.

5.68 In this connection, the Committee wanted to know as to whether the proposed system of compiling utilisation data in respect of high value and critical machines has been implemented in respect of all such machines. The BEML in a written note have informed the Committee that in April, 1984, the Company introduced machine utilisation cards for critical and high value machines as an experimental measure. In October, 1986 the format of the card has been further refined to incorporate the work order reference, planned load and utilisation data. The data is being analysed by the Industrial Engineering Department and by the Divisional Head to study the reasons for non-utilisation, if any, and to take corrective action. In the opinion of the Company, the results of an analysis through such utilisation cards are the same as the data available through the earlier system of Machine Idle Time Analysis Cards.

5.69 Asked about the results achieved on account of introduction of the new system of compilation of utilisation data in respect of high value and critical machines, the Secretary of the Ministry during evidence stated:

> "On the basis of data generated on machine utilisation, the Company will examine and discuss what can be done to improve its utilisation. Whether the inhouse production of some bought out components can be taken up of some jobbing of sub-contract work can be done for someone else on it."

5.70 The Audit has pointed out that records are maintained by the Company only for breakdowns of machinery and maintenance delays which are reported and monitored. Other operational daleys are not recorded and monitored. Furthermore, unless reporting and monitoring of both the operational and maintenance delays are done, control over machine utilisation would not be complete and

meaningful. The Committee were informed that the Company has introduced from April, 1984 the maintenance of utilisation cards for selected machines of high value and those used for special purposes. The Ministry is also reported to have informed the audit in December 1985 that "The Company has formulated an experimental system for compiling utilisation data, for the high value machines and it will be refined on the basis of experience gained."

5.71 The Committee desired to know the number of high value and special purpose machines for which machine utilisation cards have been introduced. In reply, the BEML in a note have stated that the number of high value special purpose and critical machines identified for Earthmover Division, Railcoach Division and Mysore Division are 175, 29 and 16 respectively. The utilisation cards have been introduced for all these machines.

5.72 On being asked about the nature of experience gained so far and whether the system has been found to be satisfactory, the BEML stated that the experience gained so far with the system has indicated that it needs further refinement. The manual effort involved by the first line supervision in compiling the data is enormous.

5.73 In this connection, the Ministry had intimated Audit in March 1984: "The extent of utilisation achieved in an industry of this nature would not justify introduction of elaborate control mechanism which would merely generate unproductive data and entail heavy costs without commensurate benefit in terms of profitability." The Committee enquired whether the Ministry's view in this regard was supported by the findings of any technical authority or body. The Secretary, Department of Defence Production and Supplies during evidence stated:

> "Here I would submit for your consideration that the latest management practice is monitoring by exception. But here the audit seems to be pressing for maintaining the record shop-floor wise. On the insistence of audit, the company has started maintaining a record of high value machines. But I still feel that in this fast changing climate of management practice, there should be a little flexibility on these issues. They have started keeping data of the machines costing Rs. 50 lakhs and above from 1984. On an analysis of the data it is found that the result prima facie are the same as obtained from data they were maintaining earlier."

CHAPTER VI

FINANCIAL MATTERS

A. Inventory Control

Imports far in advance of requirements

6.1 The Company is reported to have been importing raw materials, components, assemblies and complete knockdowns for manufacture of earthmoving equipment. As lead time required for supply of these items varied from 6 to 18 months, orders are placed in advance so as to avoid production hold up. Some consignments were, however, received in advance of delivery schedules, depending upon the manufacturing programme of the collaborators and availability of shipping facilities. This, coupled with the difficult ways and means position experienced by the Company, rendered it expedient to keep goods in bonded ware-houses at Madras and KGF, with a view to postponing payment of customs duty.

6.2 The number and value of items kept in bond at the end of each of the years from 1979-80 to 1986-87 are as under:

As at the end of	No. of items	Value (Rs. in lakhs)
1979-80	44	320.56
1980-81	84	1437.65
1981-82	36	987.01
1982-83	65	1754.06
1983-84	113	841.44
1984-85	108	1512.76
1985-86	135	980.80
1986-87	90	1140.07

6.3 Age-wise analysis in respect of 90 items which remained in bond as on 31st March, 1987, was as follows:—

Period	No. of items	Value (Rs. in lakhs)
12 to 18 months	19	139.56
6 to 12 months	35	467.01
Less than 6 months	36	533.50
Total	90	1140.07

6.4 According to Audit, as the Company has been financing its working capital requirements mostly out of cash credit obtained from Banks, procurement of material far in advance of requirements resulted in payment of avoidable interest charges.

6.5 When the Committee desired to know the reasons for keeping their imported goods in bonded warehouses for such long periods thereby incurring heavy interest charges. The representative of BEML during evidence stated:

> "We have to always get ready with the goods and the bonded warehouse is the facility which is being provided to all the industries. I do not think that paying the rent of a house which one is occupying calls for any criticism. So we utilise these warehouses and pay rent. Notice of some minimum period has to be given to the collaborators. We cannot order today and get the things tomorrow. We have to get ready with the goods so that whenever any order is placed we could supply the goods from the bond in warehouse otherwise we may have to suffer loss."

6.6 In this connection, the Committee pointed out that there was need for a detailed and proper planning in this regard to avoid prolonged bonding of imported goods in warehouses. The witness stated:

> "I beg to sumbit that it is only because of detailed planning, we are able to organise all these things in a proper manner. But as you know, it is not in our control totally. The customer has to pilot his requirements with Planing Commission, Government, etc."

6.7 The Committee enquired as to whether the Company has considered the feasibility of reviewing its policy of imports in advance of requirement to minimise the incidence of prolonged bonding. The CMD, BEML during evidence stated:

> **"We have been making efforts that our collaborators instead of accepting orders on annual basis may now place orders more frequently. And also we are making efforts on ourselves and planning our own operations better so that we place orders for attachment of accessories and when the customer places order on us rather than placing them in advance."**

6.8 Elaborating, the BEML in a written note have stated that the following course of action has already been implemented:

(i) Our Collaborators have been prevailed upon to accept alternation in the delivery schedule to suit changing market conditions, with an advance notice;

(ii) To the extent possible, placement of orders for attachments on firm commitments from customers;

(iii) Placement of orders for GKDs of large value mainly on receipt of firm commitments for equipment from the customers.

6.9 When asked about the total expenditure incurred due to bonding during the last five years ending 1986-87, the BEML in a written note have stated that the interest charges incurred by the Company during the last five years ending 1986-87 due to bonding of goods are as under:

Year	Rs. in lakhs
1982-83	
1983-84	22.23
1984-85	96.03
1985-86	118.94
1986-87	77.48

6.10 In view of the above interest charges paid by the company for bonding of goods, the Committee enquired from the Ministry as to whether there was a need to have a relook at the provisioning policy of Company to minimise the incidence of prolonged bonding. The Secretary, Department of Defence Production and Supplies stated during evidence:

> "These figures do show some abnormality. The position since the last one year cannot be so, for the simple reason that the Customs have changed their law. You will not have a case during the last 18 months or so. Under that amendment, if you do not lift it within a certain time limit, they are free to auction the goods."

Elaborating, the witness added:

> "I am not giving it as an argument but I am only trying to analyse. This is not an unmixed evil. Partly, it is a blessing for two reasons. We work on cost effectiveness and profit in the public sector. If we see it from that angle I am giving my views on this matter—The storage charges by the Customs for this bonding were 12 per cent per annum. You will never get any cheaper storage than this either hired or in the Company's godowns. To the extent you bond, you do not have to make immediate payment for Customs duty. If you pay the Customs duty, you will pay higher depending on the prevalent bank interest. The only risk is possible deterioration in quality and the possible increase in the rate of Customs duty. In such a situation, the Customs duty is applicable on the date of de-bonding. On the other hand, by having got it earlier in this situation of currency appreciation, you have saved substantially on the exchange parity rate. From the business proposition point of view, I do consider it is not an unmixed evil. But otherwise I do agree that importing materials and then keeping them in stock, whether in a bonded warehouse or in your inventory requires a re-look. Certain measures have been taken by the Company and we will request them to keep these observations in view. For example the marketing position in earth-moving equipment in the last three or four years has been such that these orders come to you towards the end of the year. Some Departments and public sector units like Coal India, Irrigation and the Mines, place their orders in January and expect the order to be executed in March. Why don't they issue

earlier? The orders do not flow well in time. If you cannot deliver within the short delivery schedule, you will lose the business. The Company manufactures the equipment in a modular form. They do not fix the costly attachments like tyre and engines etc. They keep the equipment ready. The moment the order comes, they purchase the tyre etc. and deliver. You are to remain in business. This is a good practice. If we are to say first give us a firm order and then get the import, we do not know whether the ship sinks or not. If it is delayed, they will say 'it will come within 18 months'. No one is going to wait for you."

B. Loss due to non-recovery of interest

6.11 The Audit have reported that according to the terms and conditions of the contracts for sale of earthmoving equipment, the customers are required to pay 70 to 100 per cent of the value of equipment through their Bankers, on production of proof of despatch. But the terms and conditions do not provide for recovery of penal interest for bills not paid by the customers within the due date. Consequently on 402 bills (value: Rs. 81.13 crores) discuounted with Banks and not honoured by the customers on due dates, the Company could not recover from the customers overdue interest of Rs. 139.15 lakhs levied by the Banks during February 1979 to March 1987.

6.12 The Ministry have informed Audit in December 1955:

"Though under terms and conditions of Supply Order payment of bills on presentation of documents through bank is envisaged, there is no stipulation for payment of OD interest due to delay in honouring the presented documents through Banks. The OD interest has accrued because the Company has discounted bills to augment its working capital requirements. There would not be any OD interest had these bills not been discounted."

6.13 The Committee enquired as to whether the Company has considered the feasibility of stipulation in sale orders for recovering of OD interest from customers in view of the heavy interest burden involved. In a written note, the BEML have stated that generally, most of the customers do not accept the stipulation in the sale order for payment of bills through bank. Even the Government departments do not agree for effecting payment through inland letter of credit inspite of a decision of the Secretaries Committee. Such of those customers who agree to effect payment

through bank insist on a normal lead-time for processing and effecting payment, and they do not agree for levy of any interest in case payment is delayed. Hence, the clause regarding payment of interest is not incorporated in the purchase orders by customers. It would be helpful if the Government departments/Government undertakings agree to effect payment through inland letter of credit.

6.14 Asked about the opinion of the Ministry in this regard, the Ministry in a written note have stated that this is not an issue with which the Ministry is involved. However, the Board of Directors of the company are being asked to examine the matter.

C. Sundry Debtors

6.15 The following table indicates the volume and analysis of book debts as at the end of each of the years from 1979-80 to 1986-87:

(Rs. in lakhs)

At the end of	Considered good	Considered doubtful	Total	Bad debts written off
1979-80	3008.45	45.97	3054.42	6.53
1980-81	1805.43	75.74	1881.17	11.56
1981-82	3733.46	100.79	3834.25	5.74
1982-83	5496.50	132.95	5629.45	17.72
1983-84	6837.46	185.79	7023.25	18.14
1984-85	14,836.46	201.32	15037.78	21.38
1985-86	16,754.04	458.15	17212.19	57.84
1986-87	19,642.11	613.13	20255.24	59.52

6.16 Out of Rs. 20,255.24 lakhs due at the end of March, 1987 amount outstanding for more than one year was Rs. 2244.15 lakhs and age-wise details are as under:

(Rs. in lakhs)

Debts outstand. for	Govt. Deptts.	Public Sector companies	Private parties	Total
1 to 2 years	723.67	147.20	52.12	922.99
2 to 3 years	387.77	53.12	147.67	588.56
More than 3 years	603.36	100.51	28.73	732.60
Total:	1714.80	300.83	228.52	2244.15

6.17 The Committee enquired about the reasons for increasing trend of outstandings and also the bad debts written off year after year. The BEML in a written note have stated that the level of outstandings depend generally upon terms of payment accepted. In earlier years the Company could get an advance payment of 30 per cent along with the order and balance 70 percent was payable on proof of despatch. With certain Government Departments, 2 per cent or 5 per cent was retained for payment after commissioning and the balance was payable on proof of despatch. However in recent years many of the customers are not accepting payment of advance Certain major customers like CIL are retaining 20 per cent for payment after commissioning of equipment. Some Government Departments and also subsidiaries of CIL are insisting upon effecting 100 per cent payment only after commissioning. These factors have contributed to a higher level of outstandings in recent years.

6.18 As regards bad debts written off, the BEML have stated that the amounts written off represents outstandings for 4 to 7 years where amounts had been disallowed by customers for reasons such as shortages, rejections, variations in rates, demurrage/wharfage etc. Although, the debts written off have been increasing over the years in absolute terms, the magnitude of Company's operations has also been increasing and the extent of debts written off comparatively is not very high.

6.19 In this connection the Ministry in a written note have stated that in the past, Company did not take action to write off pending exhaustion of all possible steps. Since all such actions have failed to fructify into realisations of such bad debts the Company had no option but to write off such debts as bad, hence the increasing trend in the recent years.

6.20 Asked about the steps taken by the Company to realise huge amounts of outstandings and also to obviate the recurrence of such write offs in future years, the BFML in a writen note have stated that the Company has a net work of Regional and District offices in close proximity to the customers and these offices are following up for payment on day to day basis. For this purpose specific officers have been earmarked in each Region/District Office. Senior Officers from HQ visit the Regional Offices and customers at regular interval to supplement the efforts of the Regional Manager. Wherever necessary, the matter is taken up at the highest level (at the level of Chairman). In certain instances, assistance from Ministry is also taken for taking up the case with concerned Ministry. The position of the outstandings is reviewed at frequent intervals by Directors/ Chairman at Board meetings and by the Ministry at quarterly Per-

formance Review Meetings. Thus a steady pressure is being brought on the customer for hastening up the settlement of old outstandings.

6.21 In view of heavy outstandings, the Committee enquired as to whether the high level of outstandings call for need to streamline the procedural formalities and thereby setting right the existing impediments in debt collection. The BEML in a written reply stated that it was desirable to implement the decision of the Secretaries Committee for effecting payment through inland letter of credit not only by the Government Departments but also by the Government Undertakings.

6.22 On being asked about the nature of assistance rendered by the Ministry to help the Company recover these huge outstanding, the Department of Defence Production and Supplies have stated in their written note that the Ministry has been writing to concerned administrative Ministries for early settlement from time to time based on Monthly Reports received from the Company. However, there has been no significant improvement in the realisation of outstandings. The majority of outstandings were from Coal Companies whose own liquidtiy position is also largely affected owing to the non-realisation of the dues from the Electricity Boards.

D. **Excessive Recourse to Cash Credit.**

6.23 The Audit have stated that the Company has been availing cash credit facility from Banks for meeting the working capital requirements. While the Company availed cash credit at high rates of interest, considerable funds of the Company have been looked up in bonded inventories, surplus/non-moving stores and outstanding debts. The details of cash credit outstanding, funds blocked up avoidably and interest paid by the Company during 1979-80 to 1986-87 are given in the table below:—

Year	Cash credit outstanding at the end of the year	Inventory at the year end		Book debts at the year-end (considered good)	Interest on cash credit paid during the year
		Kept in bond	Surplus/ non-moving		
1	2	3	4	5	6
1979-80 . . .	2808.04	320.56	217.50	2008.45	300.18
1980-81	3299.16	1437.65	275.08	1805.43	401.63

1	2	3	4	5	6
1981-82 . .	4577.03	987.01	300.40	3733.46	687.80
1982-83	9960.82	1754.06	293.25	5496.50	1397.76
1983-84 . . .	13312.97	841.44	306.32	6837.46	2162.58
1984-85 . . .	13225.21	1512.76	397.35	7235.01	1955.01
1985-86	12574.44	980.80	413.67	16754.04	1221.26
1986-87	14135.01	1140.06	411.86	19642.12	1324.96
				TOTAL:	9451.58

6.24 It would be observed from the above table that interest paid to Banks on cash credit availed by the Company during 1979-80 to 1986-87 amounted to Rs. 94.52 crores. According to Audit, the amount of profits from year to year would have been higher if the incidence of interest on cash credit had been minimised by collecting the dues promptly and reducing the funds booked up in inventories. The Committee wanted to know about the steps taken by the Company to remedy such a situation. In a written reply, the BEML have stated that the Company's customers are mostly Government Undertakings/ Departments, who generally procure bulk of their Capital Equipments during the third and fourth quarter of the year with the increasing volume of production and in order to optimally utilise the resources available to the Company, it is essential to even out the production as much as possible right through the year. This coupled with the fact that the Company produces most of its equipments based on estimates of market demand and not against firm orders it has become inevitable for the company to rely heavily on cash credit. Despite the increase in turnover from Rs. 383 crores (1983-84) to Rs. 506 crores (1986-87), the Cash Credit limit continues to be at Rs. 129 crores from December, 1984. In order to reduce the level of borrowings, the company has taken the following steps:—

(a) Introduction of Module production and regulation of high value bought out items like Engines; Transmissions; Tyres, etc. to be received just in time to match the final assembly operations;

(b) Development of multi skill operations in the direct workers which gives flexibility of deployment.

(c) Systematic follow up for collection of outstanding dues.

(d) Constant review of inventory and reduction of inventory margins wherever possible;

The Ministry has been emphasising the need for reduction of inventory and the sundry debtors and these are being monitored in the Production Review Meetings.

6.25 When the Committee enquired about the suggestions of the Ministry to remedy such a situation, the Ministry in their written reply have stated that the levels of utilisation of Cash Credit and the consequential interest burden are not considered excessive for the following reasons:—

(1) The operations of the Company have considerably increased over the years;

(2) The Company has been following a Production/Marketing Strategy of manufacturing equipment in anticipation of orders. This policy necessarily involves initiating advance procurement action resulting in—

(i) Bonding of goods;

(ii) Items becoming surplus/non-moving etc;

(iii) Most of the sales of the company are to depend upon the Government for their budgetary support and consequentially there has been some delay in realisation of the debt. However, in order to further improve the performance of the Company and to reduce the interest burden, Company has been directed to minimise inventory including bonding of inventory and expedite the collections of debts.

PART II

CONCLUSIONS/RECOMMENDATIONS OF THE COMMITTEE

1. The Committee note that the Board of Directors of the Company in December, 1976 approved a Corporate Plan, covering inter alia, environmental influences, mission, objectives, corporate strategies and functional strategies as well as an action plan comprising detailed year-wise targets for 1976-77 to 1980-81 and broad projections for the subsequent five year periods ending 1985-86 and 1990-91. Although the Bureau of Public Enterprises had issued guidelines as far back as in 1974 to the effect that each public enterprise was required to formulate a Corporate Plan with formal ratification/approval by the administrative Ministry, neither the Bharat Earth Movers Ltd. (BEML) cared to obtain the approval of the Department of Defence Production and Supplies to the Corporate Plan approved by their Board of Directors in December, 1976 nor the Department considered it necessary to ensure compliance with the guidelines issued by BPE in this regard. The Department of Defence Production and Supplies stated that as the composition of the Board included Government Directors and also in view of the fact that a copy of the agenda was sent to the Ministry no separate reference for approval of the Corporate Plan was made to the Government. The old records available in the Ministry do not suggest that the Corporation Plan of BEML was formally ratified by Government. At this stage the Committee can only express their regret that since 1976 the Company has been functioning on the basis of a Corporate Plan not approved by the Government. The Committee need hardly emphasise that specific approval of Corporate Plan by Government was necessary to enable it to indicate the direction that the Company should take and to have an overall view of the production requirements.

2. The Committee are surprised to find that the Company had not made a comprehensive review of achievements against the various strategies, action plans, etc., laid down in the Corporate Plan but only reviewed in 1980-81 (April, 1980) and 1985-86, the action plans relating to introduction of new equipment in production, year-wise

production/sales of equipment and certain indicators/ratios of performance of efficiency, at the Board level. The Committee are not satisfied with the reply given by the Company that their Board had been regularly reviewing the performance and achievements of the company in the background of the strategies and action plans spelt out in the Corporate Plan even though a specific review might not have been undertaken as comprehensive, distinct and independent exercise since the growth rate had, by and large been in consonance with the Corporate Plan.

3. The Committee are surprised to find that although the Corporate Plan had envisaged the introduction of Heavy vehicles during 1978-79, 40 ton. pipe layers meant for Mines and Petroleum producers during 1979-80, Hydraulic cranes by October, 1979 and 120 tonne Rear Dump trucks by 1985, these were not introduced till 1986-87. According to the Ministry the main reason for their non-introduction was market demand not picking up as anticipated and also various other factors. The Committee are not in agreement with this view of the Ministry. They feel that the Company should have worked out a systematic and aggressive marketing strategy.

4. In regard to 40 T Pipe Layers which was due for introduction in the year 1979-80, only development work, involving an expenditure of Rs. 22.48 lakhs was completed by March, 1985. As stated by the Company during evidence, at the time of finalisation of Corporate Plan in 1976, the Company expected on the basis of their market survey orders from the oil, gas field areas and coal sector, but subsequently the demand did not pick up as anticipated resulting in deferring of introduction of 40T Pipe Layers from 1979-80 to 1986-87. Only 2 numbers were produced during 1986-87. When enquired whether any specific commitment was obtained from ONGC for placing orders on BEML for 40 ton pipe layers, the CMD (BEML) during evidence stated:

> "No; they did not give....we do not have any such document to prove."

The Committee cannot but come to the conclusion that there was no reasonable basis for assessing the demand for pipe layers at the time the corporate plan was drawn up. The Committee feel that in the absence of any specific commitment from ONGC and from the coal sector, the Company should not have incurred expenditure on the development work to the tune of Rs. 22.48 lakhs.

5. It has also been brought to the notice of the Committee that ONGC and Gas Authority of India have placed orders on foreign parties and contractors for erection of complete HBJ pipelines, who have already got in their stock in their own country or in the third country such equipment/pipe layers. One of the clauses in the contract with them provides that they can bring the equipments (pipe layers) into India and utilise it for laying of pipelines for HBJ or for any other such contracts. The Committee are informed that the Company took up the matter with the foreign contractors as well as the Gas Authority of India Ltd. for giving BEML an opportunity to supply those equipments and spares but the efforts proved futile as the contract stipulated that the foreign party could bring to India for their use whichever equipment they required and took it back after completion of the project. Similar instances have been quoted by the Company in the field of hydro-power and thermal power projects in which foreign contractors were allowed to bring such equipment required by them and re-export them after the project had been completed. The Committee are also informed that the CMD, BEML had met all concerned authorities connected with power projects, big dams, multipurpose projects including the Secretary, Power and Chairmen of NHPC, CWC and CEA and also wrote to them that hereafter the company should be allowed to ask the foreign contractor to use the equipments and spare parts supplied by BEML. The Committee feel that the BEML should have approached the concerned authorities in regard to the supply of pipe layers well before the finalisation of agreement with the foreign contractors. The Committee would urge the Government that in future a clause should be introduced in the agreements that where indigenous capabilities were available for supply of equipments and spare parts, they would use such equipments and spare parts instead of importing such equipments and re-export them after the completion of the project.

6. The Committee note that the production of heavy vehicles meant for Defence Department was due for introduction in 1978-79 in Railcoach Division, with an envisaged production level of 95 numbers by 1980-81. It had not been taken up as the question of entering into a collaboration agreement with the Czechoslovakian Government was under consideration and the proto-type tractor was under trials (December, 1985). In the meantime, 45 vehicles were imported by the Defence Department in 1983 at a cost of Rs. 21.86 lakhs. The Committee have been told during evidence that these heavy vehicles are still being imported by the Army. According

to the Company, they were aware of General Staff Quality requirement (GSQR) of the Army in regard to heavy vehicles from the very beginning. The Army was experimenting with various types of heavy duty vehicles but had not come to any definite conclusion as to which particular type of vehicle was required by them. The Secretary, Defence Production informed the Committee during evidence that the heavy vehicles which BEML wanted to introduce and develop as per GSQR sometime in 1984 was given to the defence services in 1984 for their evaluation and trials. The results of those trials were yet to be received by the Ministry. When enquired as to how much time will be taken to evaluate vehicles given by the Company for trial, the Secretary, Defence Production stated:—

> "Final view has not yet emerged....These are matters which involve huge financial implications, change in technology, change in pattern and fuel efficiency."

The Committee are constrained to point out that the production of 95 heavy vehicles in 1980-81 itself was envisaged in the Corporate Plan by BEML without having any specific consultation with the Army. They are also pained to note that even though the Ministry were aware of the envisaged production of these heavy vehicles, they did not direct the Army to give clear indication regarding their requirement of such vehicles and the specifications thereof. Although the proto-type of the heavy vehicle was given to the Army by BEML in 1984, the Army has yet to take a final view in this regard. The Committee are unable to appreciate the delay of almost four years on the part of the Army in taking a final decision in the matter. They are particularly concerned because the BEML has the necessary infrastructure for development of such heavy duty vehicle but the Army is not giving a clear indication in regard to the model they are finally interested in whereas they have been importing such vehicles spending the scarce foreign exchange. The Committee hope that Department of Defence Production and Supplies would take up the matter with the Army with a view to pursuing the evaluation and trials of heavy duty vehicles, the prototype of which was supplied to the Army in 1984. The Committee are afraid that such delays in evaluation and trials of futuristic vehicles required by the Army might result in technological obsolesence of the equipment and resultant loss to the Company. The Committee, therefore, recommend that the Government should perform a constructive role in getting the requirement of Army finalised soon and orders placed on BEML.

7. The Committee note that the restructuring of production facilities in the existing factory at KGF, so as to limit it to the production of only crawler equipment and setting up of a new factory at Mysore at an estimated cost of Rs. 61 crores to commence manufacture of wheeled equipment from 1982, were among the strategies under the Corporate Plan. The new factory set up at Mysore, however, started commercial production only from 1985-86. According to the Company, due to insufficient demand for Earth Moving equipments the Company did not go ahead with the Mysore project in a full-fledged manner. It was decided by the Company after reassessing their market potential and market conditions that KGF complex would continue to manufacture track type of equipments like excavators, bull-dozers etc. and also the sophisticated aggregates like transmissions, hydraulics etc. The production of the wheeled equipment would be done at Mysore by utilising the existing project sanctions and also by smooth transfer of production (CKD's) from KGF to Mysore. As against project sanction of Rs. 61 crores, the factory at Mysore was set up with an investment of Rs. 20.72 crores. The transport charges incurred on the transfer of CKD's from KGF to Mysore during 1985-86 and 1986-87 were Rs. 4.66 lakhs and Rs. 25.39 lakhs respectively which had marginally increased the cost of production of wheeled equipments. When asked about the reasons for creating separate facilities at Mysore inspite of infrastructure being available at KGF, the representative of BEML during evidence informed the Committee: "while drawing the Corporate Plan, we had taken note of the need in future for bifurcating the facilities from KGF to another factory at Mysore where there are a lot of growth prospects. We thought that at one place if we start doing it, it will not be a streamlining operation because the number of workers will be around ten to twelve thousand at one place." According to the Company, the creation of facilities at Mysore was delayed by the Company due to recessionary trends in the International field of earthmoving industry and the slow growth of the national economy, the market demand pattern did not behave in consonance with the expectations. The Company considered prudent to adopt a cautious and careful approach least the company is burdened with a heavy unutilized capacity. The Company informed the Committee that the recessionary trend in the International field of earthmoving industry was a part of the general recession in the entire Engineering Industry, world-wide, which was essentially due to oil crisis of 1979. The Committee cannot but express their concern over the fact that the new factory at Mysore which was to commence manufacture of wheeled equipment from 1982 as per the strategy under the

Corporate Plan, commenced production only from 1985-86 and instead of investment of Rs. 61 crores as envisaged in the Corporate Plan, an investment of Rs. 20.72 crores was made. This clearly shows that there was lack of proper planning and anticipation of the future demand for wheeled equipment. The argument that the delay in setting up the new factory was due to recessionary trends in the international field of Earth Moving Industry and the slow growth of the national economy is too general in nature and does not fully justify limiting of facilities at Mysore. In Committee's view the transportation charges of Rs. 25.39 lakhs incurred by the Company in 1986-87 on the transfer of complete CKD's from KGF to Mysore is not an insignificant amount. These charges may increase further in future. The argument given by the representative of the Company that one of the reasons of creating facilities at Mysore was that the number of workers at KGF will be around 10 to 12 thousand at one place. The Committee are surprised as to how the continuance of facilities for wheeled equipment at KGF reconcile with this view of the Company.

8. The Committee note that the Company had set up production facilities progressively in the Earth Moving Equipment Project to keep pace with requirements, phasing out the capital investment over a period of 19 years from 1965-66 to 1983-84. The expenditure incurred to the end of March, 1984 was Rs. 31.29 crores. The U.S. consultants to the project suggested in May 1965 that a more detailed and a specific programme be drawn up for implementing the Earth Mover project. But the Company neither prepared a detailed and a specific programme nor laid down a time schedule for implementation of the Project so as to monitor the implementation on the basis of accepted techniques such as PERT and CPM. In this connection, the Company has informed the Committee that the product-mix for which the capacity was proposed to be created was changing from time to time with each project revision. The Company has further informed that in view of the fact that the demand was not growing as anticipated, they had to perforce go slow in the creation of facilities. Although no project should be implemented without having any time schedule for implementation, in this particular case the execution of the project in phases and to the extent necessary and required for meeting the demand has helped the Company in avoiding building up of idle capacity. But by resorting to close monitoring of progress of the project, Company was able to create facilities for manufacture of a variety of models of earth moving equipment which could meet not only the

domestic demand but also to a certain extent overseas demand. The PERT and CPM techniques were not frequently used in those days as they were less known and of recent use in India. The Secretary of the Ministry attributed the absence of time schedule to piecemeal sanctioning of the various phases. As regards monitoring of the implementation of the project, the Secretary informed the Committee that during those days when this project was sanctioned or initiated in the Government or in the Government undertakings either the awareness of these techniques (PERT/CPM) or the desirability of introduction of such techniques did not exist. For the first time the BPE issued instructions on this vide their Circular dated 30th March, 1970. The Committee have also been informed that continuous monitoring of the project was effected through annual capital budgets and revised estimates. In this connection, the Secretary of the Ministry also stated: "I am not ruling out the possibility of a PERT monitoring mechanism even on piecemeal sanction, but its utility and its effectiveness in my opinion is bound to be very poor if the project requirements were not sanctioned at one go." While agreeing to the importance of PERT/CPM techniques for project monitoring, the Secretary of the Ministry agreed that he would not dispute the importance and contribution of these techniques to any management practice. The Committee regret to note that the Company went on creating facilities in phases for 19 long years for the manufacture of earth moving equipment without drawing up any specific programme as suggested by the U.S. consultants. The Committee totally disagree with the justification given by them for not doing so on the ground that they had to implement the project in a piecemeal fashion so as to keep pace with the actual growth in demand. The Committee strongly feel that in such a situation it was all the more necessary for the Company to finalise a detailed and specific programme for implementing the project. The Committee are also unhappy to note that the Company did not adopt the monitoring techniques such as PERT/CPM to watch the implementation of the project. The reply given by the representative of the Company as well as Government that these techniques were not adopted because of their awareness or the desirability of the introduction did not exist, is most unsatisfactory. The BPE had issued guidelines for adopting these techniques as early as in March, 1970. The Company could have at least considered adoption of these techniques for monitoring the implementation of this project after they had received these guidelines.

9. The Committee note that in the context of inadequacy of existing indigenous sources for supply of castings and to increase pro-

duction of equipment with higher indigenous content, a Project Report was prepared (August 1972), envisaging a capital outlay of Rs. 355.75 lakhs (revised to Rs. 599.17 lakhs in June 1975), for establishing a captive foundry with an installed capacity of 3600 tonnes per annum, capable of being further augmented by 1000 tonnes per annum after providing additional marginal facilities. The cost per tonne of in-house manufacture of castings and forgings was estimated at Rs. 10,081, Rs. 9,074 and Rs. 8,470 at capacity utilisation of 60 per cent, 80 per cent and 100 per cent respectively, as against the estimated purchase price of Rs. 11,238 resulting in cost advantage to the Company. The actual expenditure incurred to end of 1974-75 was only Rs. 11.73 lakhs on the pattern shop building meant for the foundry, which is, however, being used for housing the Hydraulic Shop catering to R&D activities. Subsequently, Government of Karnataka proposed in July 1975 to entrust to the Company a private foundry run by Vignyan Industries Limited (VIL), Tarikere, set up in 1970 and remaining closed since December 1974 because of mismanagement and shortage of funds. The estimated production capacity of VIL was 1500 tonnes of steel castings p.a., subject to rehabilitation and augmentation of plant and machinery (estimated cost: Rs. 106 lakhs). The VIL was rehabilitated with the assistance of financial institutions and became a deemed Government Company under section 619(B) of the Companies Act, 1956 with effect from January 1975; it resumed working from November 1975. Government of India, however, approved (April 1983) conversion of VIL into a subsidiary of the Company by purchase of shares to the extent of at least 75 per cent of the total shareholding at an approximate cost of Rs. 16.45 lakhs. Thus the proposal to establish a captive foundry took more than a decade to materialise. Meanwhile the Company purchased from open market during 1974-75 to 1983-84 steel castings to the extent of 14,881 tonnes (including 2763 tonnes from VIL) at the average purchase price of Rs. 13,375 per tonne. Thus, due to delay in either establishing a captive foundry or taking over of VIL, the expected cost advantage was lost by the Company. The Committee also note that even as early as 1972, the Company had envisaged need for 3600 tonnes of castings per annum but the actual consumption in the 10 years from 1974-75 to 1983-84 was only 14,881 tonnes i.e. an average of less than 1500 tonnes per annum. In this connection, the Committee have been informed by the Company that the need for 3600 MT of castings per annum was envisaged in early 1972 based on the production level of 850 earth moving equipment (at stablisation level) and also for a production of 400 Railcoaches and taking an average of 1500 tonnes over a long period was not correct. They

envisaged the progressive development and increase in requirement of castings upto 3600 tonnes had been reached in the year 1983-84 and subsequently they have been using casting to the tune of more than 4000 tonnes. On the question of acquiring foundry M/s. Vignyan Industries Limited, whose capacity was assessed at only 1500 tonnes per annum after rehabilitation and augmentation of plant and machinery at a cost of Rs. 106 lakhs, as against estimated requirement of 3600 tonnes per annum, the Committee are informed that the licensed capacity of VIL was 3000 MT of steel castings. The Committee are at a loss to understand as to why M/s. Vignyan Industries Limited whose installed capacity was only 1500 tonnes per annum was purchased while the Company's need as envisaged in early 1972 was for 3600 M.Ts of casting. The Committee are constrained to note that during the years 1985-86 and 1986-87 this foundry produced only 581 tonnes and 1006 tonnes of steel castings and incurred a loss of Rs. 87.24 lakhs and Rs. 57.34 lakhs respectively. As admitted by the representative of the Company the total production of this Foundry may not exceed 1400 or 1500 tonnes during the current year. The Committee are most unhappy to note that M/s. Vignyan Industries Limited has been able to operate only at 20 per cent of its capacity. To end of 1985-86 it incurred a Cumulative loss of Rs. 512.39 lakhs as against its paid up capital of Rs. 45.47 lakhs.

The justification given by the representative of the Company that they could not achieve full capacity due to inadequate supply of power does not convince the Committee in regard to the dismal performance of the Foundry. As against the consumption of 4100 M.Ts in 1986-87, the Foundry produced only 1006 tonnes of steel castings. The remaining quantity had to be purchased from the open market. The Committee has, therefore, come to an inescapable conclusion that the decision to purchase Vignyan Industries Limited was not commercially prudent. They desire that the Ministry should hold an enquiry as to at what level the decision to purchase this unit was taken and what were the considerations which weighed for taking over this unit. They would also like to know as to why the decision in regard to establishing a captive foundry was shelved.

10. The Committee note that the total revenue and capital expenditure incurred on R&D upto March, 1987 was Rs. 1973.36 lakhs and Rs. 1294.24 lakhs respectively. Out of the 43 development projects taken up by the Company during the period April, 1971 to March, 1984, only 27 projects were completed to the end of 1983-84.

The Committee also note that the Company did not draw up any specific schedule on imports substitution projects for execution after establishment of R&D in 1971. The Committee are not satisfied by the reply of the Company that they did not draw up schedule as they gave priority for absorption of technology available through collaboration and indigenisation of collaborated products. The Committee on Public Undertakings in their 2nd Report (5th Lok Sabha) had strongly recommended that the Undertaking should formulate research schemes with the specific purpose of achieving objectives for which the Research and Development Fund had been created including the Scheme to rapidly indigenise the manufacture of components. The Committee are pained to note that the Company did take no serious note of this recommendation of the Committee. Delays in the completion of 18 projects ranged from 16 to 76 months. Had the Company drawn up schedule of import substitution projects for the execution immediately after setting up R&D, they would have reduced the delays in completion of various projects. It is only now that the Company draws up schedule for both development of products and imports substitution. The Committee regret to note that, as admitted by the Secretary, Department of Defence production and Supplies, the Ministry did not evolve a regular mechanism for monitoring and evaluating results of the various R&D projects undertaken by the Company. The Secretary also conceded that this has been a weak area as far as the Ministry level was concerned. The Committee hope that as assured by the Secretary a regular monitoring mechanism would now be evolved in the Ministry for monitoring expenditure incurred by BEML on various R&D projects and for proper evaluation of results achieved by the Company in the field of R&D.

11. The Committee are constrained to observe that although the corporate plan emphasised self-reliance in the fields involving sophisticated technology, neither any appreciable progress has been made nor effective action taken in fulfilment of this important corporate strategy even after a lapse of 12 years. This fact has been admitted by the Secretary, Department of Defence Production when he informed the Committee during evidence that one of the areas of concern was indigenisation.

12. The Committee note that one of the Corporate strategies laid down in the Corporate Plan of 1976 was to establish engineering capability for development and production of critical assemblies with high technological components like power shift transmissions and hydraulics etc. with a view to achieving self-reliance in these fields involving sophisticated technology. A hydraulic shop was set up

in 1976 by regrouping the available facilities and transferring certain machine tools and equipment (value: Rs. 23 lakhs) to produce hydraulic components required for the production of earth moving equipment. The Committee regret to note that from 1981-82 to 1986-87 the value of in-house manufacture of hydraulic items was only Rs. 8.86 crores as against outside purchases of about Rs. 40 crores. The Company is deriving satisfaction from the sudden increase in value of production of hydraulic components from Rs. 1.72 crores in 1985-86 to Rs. 4.03 crores in 1986-87 and expects to reach a level of about Rs. 7 crores in 1987-88. The Committee feel that had the Company made serious efforts and organised themselves in a better manner in the past years to improve their share of production of hydraulics, their in-house production would not have been a small fraction of their total requirements.

13. The Committee note that the collaboration agreement with M/s. Komatsu, Japan for the manufacture of diesel engines by BEML was approved by Public Investment Board (PIB) and taken on record by Government on 15-7-1985. The Ministry intimated Audit in December, 1985 that the BEML's proposal for having its own captive Diesel Engine Plant was in final stages of approval. However the project could not be cleared because of certain objections raised by the Ministry of Industry and the DGTD, who have now finally agreed to the proposal. The Committee find that M/s Kirloskar Cummins Limited, Pune are the only manufacturers of Diesel Engines which can be fitted in equipment supplies by BEML to its customers. The BEML has been facing a number of complaints from customers including the Coal India Limited of serious performance deficiencies and in every case of new equipment the period of stabilisation has been unduly long resulting in growing customer dis-satisfaction. The Committee cannot but express their deep concern over the delay in sanctioning of the Diesel Engine Project particularly when the project for manufacturing of Engines had gained currency as early as December, 1985. The Committee hope that no precious time would now be lost in clearing Diesel Engine Project.

14. The Committee note that although regular production in the Company commenced in 1968-69, the rated capacity of Earth Mover Division has not been fixed either in terms of physical output or in standard mahours (SMH) after taking into account the production facilities progressively set up. The Committee are unable to agree with the BEML that since they are manufacturing a variety of heavy duty engineering equipments with very little commonality

between them in regard to size and time taken for processing of components, it was not possible to fix capacity in such a manner and that there was no other guide for rated capacity than an assessment of the work content. In fact, the Company has now worked out a national capacity in terms of standard man hours from 1979-80 to 1986-87 based upon a proportional working in relation to the progressive expenditure on plant and machinery actually made from time to time and working backwards from the year of completion of the project for 890 equipments viz. 1985-86. As conceded by the Secretary of the Ministry, capacity of the varied product mix could be fixed in terms of standard man hours based on industrial engineering studies. Thus, the Committee desire that based on industrial engineering studies, the company should fix the capacity in terms of standard man hours, even in the product-mix situations like that of the company. The SMH capacity so fixed should be formally documented and compared with the actual capacity utilisation to have realistic assessment of the performance of the company and reported to the Committee within six months of the presentation of this report.

15. The Committee also find that although the Company is producing spares but their capacity in terms of SMH has not been fixed. The Committee are not satisfied by the explanation given by BEML that since the work content involved in manufacture of complete equipment was relatively much higher than that required for production of spares, which were mostly confined to moving and wearing parts, there was no need to specifically create additional capacity for spares and the requirement can be met by resorting to overtime work etc. The Secretary of the Ministry stated during his evidence: "....The basic question which the audit is putting is that, why are you not fixing the capacity for the production of spares? The company's answer is that we have never created any capacity as such for spares. Therefore, we cannot fix it. It is the viewpoint of the Company. I am not saying that I accept it or that it should be accepted....I personally feel—apart from the argument and the logic thereof—and I would also suggest to the Company that they should give a re-look to this problem and come out with alternatives which are possible and also how to tackle it. I propose to write to them immediately after my submission before the hon. Committee as to what are the possibilities, how best we can try to satisfy audit. We would try to find a realistic solution..... these days whenever we sanction a project for manufacturing so many original equipments, the percentage of spares is also mentioned. This is so in Ordnance Factories". The Committee would,

therefore, like BEML to clearly specify in terms of standard man-hours the capacity for spares so as to have a realistic assessment of utilisation of their capacity.

16. The Committee note that the rated capacity of 270 rail-coaches per annum of the Railcoach Division of the Company was expanded to 400 railcoaches by 1975-76 at a cost of Rs. 211 lakhs, based on an expansion project for increasing the capacity of the Division, which was approved by Government in December, 1970 (Estimated cost Rs. 213.65 lakhs). Though the Railway Board intimated in April, 1974 a cut back on orders for railcoaches, the Company went ahead and raised the plant capacity to 400 rail-coaches on the ground that bulk of the commitments on civil works, plant and machinery were already made. The Committee regret to note that as against the rated capacity of 400 railcoaches per annum, the actual production of the Division ranged between 184 to 350 railcoaches per annum from 1979-80 to 1986-87. Even after 12 years, the full capacity of 400 coaches has not been utilised by the Company. The Committee are unable to comprehend such a situation as on one hand there is acute shortage of rail-coaches in the country and on the other hand established capacity of BEML for rail coach manufacture is not fully utilized. The Railways have to invest in expanding their coach manufacturing capacity whereas BEML has to diversify to utilize its capacity. The Committee consider such a sorry state of affairs due to lack of proper dialogue between the Ministry of Railways, Ministry of Defence and BEML.

17. The Committee find that as against the sanctioned capacity for the manufacture of 850 earthmoving equipment upto 1980-81 and 890 thereafter, the earthmover division produced 950 equipment in 1981-82, 1131 in 1982-83, 930 in 1983-84, 1004 in 1984-85 and 924 in 1985-86 respectively. The percentage of imported components to total consumption of components has increased from 45.53 per cent in 1979-80 to 61.37 per cent in 1985-86 as also the value from Rs. 25.06 crores to Rs. 133.65 crores during the same period. According to Audit, the utilisation of high percentage of components from outside sources to achieve higher rate of production also resulted in under utilisation of production facilities established in the company. The percentage of in-house manufacture of components of the Company came down from 15.17 in 1979-80 to 9.04 in 1985-86. The Committee recommend that the Company should take necessary measures to ensure that the foreign exchange outgo should be as little as possible and in no case it should be encouraged. The import content in the manufacture of equipments should therefore be brought down

to the barest minimum. The Committee would like a close watch to be kept on the imports of components equipment-wise.

18. The Committee note that the Company initially started production of earth moving equipments with low indigenous content to be increased progressively with the assistance of collaborators. In some cases the agreements were extended specifically to attain this objective. However, the extensions of such agreements due to non-achievement of expected indigenisation levels led to continual import of components. Several products developed by the Company were also produced with low indigenous content initially and progressively increased thereafter. From the information furnished to the Committee by the Company, it is observed that in case of the equipments like Haulpak LW 50, D 355 A-3 Dozer, D 155 A, Dozer G.D. 605 Motor Grader, either the level of 85 per cent indigenisation has been achieved after the target year of maximum indigenisation or has not been achieved at all so far. In case of new equipments introduced in 1984-85 like D31, HD785, PC650 and PC300 Hydraulic Excavators, there was no significant progress made by the Company to achieve maximum indigenisation. The Committee are informed that there was a delay in achieving required indigenisation level for some of the equipment because of specifications and degree of sophistication in respect of certain items. The Committee are surprised at the reply of the Company that they adopted an optimistic approach with a view to reaching high levels of achievement. In Committee's view they should have taken the factor of degree of sophistication into account while fixing the target year for maximum indigenisation. The Committee hope that as assured by the Company, they would achieve the indigenisation level of 80 per cent within a period of 5 year as against the 10—12 years taken by them in earlier years. The Committee need hardly stress their earlier recommendation made in their 2nd Report (1971-72—5th Lok Sabha) that the pace of indigenisation progress needs acceleration.

19. The Committee note from the details of machine utilisation furnished by Audit and the Company that the unutilised machine capacity in the Earth Mover Division during 1979-80 to 1986-87 ranged from 5 to 46 per cent in the Machine Shop, 16 to 64 per cent in the Gear Shop and 3 to 18 per cent in the Plate Shop. In the Rail Coach Division the unutilised capacity during 1981-82 to 1986-87 ranged from (—) 3.45 to 28 per cent in the Machine Shop, 8 to 36 percent in the Sheet Metal Shop and 14 to 42 per cent in the Material

Preparation Shop. The Ministry have informed Audit that the low machine utilisation was due to the inevitable problems of capacity balancing in the different work centres for multi-product situation. Although the Company have introduced machine idle time analysis card, this card does not give details of actual machine utilisation. It is only an indicator of the availability of the machine for utilisation. The Committee feel that such a system would not be useful in computing the actual machine utilisation. The Committee, therefore, recommend that a system should be evolved in the Company with the help of "Industrial Engineering Studies", so that the actual machine utilisation of all the machines installed in the Company could be ascertained accurately for comparing it with the available machine capacity.

20. The Committee also note that the Company has introduced machine utilisation cards for critical and high value special purpose machines in respect of 175, 29 and 16 machines in Earth Mover Diyision, Rail Coach Division and Mysore Division respectively costing Rs. 50 lakhs and above, as an experimental measure from April, 1984. In October, 1984 the format of the card has been further refined to incorporate the work order reference, planned load and utilisation data. The data is being analysed by the Industrial Engineering Department and the Departmental Head to study the reasons for non-utilisation, if any, and to take corrective action. According to the Company, the results of an analysis through such utilisation cards are the same as the data available through the earlier system of Machine Idle Time Analysis Cards. The Committee, therefore, desire that the system of machine utilisation cards for high value special purpose and critical machines should be further refined so as to give more precise utilisation data. They also desire that the possibility of computerisation of the compilation of machine utilisation data may also be explored.

21. The Committee are constrained to note that as on 31st March, 1987, 90 items valuing Rs. 1140.07 lakhs were lying in bonded warehouses. Out of these 90 items, 19 items valuing Rs. 139.56 lakhs were lying for a period of 12 to 18 months, 35 items valuing Rs. 467.01 lakhs for a period of 6 to 12 months and 36 items valuing Rs. 533.50 lakhs for less than six months. In justification of bonding of goods for such a long time, the representative of the Company stated in evidence : "Notice of some minimum period has to be given to the collaborators. We cannot order today and get the things tomorrow. We

have to get ready with the goods so that whenever any order is placed we could supply the goods from the bond in warehouse otherwise we may have to suffer loss." Although the Company is stated to have taken certain remedial measures for minimising prolonged bonding of goods but the interest charges paid due to bonding of goods were as high as Rs. 314.68 lakhs during the period 1983-84 to 1986-87. In this connection, when the Committee enquired whether there was a need to have a relook at the provisioning policy of Company to minimise the incidence of prolonged bonding, the Secretary of the Ministry conceded during evidence: ".....I do agree that importing materials and then keeping them in stock, whether in a bonded warehouse or in your inventory requires a relook. Certain measures have been taken by the Company and we will request them to keep these observations in view." The Committee, therefore, recommend that as the Company has been financing its working capital requirements mostly out of cash credit obtained from Banks and procurement of material far in advance of requirements resulted in payment of avoidable interest charges which are quite substantial, the Company should so plan their provisioning requirement as to minimise prolonged bonding of items thereby reducing the locking up of funds on inventory.

22. The Committee find that as per the terms and conditions of the contracts for sale of earth moving equipment, the customers are required to pay 70 to 100 per cent of the value of equipment through their Bankers, on production of proof of despatch. But the terms and conditions do not provide for recovery of penal interest (OD interest) for bills not paid by the customers within the due date. The Committee regret to note that consequentially on 402 bills (valued at Rs. 81.13 crores) discounted with the banks and not honoured by the customers on due dates, the Company could not recover from the customers overdue interest of Rs. 139.15 lakhs levied by the Banks during February, 1979 to March, 1987. According to the Ministry the OD interest has accrued because the Company has discounted bills to augment its working capital requirement. There would not be any OD interest had these bills not been discounted. The Committee have been informed by the Company that most of the customers including the Government Departments do not agree to the incorporation of clause regarding levy of any interest charges in the case of delayed payment by them. In this connection, the Ministry has informed the Committee that the Board of Directors of the Company are being asked to examine the matter. The Committee trust that the matter has since been considered by the Board of

Directors of BEML with a view to stipulating in sale orders for recovering OD interest from customers in view of the substantial interest burden involved.

23. The Committee regret to observe the increasing trend of outstandings as well as the bad debts written off. At the end of the year 1986-87 the outstandings and bad debts written off amounted to Rs. 20255.24 lakhs and Rs. 59.52 lakhs respectively. The main reason for heavy outstandings as advanced by the Company is the retention of 20 per cent of payment by major customers like CIL to be paid after commissioning of the equipment. Some Government Departments and also subsidiaries of CIL are insisting upon effecting 100 per cent payment only after commissioning. As regards assistance rendered by the Ministry for the recovery of huge outstandings, the Committee have been informed that the Ministry has been writing to concerned administrative Ministries for early settlement from time to time but there has been no significant improvement in the realisation of outstandings. The Committee desire that as the major customers of the Company are the Government Departments/Public Sector Undertaking, all possible measures should be taken to streamline the procedural formalities to set right the existing impediments in debt collection.

24. The Committee note that the Company has been availing cash credit facility from Banks for meeting the working capital requirements. While the Company availed cash credit at high rates of interest, considerable funds of the Company have been locked up in bonded inventories, surplus/non-moving stores and outstanding debts. The Committee are distressed to note that the cash credit outstanding at the end of the year 1986-87 has been as high as Rs. 141.35 crores and the interest paid on cash credit from the year 1979-80 to 1986-87 amounted to Rs. 94.52 crores. They are not convinced of the reply given by the Government that the levels of utilisation of cash credit and the consequential interest burden are not considered excessive on account of the Company's Production/Marketing strategy of manufacturing equipment in anticipation of orders. Inspite of the directions given by the Ministry to the Company to minimise inventory including bonding of inventory and expedite collections of debts, the Committee do not see much improvement in the situation. They, therefore, recommend that Company and the Government should spare no efforts to minimise dependence of the Company on cash

credits by collecting the dues promptly and also by reducing the locked up inventories. Such a situation has the effect of reducing the profitability of the Company by straining its resources to meet the requirements of working capital.

NEW DELHI;
26 *April*, 1988
6 *Vaisakha*, 1910 (*S*).

VAKKOM PURUSHOTHAMAN,
Chairman,
Committee on Public Undertakings.