CPU No. 85

COMMITTEE ON PUBLIC UNDERTAKINGS (1967-68)

FOURTEENTH REPORT

(FOURTH LOK SABHA)

HEAVY ENGINEERING CORPORATION LTD.

MINISTRY OF INDUSTRIAL DEVELOPMENT AND COMPANY AFFAIRS

(DEPARTMENT OF INDUSTRIAL DEVELOPMENT)

LOK SABHA SECRETARIAT
NEW DELHI
April 1968/Chaitra 1890 (Saka)
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(1967-68)

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Shri A. L. Rai—*Deputy Secretary.*

Shri M. M. Mathur—*Under Secretary.*

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*Ceased to be a Member of the Committee consequent on his retirement from Rajya Sabha on 2-4-1968.

STUDY GROUP II ON HEAVY ENGINEERING AND HEAVY ELECTRICALS

COMMITTEE ON PUBLIC UNDERTAKINGS
(1967-68)

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INTRODUCTION

I, the Chairman, Committee on Public Undertakings having been authorised by the Committee to submit the Report on their behalf, present this Fourteenth Report on the Heavy Engineering Corporation Ltd.

2. This Report is based on the examination of the working of the Heavy Engineering Corporation Ltd. upto the year ending 31st March, 1967. The Committee took the evidence of the representatives of the Heavy Engineering Corporation Ltd. on the 19th and 20th January, 1968 and of the Ministry of Industrial Development and Company Affairs (Department of Industrial Development) on the 30th January, 1968.

3. The material relating to the undertaking was processed at various stages by the Study Group 'II' of the Committee.

4. The Report was adopted by the Committee on the 4th April, 1968.

5. The Committee wish to express their thanks to the officers of the Department of Industrial Development and Heavy Engineering Corporation Ltd. for placing before them the material and information that they wanted in connection with their examination. They also wish to express their thanks to the non-official organisations who, on request from the Committee, furnished their views on the working of the Heavy Engineering Corporation Ltd.

The Committee also place on record their appreciation of the assistance rendered to them in connection with the examination of audit paras pertaining to the Heavy Engineering Corporation Ltd. by the Comptroller and Auditor General of India.

D. N. TIWARY,
Chairman,
Committee on Public Undertakings.

NEW DELHI,
April 8, 1968
Chaitra 19, 1890 (*S*).

I

HISTORICAL

The Heavy Engineering Corporation Ltd. Ranchi (hereafter called the Corporation) was incorporated on the 31st December, 1958 under the Companies Act, 1956 in the State of Bihar with registered office at Ranchi. The Corporation was set up to develop manufacture of heavy capital equipment in the country through

(a) a Heavy Machine Building Project (HMBP)

(b) a Foundry Forge Project (FFP), and

(c) a Coal Mining Machinery Project (CMMP).

These three projects were actually transferred by the Government to the Corporation in May, 1959. Till then the preliminary investigations, agreements for detailed projects, consultancy, etc. for these projects were carried on by the Government and the National Industrial Development Corporation.

2. Subsequently, in November, 1960 the Corporation was entrusted by the Government with the execution of the Heavy Machine Tools Project (HMTP). The Coal Mining Machinery Project was formed into a separate corporation called the Mining and Allied Machinery Corporation with effect from 1st April 1965.

3. The working of the Heavy Engineering Corporation was examined by the Estimates Committee in 1963-64. The recommendations and conclusions of that Committee are contained in their Fifty-first Report (Third Lok Sabha). The action taken by the Government on the recommendations in this Report were examined by this Committee and the Committee's observations thereon are contained in the 7th Report (Fourh Lok Sabha). The aspects which were covered in these reports have been only briefly touched in this Report wherever considered necessary.

Heavy Machine Building Plant

4. The question of setting up a unit for the manufacture of heavy machinery and equipment had been under consideration of the Government of India since 1955. The country had been depending mainly on imports for her requirements of heavy machinery and equipment resulting in a heavy drain on foreign exchange resources. In view of the ambitious programme of development of iron and steel industry in the Second, Third and subsequent Five Year Plan periods,

it was felt that there was great need for the country to become self sufficient as early as possible in the manufacture of heavy machinery and equipment, particularly those required by the steel plants.

5. A team of experts from the USSR, invited by the Government to advise on the establishment of a unit for the manufacture of heavy machinery and equipment required by the iron and steel plants, submitted its preliminary Project Report in January, 1957. Almost simultaneously, the U.K. Heavy Engineering Mission, appointed under the joint aegis of the Colombo Plan and the Federation of British Industries, had carried out a similar survey and submitted their Report in January, 1957.

6. The Soviet experts opinion was that to make the unit economical it should not be below a capacity of 45,000 tons per annum and they would welcome setting up a unit with 80,000 tons capable of expansion up to 1,65,000 tons. The British team, however, held a different view and suggested units of smaller capacities dispersed in different parts of the country.

7. The Government appointed a Committee under the Chairmanship of Shri Jehangir Ghandy, Director, Tata Industries (P) Ltd., to examine the proposals of the USSR team and the U.K. Mission and to advise them on the most suitable plan for the establishment of heavy engineering industry. The Committee reported in March, 1957 that the proposals of the U.K. Mission were preferable to those of the Soviet team. However, ultimately at the end of 1957 the Government decided to set up the plant with technical collaboration and credit assistance of the USSR having 80,000 tons per annum capacity starting with 45,000 tons in the first stage to be expanded to 80,000 tons in the second stage.

8. An agreement for the preparation of Detailed Project Report was signed in December, 1957. The report was received in June 1959 and after examination by a Committee of experts, it was accepted in November, 1959. An agreement for the supply of plant, equipment and certain other materials to be imported from the USSR was signed on 12th March, 1960.

9. In April, 1960, the Government decided that instead of implementing the Heavy Machine Building Project in two stages, the Corporation may go ahead with the plant of 80,000 tons in one stage. As a result another contract was entered into in July, 1962 for the supply of plant and machinery.

Steel Structural Fabrication Shop

10. To meet the requirements of steel structures the Corporation decided to put up a Steel Structural Fabrication Shop with a capacity of 25,000 tons of fabricated structurals on a double shift basis as an adjunct to the HMBP. The proposal was approved by the Government early in 1965 and its execution was taken up by the Corporation thereafter.

Foundry Forge Plant (F.F.P.)

11. The Government had also felt that besides the concept of the Heavy Machine Building Plant which was to come up much later, there was need in the country for the manufacture of heavier ranges of castings and forgings, since a number of private sector units had been licensed for undertaking manufacture of machinery for Sugar, Jute, Cement Industries, etc. all of which required large sized and heavy castings. A Committee was therefore set up by the Government in 1955 to consider the approximate demand of castings and forgings to determine the most suitable capaciy to be developed. Pursuant to the recommendations of this team, global tenders were invited by the Government for setting up a Foundry Forge Plant having an annual capacity of 25,000 tons of grey iron castings, 15,000 tons of steel castings and 5000 tons of forgings. Out of quotations received in response to the tender notice the offer of Messrs Technoexport of Czechoslovakia was considered to be the most attractive. They also offered deferred payment terms.

12. In their report on HMBP the Soviet team had recommended a captive foundry and forge plant to form an integral part of the project. Therefore, in January, 1958 the Government accepted the Czechoslovakian offer for setting up a Foundry Forge Plant and decided to tie it up with the Heavy Machine Building Plant.

13. The size of the F.F.P. offered by M/s. Technoexport was found to correspond to an approximate production of 23,000 tons of heavy machinery items included in the HMBP by the Soviet team. This was inadequate to meet the needs of castings and forgings of HMBP which was to have a capacity of 45,000 tons even in the first stage. It was therefore decided to arrange for its immediate expansion to meet the requirements of HMBP up to 45,000 tons stage. The 23,000 tons capacity came to be called as the first stage and 45.000 tons as the second stage. The Detailed Project Report for capacity of 45,000 tons was received in November. 1959 and after detailed examination it was accepted on the 12th April, 1960. The contract for the supply of plant and equipment for the second stage was executed on the 31st March, 1961.

14. With the decision to meet the requirements of HMBP for castings and forgings upto 80,000 tons of heavy machinery items and also of the HMTP it was decided to raise the capacity of the FFP further to constitute the first phase of the third stage. The Detailed Project Report for additional capacity was accepted in May, 1963. A fresh contract for the supply of plant and machinery was also entered into in May, 1963.

15. This plant was to meet the requirements of HMBP in respect of castings upto 100 tons piece-weight and of forgings upto 30 tons piece weight. In order to meet the requirements of forgings of higher weight ranges it was decided to set up a 6000/8000 tonne Forging Press as a part of the FFP. Offers received in response to Global enquiries for this press were examined and a contract was signed with M/s. Techno-export of Czechoslovakia in February, 1964.

Heavy Machine Tools Project

16. On the recommendations of a Committee appointed to study the pattern of demand, capacity etc. for Heavy Machine Tools, the Government took decision that a factory should be set up to undertake manufacture of diverse items of heavy tools starting with 10,000 tons per annum in the first stage to be ultimately expanded to 20,000 tons in the second stage. In November, 1960, the Corporation was entrusted with the execution of his project, locating the same in Ranchi for the reason that the supply of heavy castings required by the HMTP could conveniently be met by the FFP. A contract with M/s. Technoexport of Czechoslovakia for the preparation of the Detailed Project Report was executed on the 31st May, 1961. It was received in April, 1962 and accepted on the 30th May, 1963. A contract for the supply of plant and equipment by M/s. Technoexport was also executed on the 30th May, 1963.

II

CONSTRUCTION AND COMMISSIONING OF PLANTS

A. Delays in Construction

Heavy Machine Building Plant

17. There had been considerable delays in the construction and commissioning of the projects of the Corporation. According to the schedule drawn up by the management in April, 1962, the construction of the Heavy Machine Building Plant was to be completed by the end of 1964 except the heavy machine Department which was to be completed by the end of 1965. However, because of the decision to implement the project with increased capacity in one stage, another contract was entered into in July, 1962 for the supply of equipment which provided for the delivery of equipment by December, 1966 and the erection of equipment was to be completed by March, 1967. But this schedule could not be adhered to and the erection of plant and machinery was not yet complete.

18. The delay in the erection of plant and equipment was attributed mainly to the delay in receipt of equipment from the USSR. Out of the equipment received upto 1966-67, 91.41 per cent of the machinery had been erected. But there was still 874 tons of equipment to be delivered by the USSR. The delay in supply of equipment had been attributed by the USSR authorities to the fact that the latest developments were being incorporated in the machine tools to be supplied and machine tools had to be designed to keep pace with the manufacturing technology of the items. The other reasons which contributed to the deviation from the schedule were stated to be the delay in the initial stages in the receipt of working drawings from the USSR and the difficulties in procurement of building materials.

Heavy Machine Tools Plant

19. As in the case of the HMBP, there was delay in the construction and commissioning of the HMTP also. Although the erection of machinery and equipment was to be completed by December, 1966 the work was now expected to be completed by April, 1968. The delay was stated to be due to difficulties in procuring matching steel and in obtaining structurals which delayed the construction of the

principal production building. Further, because of delay of about 6 months in getting the import licences for obtaining machines from Swiss and German parties there was delay in the receipt of requisite foundation drawings for these machines. The delivery of some of the machines was also delayed in the wake of devaluation of the rupee pending the settlement of the question of extra payment for import from the East European countries.

Foundry Forge Plant

20. The maximum delay in construction and commissioning has been in the case of Foundry Forge Plant. The time schedule for commissioning of the major production shops (Second stage) as given in the Detailed Project Report and as per the programme of commissioning approved by the management on 25th April, 1962 is given below:—

Unit	As per DPR	As approved by management
1. Grey Iron & Non-Ferrous Foundry . . .	31-11-1964	December, 1965
2. Steel Foundry . . .	30-6-1965	December, 1966
3. Forge Shop . . .	31-10-1965	August, 1966
4. Rough Machining Shop .	31-10-1964	August, 1966
5. Casting Clearing Shop . .	30-11-1964	January, 1966

21. The representatives of the Corporation had assured the Estimates Committee which examined the working of the Corporation in 1963-64 that the above-mentioned schedules approved by the mates Committe which examined the working of the Corporation failed to keep this assurance and the work of erection of machinery and equipment lagged much behind the schedule as shown below:—

Unit	Date of completion of erection of equipment as per schedule	% of work actually completed on the scheduled date
Grey Iron & Non-Ferrous Foundry	31-12-1963	42%
Steel Foundry . . .	31-12-1965	17·1%
Forge Shop	31-8-1966	8·6%
Rough Mechining Shop . .	31-8-1965	14·1%
Casting Clearning Shop . .	31-1-1966	6·5%

22. Thus it will be seen from the above table that the work completed on the scheduled dates of commissioning was only 6 per cent to 40 per cent in different shops. A revised programme was again drawn up in April, 1966 according to which the major production shops are likely to be commissioned by August, 1968 as shown below:—

Unit	Schedule date of commissioning
Grey Iron & Non-Ferrous Foundry . . .	September, 1967
Steel Foundry	May, 1968
Forge Shop	August, 1968
Rough Machining Shop .	August, 1968
Casting Cleaning Shop . .	April, 1968

23. The Committee enquired whether the Corporation would be able to adhere at least to the revised schedule. They regret to note that even this schedule will not be adhered to and there was likely to be an overall delay of 4 or 5 months in commissioning of major production units. Thus, as compared to the schedule drawn up in 1962, there was likely to be delay of more than two years in commissioning of the various units of the plant.

24. The following main reasons were advanced by the Corperation for the delays in construction:—

(a) Change over to pile foundation from conventional type due to sub-soil conditions and low safe bearing capacity of soil.

(b) Construction of soaking furnaces in two of the major production buildings involving deep excavations rendering normal open excavation method difficult for which special type of piling was resorted to.

(c) Difficulty in obtaining fabricated steel from indigenous fabricators—as the requirements of raw steel for a total quantity of 43,800 tonnes of structures could not be supplied in time by the steel plants. There were also difficulties in obtaining matching steel and heavy sections which had to be imported.

(d) Foundry forge steel structure designs are welded ones, necessitating build up construction requiring large quantity of plates. Considerable delay occurred in the procurement of these plates because producers were unable to supply them and finally large scale imports had to be resorted to on the advice of Iron and Steel Controller.

25. **The Committee find that the pile foundation which has been advanced as one of the reasons for delay in construction had to be resorted to because of inadequate soil investigation before the selection of site for the setting up of the project.** The selection of site for the project was made on the basis of some preliminary soil investigations carried out by the State Government and the Consultants. Later on, when the construction started in 1961 it was found that there was not sufficient bearing pressure for heavy foundations. Additional soil investigations were then carried out by the Corporation at a cost of Rs. 2·25 lakhs. Ultimately it was decided to change over to pile foundations. The expenditure on piling was estimated at Rs. 114·00 lakhs.

26. **The need for proper soil investigation was emphasised by the Estimates Committee in para 64 of their 51st Report (1963-64). The Committee were informed that the attention of the Public Undertakings has been drawn to the importance of proper soil investigation through any of the existing specialised Government agencies before selecting a site for setting up of a plant (Appendices I & II). The Committee trust that these instructions will be followed in future so that a decision with regard to the type of foundation required is taken at the right time.**

27. As regards the delay in the supply of steel by the steel plants the Committee find that one of the contributory factors was the long time taken in placing firm indents for steel with the Iron and Steel Controller. Although the work orders for fabrication had been placed by the Corporation between May—October, 1961, the firm indents showing the sizes and quantities of steel required for fabrication were placed with the Iron & Steel Controller between January—October, 1962.

28. Explaining the reasons for the delay in placing indents, the Chairman of the Corporation stated during evidence that it was stipulated in the work orders that the responsibility for getting the steel would be that of the fabricators. But before firm indents indi-

cating the quantity and sizes could be placed with the Iron and Steel Controller the detailed drawings had to be evolved from the design drawings obtained from Czechoslovakia. The processing of these detailed drawings took considerable time. It was, however, admitted that the delay to such an extent in placing indents was not justified and the time taken in this regard could have been cut down.

29. **The original concept of setting up of this project was that the Foundry Forge Plant which has a metallurgical base will supply all the forgings and castings required by the Heavy Machine Building Plant to meet its full needs for the 80,000 tons annual production of heavy machinery. Because of delay in commissioning of the F.F.P., the requirements of forgings and castings for the HMBP had to be met from other sources including imports of heavier range of castings and forgings not available indigenously. The value of steel castings and forgings obtained from indigenous sources during 1964-65 to 1966-67 amounted to Rs. 52:95 lakhs. Besides, castings and forgings of the value of Rs. 75·50 lakhs had to be imported during the same period.**

30. **The Committee regret to note the inordinate delays in the construction and commissioning of the projects of the Corporation even as compared to the schedules drawn up by the management itself in 1962. Even granting that some delays might be unavoidable in complex plants like those of the Corporation due to certain unforeseen circumstances, the delays to the extent of more than two years as in the case of the Foundry Forge Plant can hardly be justified. The delays in the procurement of materials, designs, drawings, plant and machinery, etc. could have been avoided to a large extent with proper planning and co-ordination and by having close liaison with the authorities concerned. What is regretted is that even the revised schedule drawn up for the Foundry Forge Plant, as late as 1966 would not be adhered to and there was likely to be a delay of 4-5 months in commissioning of the shops as compared to that schedule.**

31. **It was admitted during evidence that though in the case of plants of the size of the Heavy Machine Building Plant and the Foundry Forge Plant a period of 5-6 years for completion of construction might be necessary, these should not have taken as much as 8 years. The delays in construction and commissioning have resulted in considerable loss of production and drain on limited foreign exchange resources because of imports necessitated as a result of shortfall in supplies from these plants. The Committee trust that steps would at least now be taken to complete the construction and commission all the plants expeditiously.**

B. Works taken on hand without sanction of detailed estimates and contracts awarded without execution of agreements.

32. Normally, no work should be taken up without obtaining prior technical sanction for the Detailed Estimates. Which the preparation of Detailed Estimates is likely to take some time and work is to be taken urgently in hand, tenders may be called for in advance by obtaining the sanction of the competent authority, but the Detailed Estimates are to be prepared and technical sanction obtained before the tenders are received and opened. In case of emergency, however, the work can be taken without preparing the Detailed Estimates and obtaining the technical sanction thereto after obtaining the urgency certificate from the competent authority therein indicating the time by which the Detailed Estimates are expected to be prepared and Technical Sanction obtained. It is, however, seen that in the case of the Foundry Forge Project, a large number of works were taken up long time ago without the Detailed Estimates having been prepared and the technical sanctions accorded thereto. A statement showing works taken up without such Detailed Estimates and technical sanctions is given in Appendix III.

33. As regards the reasons for not preparing the Detailed Estimates, it was stated that the Detailed Project Report for the F.F.P., prepared by the Consultants was accepted by the Government after the same was examined thoroughly by the Technical Committee. At the time of acceptance of the Detailed Project Report there was no bill of quantities and after a prolonged discussion the Consultants agreed to work out the approximate bill of quantities for tendering purposes only from the basic drawings supplied by them. These basic drawings only indicated in general the important types of work involved about the various components of the structures but were not in detail which would have helped in preparing the Detailed Estimates and obtaining technical sanction before starting the work. Detailed Estimates were possible only after completing the detailed drawings which were prepared progressively during the course of construction.

34. **The Committee however find that not only were these works taken up without preparation of Detailed Estimates and obtaining technical sanction, but in some cases such sanction has also not been accorded even so far although these works were taken up for execution as far back as 1961. Such inordinate delays in obtaining technical sanction can hardly be justified.**

35. It is also noted that not only were these works taken up for execution without the preparation of detailed estimates but the contracts were awarded to the private parties without execution of

formal agreements. A statement showing the period of delay in execution of formal agreements etc. is given in Appendix IV.

36. It is seen from the statement that in certain cases the delay in execution of agreements has been as much as five years. Some such instances are given below:—

Name of Contractor	Contract Value (Rs. in lakhs)	Date of award of contract	Date of signing of contract
M/s. BBJ Ltd.	405·78	Oct., 1961	Not yet accepted.
Do. . . .	9·20	Jan., 1962	April, 1967
M/s. Kumardhubi Engineering Works.	28·70	May, 1961	Feb. 1966
M/s. Mechenzies Ltd. .	61·06	Dec., 1961	Not yet accepted.
M/s. Gammon (I) Ltd.	383·41	April, 1962	Do.
Do.	87·12	May, 1962	June, 1967

37. The following main reasons have been advanced for the delay in the execution of the contracts:—

(a) Contractors suggesting change in the form of agreement.

(b) Delay in finalisation of legal document including power of attorney.

(c) Settling the final contract value, as specially in the case of structural steel contract, the total tonnage to be fabricated was revised at a later date which were of the order of about 25 to 30 per cent more over the original quantity.

(d) Preparation of draft agreement by the division concerned, vetting in the first instance by the Finance and subsequently modifying the draft agreement in conformity with the observations made by the Finance, if any, and final acceptance by the competent authority, *i.e.* observing various inter-departmental formalities.

38. During evidence the Chairman of the Corporation admitted that such long delays in entering into formal agreements could not be justified. It was, however, added that financial and other vital conditions were included in the work orders and there had been no monetary loss as such because of the absence of such agreements.

39. **The Committee are unhappy over the delays in the preparation of detailed estimates and in execution of formal agreements**

with the contractors for these works. It was noted that in several cases the actual quantity of work done was much more than the original estimates and additional payment had to be made to the contractors. In the absence of detailed estimates there cannot be any effective technical or financial control over the work. The absence of formal agreements is also fraught with risk of financial loss in case of dispute with the contractors.

The Committee find that even in his Quarterly Review for the period October-December, 1965 the Financial Adviser and Chief Accounts Officer of the Corporation had pointed out the absence of such detailed estimates and formal agreements with the contractors in a large number of cases. It is regrettable that in spite of the observation of the FACAO delays in this regard have persisted. The Committee desire that immediate action should now be taken to complete the detailed estimates and finalise the agreements with the contractors which are still pending.

C. Port rent and demurrage

40. Bulk of plant and machinery imported by the Corporation is received through the Calcutta port. There had been delays in clearance of consignments and the Corporation had to pay substantial amounts to the port authorities by way of single rent and penal rent on account of delays in clearance of consignments. In their 51st Report on Heavy Engineering Corporation, the Estimates Committee (1963-64) observed in this regard:—

> "The Committee feel that the factors which have resulted in payment of such heavy demurrage charges as well as congestion at the port could have been avoided if the Corporation had kept close liaison with the suppliers and programmed the movement of the consignments accordingly. They trust that immediate steps would now be taken by the Corporation to get the packages lying at the port transported to the projects site and to avoid any undue holding up at the port in future".

41. It is learnt that a Committee was set up by the Corporation to enquire into the circumstances which led to the payment of heavy demurrage charges and that a strict control is now being exercised to reduce the incidence of port rent. The average rent per tonne had come down from Rs. 11.3 in 1964 to Rs. 6.7 in 1966. The Committee, however, find that the incidence of port rent again shot up to Rs. 20.2 per ton in 1967. The reasons for the substantial increase in port rent have not been furnished to the Committee.

42. It is surprising that in spite of the fact that the construction of all the projects of the Corporation is nearing completion and consequently the tempo of inward shipment has considerably declined, the port rent should have increased from Rs. 11.3 per ton in 1964 to Rs. 20.2 per ton in 1966-67. Apparently the matter has not been given the attention it deserves. The Committee desire that the reasons for increase in the incidence of port rent should be examined and responsibility fixed. Steps should also be taken to avoid any undue hold-up at the port and payment of unnecessary port rent in future.

III

PRODUCTION

A. Shortfall in Production

43. As in the case of construction schedule there had been a wide gap between the production targets and the actual achievements. Not only was the actual production below the original programmes drawn up by the Corporation in 1963 but even as compared to the annual targets fixed by the Corporation. The programmes of production and the actuals in the projects of the Corporation are discussed below:—

Foundry Forge Plant.

44. The Foundry Forge Plant is equipped to produce all the castings and forgings required by the other two units of the Corporation *viz.* the Heavy Machine Building Plant and the Heavy Machine Tools Plant. Provision has also been made for some surplus capacity to meet the demands of heavier castings and forgings from various other industries both in the public and private sectors. The annual rated capacity of this plant in terms of value and quantity is as follows:—

S. No.	Item	Annual rated capacity (Tonnes)	Revised value (Rs. in lakhs)
(1)	(2)	(3)	(4)
1.	*Grey Iron Foundry*		
	(*a*) Shaped Castings . . .	33,345	666·90
	(*b*) Rolls	11,540	403·90
	(*c*) Ingot Moulds . . .	1,110	7·77
2.	*Non-ferrous Foundry*		
	(*a*) Al. Alloy Castings . . .	92	11·04
	(*b*) Copper Base Castings . .	608	133·76

(1)	(2)	(3)	(4)
3. *Steel Foundry*			
	(*a*) Shaped Castings	40,182	1205·46
	(*b*) Rolls .	6,200	217·00
	(*c*) Steel Ingots	40,000	280·00
Forge Shop			
	(*a*) Free Forgings .	28,548	856·44
	(*b*) Die Forgings . .	3,045	91·35
	(*c*) Rolls	3,570	142·80
	(*d*) Forgings from 6000 ton press	18,000	540·00

45. Partial production started in Grey Iron & Non-ferrous Foundry from May, 1964 and in Steel Foundry & Forge Shops from July, 1966. The production programme drawn up by the Corporation in 1963 the targets fixed every year and the actual production in each shop for the years 1964-65 to 1966-67 had been as follows:—

	Original Programme	Annual target		Actuals	
	Tonnes	Tonnes	Value (Rs. lakhs)	Tonnes	Value (Rs. lakhs)
1964-65	3780	1322	36·2	952·38	23·34
1965-66	19925	2686	61·56	2466	48·23
1966-67	..	7181	155·61	5058·26	95·45

46. It will be seen from the above table that the actual production in the F.F.P. was not only below the original programme but also below the annual targets fixed by the plant.

47. Asked about the reasons for the shortfall in production as compared to the annual targets, the Committee were informed that this was due to non-availability of certain equipment and facilities on account of delays in construction. Even the units that had been commissioned could not attain the rated capacity because of certain breakdowns and teething troubles. Further the targetted output per

unit moulding area was calculated on the basis of weight group as prescribed in the Detailed Project Report. The orders received on the other hand being of differing weight group, the output per unit moulding area as calculated could not be achieved. Besides, the efficiency of the workers remained far below the norms specified in the Detailed Project Report as most of the workers are trainees taken from the construction side.

48. In this connection it was noted that not only the targets fixed before the commencement of the year but even the revised targets fixed at the time of preparation of revised budget estimates (which are prepared during the middle of the financial year) were not achieved. Thus the production in 1966-67 was only 52 per cent of the targets fixed as per the revised budget.

49. Asked about the reasons for not achieving even the revised targets, the representative of the Corporation stated during evidence that there were delays in construction as a result of which certain equipment and facilities were not available in time. Further, because of delay in construction, 250 persons which were to be released and transferred to the production side could not be released. This hampered production. The break down of three ton hammer in Forge Shop for 1113 working hours was another factor for shortfall in production. As there was no spare piston available at the time of break down, it had to be casted and machined before the hammer could be commissioned again.

50. The reasons advanced for the shortfall in production in 1966-67 even as compared to the revised estimates when the actuals of six months production were available are hardly satisfactory. One of the reasons advanced is that there were construction delays due to which certain equipment and facilities were not commissioned in time. That it was not possible for the management to forecast with reasonable accuracy the construction schedule for even the coming six months does not speak well of the planning and organisational efficiency of the Corporation which has nearly eight years of construction experience.

51. Another reason advanced for shortfall in production is that because of delays in construction, about 200 workers and 50 supervisors could not be transferred from the construction side to the production side thereby affecting the production. For the proper discharge of their duties, it is essential that the persons should be in position well in time so that they could be familiar with the jobs. The Committee fail to understand as to how the plant depended on untrained persons which were yet to join from the cons-

truction side. It appears that there was hardly any phased programme for the training and deployment of workers according to the needs of production.

52. The Committee view with concern the substantial shortfall in production in the F.F.P. as compared to the annual targets fixed. The shortfall in production not only affects the working of this plant but also the production in the HMBP and the HMTP which depend on this plant for the supply of castings and forgings. The satisfactory working of this plant therefore assumes added significance. The Committee, therefore, desire that steps should be taken by the management to fix realistic targets taking into consideration all the factors and to ensure that the targets so fixed are actually fulfilled.

Heavy Machine Building Plant

53. The Heavy Machine Building Plant is designed to produce annually 80,000 tonnes of heavy machinery items and equipment. Out of the total capacity, about 65,000 tonnes will be machinery and equipment required for steel plants and the rest for meeting the requirements of heavy machinery items for other industries like cement, fertilizers, mining, oil drillings, etc. The scope of items to be manufactured as per Detailed Project Report is as under:—

Description of Item	Quantity in M/tons	Value in Rs. lakhs
Coke oven & By Product Equipment	7700	362·00
Blast furnace equipment	5500	238·00
Steel melting equipment	7000	246·00
Crushing & Grinding Equipment	3150	152·00
Crane Equipment	6570	270·00
Rolling Mill Equipment	34500	2000·00
Spare parts for Metallurgical equipment	1080	105·00
Heavy mining equipment	880	45·00
Excavators	4950	205·00
Press forging equipment	1360	76·00
Heavy Oil Drilling rigs	5500	361·00
Miscellaneous heavy parts and assemblies	1810	72·00
TOTAL	80000	4136·00

*The value of output at the time of reaching rated capacity will be different from value indicated in D.P.R. since the basis for D.P.R. values is the world market price—C.I.F. Indian ports prevailing in 1959.

54. The pattern of production is only indicative of the capacity of plant in terms of machining handling, heat treatment and assembling facilities and does not imply that the same pattern of production should be repeated year after year. The plant is equipped with versatile general purpose machine tools and provides for wide flexibility in undertaking manufacture of analogous items.

55. To meet the requirements of steel structures a Steel Structural Fabrication Shop with a capacity of 25,000 tons of fabricated structurals on a double shift basis has been set up as an adjunct to the Heavy Machine Building Plant.

Production Programme

56. The initial production in the Heavy Machine Building Plant commenced in November, 1963 based on the equipment installed. The production programme drawn for this plant in 1963, targets fixed every year and the actual production during the years 1964-65 to 1966-67 were as follows:—

	Original programme tonnes	Annual target		Actuals	
		tonnes	Value	Tonnes	Value
					(Rs. in lakhs)
1964-65 . .	16000	7798·5	212·5	3208·3	72·11
1965-66 . .	22500	9451·5	344·00	10980·5†	285·4
1966-67 . .	..	1951·9	749·5	14309·2*	466·74

57. It will be seen from the above table that the actual production fell short of the annual targets fixed by the plant. In 1966-67 although the production in terms of quantity was 73.4 per cent of the targetted production the actual financial value was only 62 per cent of the budget estimates. This was mainly due to lesser production of mechanical items which have a much higher saleable value than structural items. Further out of total production in the Heavy Machine Building Plant in 1966-67 about 16 per cent. were imported components.

58. In the case of the Heavy Machine Tools Plant also the original production programme for 1966-67 was for the manufacture of 24 machines. However due to the late receipt of foundation drawings of machines and belated delivery of cranes and machines from abroad the erection of machinery and equipment could not be carried out as

*Inclusive of tonnes of fabrication of structural by the contractors

†Includes fabrication done by other Agencies under HMBP.

per original plan. A revised budget estimate was therefore prepared for the assembly of 12 machines from imported components. But this programme could also not be adhered to and the number of machines actually assembled was only 7.

59. The Committee regret to observe that little effort seems to have been made to improve the working of the plants. In the case of the Heavy Machine Building Plant even in 1967-68 the actual production was only 6180 tons as against the planned production of 12,200 tons for the half year ending the 30th September, 1967 or about 50 per cent of the planned output. Similarly in the Heavy Machine Tools Plant, as against the production programme for the manufacture/assembly of 36 machines in 1967-68, the number of machines assembled during the half year ending the 30th September, 1967 was only 9. This is a sad state of affairs. As pointed out in subsequent paragraphs of this report, the shortfall in production especially in the Heavy Machine Building Plant not only affects the working of this plant, but also the timely delivery of goods to the customers. In many cases the Corporation failed to make deliveries according to the commitments made. Further, the shortfall in production is also likely to affect the import contents of the product as the same may have to be increased in order to adhere to the delivery schedule. This as well as the high incidence of fixed charges on lower output affects the cost of production. The Committee therefore desire that a thorough enquiry should be made into the reasons for continued low output in these plants and steps taken to improve their working. Some of the deficiencies noticed by the Committee are discussed in the following paragraphs.

B. Idle machinery and labour

60. The Committee called for a statement about the idle machines and labour in the Heavy Machine Building Plant during 1966-67. From the information furnished they observe that out of 17,38,288 machine hours available, the machine hours actually utilised were only 4,93,257. Thus the machines remained idle for 12 per cent of the machine hours available. There was also idle labour and out of 21,81,766 labour hours available, the labour hours utilised were only 10,11,723. Thus the percentage of idle labour hours was 54 per cent of the total hours available.

61. During evidence the Committee were informed that the idle time of machines as furnished included the time taken in issuing instructions, fixation of jigs and fixtures and in setting up of the machines. This should not be included in idle time as it was already provided in the planning schedule. Therefore the 72 per cent of

the idle machine hours did not reflect the correct idle time of the machines. However, even according to the corrected figures of idle machines for the period April-December, 1967 furnished at the instance of the Committee, they find that the position was no better and the percentage of idle machine hours during this period was 70.3 per cent of the total available hours. The break-up of idle percentage of the machines was as follows:—

(a) Want of operator	21·3%
(b) Want of Job	8·2%
(c) Want of tools	1·3%
(d) Mechanical & Electrical breakdowns	3·4%
(e) Want of Crane facility	0·1%
(f) Want of material	1·9%
(g) Want of drawing & Technology	0·2%
(h) Tool-down strike	2·3%
(i) Machines not actually working in second shift	18·0%
(j) Delay due to inspection	5·2%
(k) Deficiencies in reporting	8·3%
TOTAL	70·3%

62. The Committee view with concern that even after three years of commencement of production in this plant, while on the one hand the valuable machinery costing Rs. 16·39 crores remained idle for 70 per cent of the machine hours available, on the other hand there was idle labour to the extent of 54 per cent. In view of such a high percentage of idle men and machinery it is not surprising to find that there was delay in execution of orders in more than 71 per cent of the cases during the last three years as pointed out in para 67 of this Report. This serious situation calls for immediate remedial measures to ensure proper utilisation of labour and machinery. From the break-up of idle time of machinery it is seen that the reason for the idle machinery to the extent of 21.3 per cent was want of operators. It is regrettable that while on the one hand the machines remained idle to such an extent for want of operators, on the other hand the workers were idle to the extent of 54 per cent of the labour hours available. The Committee were informed that the operators required were for big and sophisticated machines. They however find that the Corporation have secured for this plant alone the services of 373 foreign experts and of another 242 Indian persons trained abroad besides large number of persons trained in other plants/undertakings in India and in the Central Training Institute of

the Corporation. That the Corporation should still be short of trained operators for certain machines shows that no proper thought was given to the selection and training of right types of persons for the running of this plant. This has led to the anomalous position of shortage of suitable persons for running the plant and at the same time a large force of idle workers. The Committee recommend that the Government should carefully analyse the reasons for this alarming situation and take immediate remedial measures.

C. Planning for Production

63. **One of the reasons for idle machinery was lack of scientific planning for production for different shops. As pointed out by the FA & CAO of the Corporation, at present planning is done in a general manner without specific reference to the machine-wise available capacity and without taking into consideration the normal time in terms of standard time, required to complete the various jobs, with the result that it is difficult to analyse which part of idle time relates to want of load and which part to other reasons. In the absence of such planned loading of the shops, it is difficult to ensure proper utilisation of machines. The Committee, therefore, desire that early action should be taken to work out the standard hours for all jobs. This would also help the plants in working the incentive bonus scheme for the workers. The norms so fixed could of course be reviewed in the light of experience gained on production in different shops.**

Materials Planning.

64. Another reason for idle machinery was non-availability of drawings, material, etc. It was noted that there were bottlenecks in the Structural Design Department and in the Engineering Departments where detailed preparation of bills of materials, shop routing, blue printing of technology and drawings etc. were made out. Any delay in the Engineering Department/Structural Design Office results in further delay in other sections and in the Purchase Department in procurement of raw materials, etc. as procurement action to meet the demands of production can only be taken in advance if the Purchase Department is given complete details of the items required with full specifications in time. There were delays in the Purchase Department also in the procurement of materials.

65. The Chairman of the Corporation admitted during evidence that the procurement of materials, etc. had been the main bottleneck so far in the proper working of the Heavy Machine Building Plant. Steps have however been taken to reorganise the concerned depart-

ments *e.g.* Planning Department, Engineering Department and the Stores and Purchase Departments.

66. The Committee regret to note that it should have taken the Corporation so long to realise the deficiencies in these departments and to take necessary remedial measures. They trust that it would at least now be ensured by the Corporation that as far as possible no work is held up or machinery or labour remain idle for want of materials.

D. Delay in execution of orders

67. A total of 439 work orders for 36.438 tonnes were taken up by the Heavy Machine Building Plant for execution by March, 1967. But there was considerable delay in the execution of these orders and only 127 work orders for 16,133 tonnes were completed till the due date. Thus there was delay in execution of 71 of the work orders. There were also delays in execution of orders in the F.F.P. Work Orders of the value of Rs. 59.25 lakhs were delayed in this plant by more than three months from the dates of deliveries originally agreed to.

68. The delays in execution of orders affected the manufacturing programme of the customers. In a memorandum furnished to the Committee the Hindustan Steel Ltd. pointed out that the supply of third pig casting machine was delayed by about 9 months. The equipment was delivered at Durgapur in December, 1965 against the contract date of March, 1965. Similarly because of delay in supply of equipment for the sixth blast furnace complex for Bhilai Steel Plant, its commissioning would be delayed by more than one year. The rolls, spares and changeables for the Hindustan Steel Ltd., units were also delayed considerably and it had been stated by the Hindustan Steel Ltd. that unless there was a positive drive to complete these orders by Heavy Engineering Corporation, the maintenance of the steel plants would suffer greatly. The delays in execution of orders were also pointed out by Tata Iron & Steel Company Ltd. and Indian Iron & Steel Company Ltd.

69. During evidence is was admitted that there had been delays in the execution of orders even upto one year in some cases. Thus for instance there had been serious delays on the part of the Corporation in the supply of components for Bokaro Steel Plant. Certain orders of the Ministry of Defence were also delayed.

70. As to the reasons for the delay in execution of work orders, the Chairman of the Corporation stated that there were several factors responsible for it. There were difficulties in the procurement

of raw materials and designs and drawings. The Corporation had re-organised the concerned departments *e.g.* the Planning Department, Engineering Department and Stores and Purchase Departments to avoid the bottlenecks in procurement. There were also difficulties in getting trained personnel to operate the sophisticated machines installed in Heavy Machine Building Plant. The existing staff had to be trained and they took time to develop their skills.

71. The Secretary of the Ministry also admitted during evidence that the delay in execution of orders was a very serious matter which the Ministry was looking into. According to him it was partly a question of managerial deficiency and partly a question of lack of experience. Both these had to be tackled. He added that the Corporation had been rather too optimistic in giving the delivery dates and he had personally told the previous Chairman of the Corporation that he should be more realistic in his estimates of production.

72. The Committee are unhappy over the serious delays in the execution of orders which not only affect production in Heavy Engineering Corporation but also the manufacturing programme of their customers. Such delays are also likely to result in financial loss by way of penalty for non-delivery of products according to schedule. In case the delays in the execution of orders persist, the customers will have second thoughts before placing orders on Heavy Engineering Corporation. This the Corporation can ill afford at present when it is already short of orders. The Committee, therefore, desire that immediate steps should be taken by the Corporation to ensure that the delivery dates are adhered to.

73. During evidence the Committee also enquired whether these serious delays in the execution of orders came to the notice of the Ministry. The Secretary of the Ministry of Industrial Development and Company Affairs stated that as a normal practice the Ministry did not watch the execution of work orders. But what usually happened was that the people who were affected by the delay in execution of work orders brought it to their notice. As soon as these delays were brought to their notice the matter was taken up with the management.

74. The Committee find that the Ministry receives regularly the monthly progress reports and also the Quarterly Financial Reviews from the Corporation. It is, therefore surprising that the Ministry should wait till the customers bring such delays to their notice. The very purpose of submitting these reports is defeated, if timely action is not taken by the Ministry to take up with the management the defects noticed as a result of examination of these reports. The

Committee believe that the delays could have been minimised to some extent if the Ministry had taken greater interest in the reports submitted to them. They desire that suitable instructions should be issued by Government to ensure that these reports are studied by the Ministries concerned and remedial measures taken on deficiencies noticed. Failure on the part of the officers of the Ministries to take appropriate action should be enquired into and the responsibility fixed.

E. Cost of Production

75. It is seen that both in Foundry Forge Plant and Heavy Machine Building Plant the cost of production is much higher than even the selling price resulting in considerable loss to the Corporation. From the statement furnished to the Committees (Appendices V and VI) regarding the cost of production and selling prices etc. of items produced in 1966-67 it is noted that in certain cases the cost of production was even more than double the selling price. Some of the instances in which the cost of production was much higher than the selling price are given below:—

	Total cost of production per tonne	Selling price per tonne
	Rs.	Rs.
F.F.P. structurals	3,019	1,400
C.I. Floor plates HMTP	8,000	3,500
Lifting mechanism for Gandak Barrage . . .	31,069	5,936
Rolls for BSP	976	429
N. F. Blast Tuyers for HSL	23,440	22,000
G. I. Chill rolls for M/s. Tin Plate Co., Jamshedpur.	6,230	5,000
Rolls (Russian imported)	4,430	3,077

76. During evidence the Committee were informed that the main reason for the high cost of production was high over-heads because of low production. With the increase in production the over-heads per unit were expected to come down.

77. The Committee are constrained to observe that in the case of certain items, the selling price does not cover even all the direct charges in respect of items such as raw materials, salaries and wages

and power and fuel, not to speak of indirect charges like depreciation, interest, other over-heads, etc. This is a serious matter and calls for urgent action on the part of the Corporation to examine the reasons for such high cost of production. The high cost of production not only affects the financial working of the Corporation but also its competitive position in the international market. Because of lack of sufficient internal demand, it is vital for the Corporation to enter the export market. But it was admitted by the Chairman of the Corporation that although they had tendered in a number of cases, they could not secure any order mainly because of very high cost of production and the international price being not sufficient even to cover the cost of raw materials. The Committee, therefore, urge that concerted efforts should be made by the management to reduce the cost of production, through improved productivity and reduction in inventories, wastages of materials, and better utilisation of men and machinery.

F. Quality of Products

78. There had also been complaints about the quality of items manufactured by Heavy Engineering Corporation. In a memorandum submitted by the Hindustan Steel Ltd., it was pointed out that all the rolls which had been supplied by the Heavy Engineering Corporation had been rejected for the following reasons:—

(a) The machining of the necks of the rolls for the Billet Mills was defective and these could not be fitted in the double row tapered roller bearings. If these were fitted, this would have caused damage to the bearing.

(b) None of the Key-ways put in the rolls were in conformity with the dimensions and tolerances given in the drawings. These were, therefore, not interchangeable as they must be.

(c) The material used in the manufacture of rolls was sub-standard. The Hindustan Steel Ltd. had asked for the alloy S.G. rolls, and Heavy Engineering Corporation had supplied plain carbon unalloyed rolls. The rolls of this specification are suitable only for rolling rounds as in the case of Durgapur Steel Plant but definitely not for Bhilai Steel Plant where they are meant for rolling channels and joists. These rolls were sent back to Heavy Engineering Corporation.

79. In the case of 12 rolls supplied to Durgapur Steel Plant, two rolls had been rejected on account of bad machining and returned to Heavy Engineering Corporation for rectification. The life of the

rolls supplied was also less compared to the imported ones because these rolls did not contain the alloying elements like nickel, molybedenum, chromium etc.

80. The Hindustan Steel Ltd. had observed that they were not yet satisfied with the quality of rolls, delivery periods and their performance and it seems that for a few years more they will have to continue with the import of rolls. Several defects were also pointed out by the Hindustan Steel Ltd. in the equipment supplied for the sixth Blast furnace complex at Bhilai.

81. During evidence it was admitted that there had been complaints about the quality of the items manufactured by the Corporation. The main reason for these defects was that these items had been taken up for manufacture for the first time in the country and experience/skill were slowly being developed resulting in further improvement in quality.

82. As regards complaints about rolls supplied to the Hindustan Steel Ltd. the representative of the Corporation stated that due to difficulties in obtaining alloy steel, the rolls supplied were not exactly according to the specifications. These rolls had later on been withdrawn and new rolls had been supplied according to the specifications. The defects in the sixth Blast furnace complex were stated to be minor defects which had developed in transit. On defects being pointed out by the Bhilai Steel Plant, a team was sent out which inspected the equipment at site and rectified the defects.

83. It needs no emphasis that the products manufactured should be of standard quality and according to the requirements of the consumers. The Committee, therefore, recommend that there should be rigid quality control at every stage of production to obviate complaints from customers and to inspire confidence in the products of the Corporation.

G. Surplus capacity

84. While on the one hand there were delays in the execution of orders both by the Heavy Machine Building Plant and the Foundry Forge Plant, on the other hand the Committee were informed that the Corporation was facing the problem of lack of forward orders to utilise fully the capacity that would be developed in various plants of the Corporation in the coming years. From the statements furnished to the Committee (Appendix VII) regarding estimated capacity, the orders in hand or expected and the likely surplus or shortfalls in orders in the three plants of the Corporation, it is seen that

while the capacity of the Heavy Machine Building Plant is sufficiently loaded upto 1969-70 except for certain departments, the Foundry Forge Plant and the Heavy Machine Tools Plant will have unutilised capacity even from 1967-68.

85. The Committee enquired during evidence whether in view of the surplus capacity in the Foundry Forge Plant, it was desirable to continue with the implementation of the first and second phases of the third stage expansion of the Foundry Forge Plant. The Secretary of the Ministry stated that the implementation of this stage would only mean increasing the capacity of this plant to match the capacity already established in the Heavy Machine Building Plant. Since orders had already been placed for the civil works, buildings and the equipment, it would not be possible to cancel these orders at this stage.

86. As regards the Heavy Machine Tools Plant, the Committee were informed that the lack of orders for this plant was a temporary phase and the Corporation was confident of utilising the capacity created for heavy machine tools. The Corporation had already got orders for more than 40 machines and further orders were also expected in course of time.

87. In the case of the Heavy Machine Building Plant, the problem was that the type of capacity established there was essentially of a jobbing nature. It was stated that the range of equipment required to be manufactured was comparably of long manufacturing cycle. It took nearly 1½ to 2 years on preparatory work (like design, technology, tooling, material estimates, material procurement, making of patterns, obtaining castings, etc.) from the date the orders were received before the production could commence. It was, therefore, necessary to have long range planning for setting up of new steel plants or expansion of the existing units, so that on economic batch production basis, work could be taken up and resources fully utilised. For this purpose, at least firm orders should be in hand for 5 years and for another 5 years there should be perspective planning so that for certain items a continuous manufacturing programme could be maintained and the capacity utilised fully.

88. It was further stated that the items to be produced in the Heavy Machine Building Plant were also very bulky and expensive. Therefore, the Corporation could not afford in every case to produce for stock. If the orders were planned in advance, standard items like excavators, slag ladle cars, ingot mould cars, transfer cars, oil drilling rigs, hydraulic presses, heavy duty metallurgical cranes and such other items could be produced in economic lots and the profitability improved.

89. During evidence the Secretary of the Department of Industrial Development agreed that, as pointed out by the USSR authorities also, there must be planning right now for the production which would start in the Heavy Machine Building Plant in 1973 to have an even flow of production. The capacity which was being developed in the Heavy Machine Building Plant was sufficient for manufacturing steel plant equipment of a million ton per year. It was hoped that the steel development programme would be such that a million tonne of steel capacity on an average would be added each year during the Fourth Five Year Plan. But, unfortunately, as things stood it looked that the increase in the capacity of steel plants was not likely to be more than half a million tons per annum on an average. He admitted that unless the development plans of the steel industry were much larger than the present prospects, the shortage of orders was going to be one of the very serious problems of Heavy Engineering Corporation in the near future.

90. As regards steps taken to utilise the surplus capacity, the Committee were informed that steps have been taken for product diversification. Certain items taken up for manufacture were (i) irrigation well drilling rigs; (ii) continuous casting machine; (iii) equipment for gas cylinder and rear axle and heavier components for marine diesel engines; (iv) excavators for mining industry; (v) palletisation machinery, etc. A Russian team had also been invited to assist in planning diversification with the least additional expenditure.

91. The Committee are perturbed at the lack of orders for the Heavy Machine Building Plant. In their opinion one of the major causes leading to the present situation is the decision of the Government to revise the initial capacity of the Heavy Machine Building Plant. As pointed out in para 7 of this Report, the capacity of the Heavy Machine Building Plant was initially to be 45,000 tons in the first stage to be expanded to 80,000 tons in the second stage. But the Government subsequently decided to have the capacity of the plant as 80,000 tons from the very beginning. It was also decided to revise the capacity of the Foundry Forge Project to 80,000 tons so as to be in step with the Heavy Machine Building Plant. The revision in the capacities of the plants has resulted in delays in construction and additional expenditure. Before deciding to increase the capacity of the Heavy Machine Building Plant from 45,000 tons to 80,000 tons, it was expected of the Government to ensure whether there were reasonable chances of corresponding development of the iron and steel industry. The limited resources of the country and the need for balanced development of all sectors of economy called for a cautious approach. The Secretary of the Min-

istry agreed during evidence that there should be proper assessment of demand, the projects should be started on a conservative basis and the expansion should be thought of only when capacities created have been fully utilised. The Committee cannot help reaching the conclusion that if the original capacities had not been revised, these units would have gone into production much earlier, there would have been lesser capital investment and the Corporation would not have faced the problem of lack of demand and idle capacity. The Committee trust that in future the Government would make more realistic assessment of demand especially when setting up plants with such heavy capital investment.

92. It is significant to note the financial implications of the surplus capacities in these plants. According to an assessment made by the Corporation, the Heavy Machine Building Plant will be practically idle from 1970-71 and the fixed charges alone will be Rs. 14 crores annually unless orders are received in the meantime. In the case of the F.P.P. there would be surplus capacity from 1967-68 itself and as a result of it the net loss upto 1969-70 would be Rs. 17·52 crores. From 1970-71 this plant would also be practically idle and the fixed charges will amount to Rs. 17 crores per annum. The position is no better in the H.M.T.P. in as much as there are no appreciable orders there at present. If the capacity is not utilised the fixed charges would be Rs. 7·08 crores upto 1969-70 and Rs. 3·35 crores from 1970-71.

93. **Thus these plants set up at a capital investment of Rs. 244 crores instead of paying any return on capital employed will result in a dead loss of Rs. 34.35 crores per annum from 1970-71 on account of fixed charges. This is an alarming position and calls for immediate steps to ensure proper utilisation of the capacities created in these plants. In addition to the steps being taken by the Corporation for product diversification, there is an urgent need for firm decision by the Government about the expansion of steel plants in the next ten years.**

Concerted efforts should also be made to promote exports through proper assessment of demand for the products of the Corporation in other countries. In this connection the Committee also feel that it would help exports if facilities are offered by the Government for supplying plant and equipment on deferred payment terms. While granting long term credits to the neighbouring countries, certain turn key projects for establishment in those countries could form a part of package deal. This would help to increase exports and utilise the surplus capacities in these plants. The Committee trust that the matter would receive urgent attention of the Government.

H. Standardisation

94. As pointed out earlier one of the reasons why the Corporation requires orders five years in advance is that the HMBP has a long manufacturing cycle. The preparatory work alone like preparation of designs, technology, tooling, material estimates, etc. takes 1½-2 years. Standardisation of equipment is one of the essential conditions for reducing the time lag in the manufacture of equipment. Once an equipment is standardised, a lot of time spent on preparatory work can be saved as most of the requirements like technology, designs, tools and fixtures etc. will be available with the plant.

95. It is regrettable that not much headway has been made in regard to standardisation of steel plant equipment. In 1963-64 when the Estimates Committee examined the working of Heavy Engineering Corporation, they were informed that the Corporation has come to an understanding with HSL regarding standardisation of blast furnace designs. That Committee urged the need for early standardisation of other equipment in close consultation with the users. The Committee are constrained to observe that the position is no better even today and except the blast furnaces no other equipment has been standardised. Needless to say that there is urgency for concerted efforts in this direction. The standardisation of equipment would not only help to reduce the time lag in the manufacture of the equipment but also the cost of production, as the design costs range from 10 per cent to 25 per cent of the total cost of the equipment.

I. Turn Key jobs

96. The Corporation has expressed the view that placing of contracts on the foreign suppliers for turn key projects was not desirable. The discussions with foreigners take three to four years before finalising the contract for turn key projects and when the question of supply comes, the foreign supplier generally recommend purchase of major part of equipment and machinery from abroad, and the items which could be produced in the country are left out on the plea that the indigenous supplies will take long time. With long range advance planning, requirements can be worked out with more definiteness and the production taken up in a manner that there is a better utilisation of indigenous capacity.

97. The Committee have in the past also (para 92, 13th Report) pointed out that setting up of plants on turn key basis should be confined to cases where time is of essence or where there is lack of necessary technical skill and know-how in the country. In fact, with the setting up of heavy engineering units like Heavy Engineering Corporation, Heavy Electricals (India) Ltd. and the experience gained by the steel plants personnel in erecting and running the

steel plants, a stage has been reached when it should be possible to set up future steel plants without any foreign collaboration.

98. The Committee considered the question as to how far the Corporation could itself take up the turn key jobs for the setting up of steel plants. The Secretary of the Department of Industrial Development stated during evidence that they were examining the possibility of setting up a sort of consortium of equipment suppliers like the Heavy Engineering Corporation, Heavy Electricals (India) Ltd., Instrumentation Ltd., and some other companies which would take up turn key jobs for execution in India or even abroad for setting up steel plants. In taking up a turn key job there were three main stages involved. First there was the question of designing of the project and its plant and equipment, then the supply of equipment and thirdly the question of civil works and erection of equipment. The possibility of forming a sort of consortium to take up turn key jobs by collaborating with the firms either in the private or public sector was under examination.

99. **The Committee welcome this step. They consider that by virtue of its being in a position to make major contribution in the supply of plant and equipment for the steel plants, Heavy Engineering Corporation can play a leading role in such a consortium. The Government will of course have to carefully examine the existing gaps in the facilities available in the country for equipment, design and engineering and measures will have to be taken to cover up such gaps in order to enable any consortium to take up the work of setting up a steel plant from its conception to its commissioning.**

IV

MATERIALS MANAGEMENT

A. Inventories

100. The following table shows the value of inventories for the three plants during the last three years:—

(Rs. in lakhs)

	1964-65	1965-66	1966-67
H.M.B.P.			
Raw Material Stores and spares:—			
Indigenous	204·27	582·56	513·38
Imported.			284·29
Semi-finished goods.	21·84	37·65	40·03
Finished goods.	9·21	128·21	173·73
TOTAL	235·32	748·42	1011·43
Foundry Forge Project			
Raw material (Production) and consumable stores.	33·50	79·77	164·30
Spares for P & M & equipment.	108·15	126·77	214·20
Semi-finished products.	4·18	5·54	45·92
Finished product	1·49	2·92	10·16
TOTAL	147·32	215·00	434·58
Heavy Machine Tools Project			
Stores, spares etc.	29·53	40·48	20·36
Production steel	..	..	2·25
Castings & Forgings	..	00·32	0·57
Aux. for machines & equipment CKD components and raw materials	..	..	82·02
Imported tools	..	..	26·58
TOTAL	29·53	40·80	131·78

It will be seen from the above statement that there has been considerable increase in the value of inventories. The value of inventories in 1966-67 in all the three plants amounted to Rs. 15·78 crores.

101. During evidence the Chairman of the Corporation stated that the inventories should be judged with reference to the likely production during the next year. Further in a plant like the Heavy Machine Building Plant, which has a long production cycle running from 8 months to two years, the inventories have to be higher than in other industries having comparatively short manufacturing cycle.

102. It was, however, admitted that the inventories in the Heavy Machine Building Plant were very high. One of the reasons was the heavy stock of steel items costing about Rs. 7 crores. Recently a Committee was appointed and it suggested that out of 30,000 tons of steel items, about 10,000 tons of steel was surplus to requirements. The witness added that steps have been taken for their disposal.

103. The Committee regret to note that items of steel were purchased much in excess of requirements without carefully assessing the actual need. They find that there had been several other cases where materials costing lakhs of rupees were purchased without carefully assessing the actual requirements. Some of the instances as pointed out by the F.A. & C.A.O. in his reports for the Quarters ending June and September, 1967 are given in Appendix VIII. The Committee desire that these cases should be examined and the responsibility for the purchase of materials in excess of requirements fixed.

104. Because of injudicious purchases of materials, stores valuing Rs. 94·66 lakhs were lying idle on the 1st April, 1967 out of which stores worth Rs. 27.9 lakhs had not moved for more than three years. What is worse is that inspite of heavy inventories in a large number of cases, the production suffered for want of materials. The Committee cannot help observing that the system of planning and purchasing of stores is defective and needs urgent review to avoid unnecessary locking up of working capital in inventories and considerable loss to the Corporation because of heavy inventory carrying cost.

B. Consumption of raw materials

105. The following table shows the norms per tonne of production as given in Detailed Project Report and the actual consumption of various raw materials in the Foundry Forge Plant:—

	Consumption per ton of good castings as given in the DPR (Tons)	Actual per ton of good casting during 1966-67 (Tons)
G. I. Foundry		
Pig Iron (all types)	0·62	1·0
Scrap (Steel Roll and Ingot Mould)	0·42	0·25
Ferro alloys	0·03	0·02
Non-Ferrous Foundry		
Charging materials	1·50	1·54
Steel Foundry.		
Steel Scrap	1·24	1·60
Ferro-alloys	0·03	0·02

106. As regards the reasons for high consumption the Committee were informed that as Grey Iron Foundary was in its initial stages of production, return scrap of suitable composition was not available and further Foundry returns were not accumulated so as to conform to the composition required. In the case of Steel Foundry, the norms given in Detailed Project Report were inclusive of open-hearth steel which contained 30 per cent of pig iron approximately. However, as the open-hearth furnaces had not been commissioned, the whole charge was of only steel scrap.

107. In the case of the Heavy Machine Building Plant, the control over consumption is exercised through bills of materials made out for each item of manufacture. According to the Russian Organisation Manual the control over the issue of materials has to be exercised at the issue stage itself by means of limit charts. It provided that no issue of materials in excess of the authorised quantity should be made unless the same was specifically authorised by an officer higher than the one normally authorised to draw the materials. Further, the excess issue should be drawn on a separate

voucher so that the cost of the excess issues could be worked out easily. However as pointed out by the F.A. & C.A.O. of the Corporation this procedure was not being followed in the Heavy Machine Building Plant as a result of which it was difficult to know the cases of excess consumption of materials.

108. During evidence it was admitted by the Chairman of the Corporation that the bills of quantities were not properly prepared. He added that instructions had since been issued in this regard to see that there was no undue wastage of materials. It had been provided that any quantity in excess of limit card had to be approved by the Chief Engineer (Technical).

109. The Committee were also informed that in the absence of supply of correct sizes of metal rolled products from suppliers, initially 12 to 15 per cent of these items resulted in cut pieces. These were however subsequently used for smaller jobs. Instructions had also been issued to see that the materials issued for production were of required sizes so that the minimum wastage took place.

110. Considering that the cost of raw materials accounts for a major portion of total cost of production for any item, it is essential that there should be strict watch over consumption of raw materials. The Committee, therefore, recommend that the norms of consumption should be fixed on a scientific basis and should not be exceeded without legitimate reasons. They suggest that the cost of excess consumption should be worked out separately as this would help the management in reviewing the extent of such excess and taking remedial measures.

C. Fire accidents

111. The Corporation suffered considerable loss due to several fires in their plants. Details of major fires and the assessment of loss suffered in each case are indicated below:—

Sl. No	Date of fire	Place of fire	Loss caused
1.	15-6-63	Hatia Storage Shed.	Rs. 8 lakhs.
2.	29-1-64	HMBP Open Gantry.	Rs. 46·31 lakhs.
3.	10/11-9-64	'E' type shed at Custody Stores, Foundry Forge Project.	Rs. 25,000/-
4.	28-2-1966	Grey Iron Foundry B-C Bay underground cable tunnel (FFP).	Rs. 23,600/-

112. The Director (Construction) of the Corporation who investigated the causes of the first fire made the following recommendations to avoid such fires in future:—

(i) Regular weekly fire drill should take place where all the concerned fire staff take part and are fully familiar with the procedure to be adopted in case of fire.

(ii) The fire engines should be started every day for short periods and run on full load at least once in a month for 2 hours to satisfy ourselves that it is in good working condition and a log book should be maintained.

(iii) As the building for Fire Station is not yet ready, Fire Engine and Fire Squad may be located in the Transport Shed where a separate place is given to them and a separate telephone installed. This should be manned all the 24 hours on shift system. All the Project Officers and the Stores should be intimated that they should contact the Fire Brigade through this telephone number immediately a fire occurs.

(iv) Regular lessons should be given to the concerned staff in Stores, etc. so that they are familiar with the correct method of using the various fire extinguishers. These fire extinguishers should be tested periodically and a log book maintained to show that they have been tested and are in good condition. A record should be maintained on the fire extinguisher itself to show that each extinguisher was refuelled, etc.

(v) We should have at least two water lorries with about 1,200 gallons capacity each fully filled with water and readily available at the fire Brigade all the 24 hours.

(vi) Fire extinguishers in adequate number should be installed in all the Stores, Machine Shops etc. Special precaution should be taken where the incidence of fire is likely to cause great damage like Wood Working Shop, Oil Storage Sheds, etc.

(vii) Strict rules regarding prohibition of smoking, etc. especially in vulnerable places, should be followed.

(viii) Fire buckets with sand should be installed in various places in adequate numbers.

(ix) The Fire Staff should be supplied with uniform so that they may be easily recognised and permitted to go in without being held up by the Security staff.

(x) Instructions should be issued that when a fire occurs, the H.E.C. Exchange should be informed. A list of essential persons, who should be intimated, should be available with the Exchange Operator, who will take steps to inform these persons immediately.

113. Unfortunately even after this report of the Director (Construction) effective steps were not taken to implement his recommendations to fight/prevent fires in future. To quote the words of Justic Mukherjee who enquired into the causes of the second fire in January, 1964, "it is depressing to note that many of the suggestions made by Mr. Narayana Rao were only observed in the breach".

114. The Committee enquired the reasons for not implementing these recommendations. They were informed that on the receipt of the Report of the Director (Construction), the Chairman of the Corporation issued instructions to the Director Incharge of fire fighting organisation and to all Heads of the projects for implementing these recommendations. In view of the observations by Justice Mukherjee, the explanation of the Director in charge of Fire Fighting Organisation was called for and this was examined by the Ministry concerned. Although according to the explanation of the Director in charge he had taken action to implement these recommendations, the ultimate finding of the Ministry was that although something was being done to implement these recommendations, the sense of urgency with which these recommendations should have been implemented was not there. Everything was done in a routine way with the result that there were no adequate arrangements at the time of second fire in January, 1964.

115. The Committee regret to note that not only did the Corporation fail to take necessary precautions for fire fighting from the very beginning, but even after the fire in June, 1963, no urgent action was taken to implement the recommendations of the Director (Construction). The result was that there was another major fire in January, 1964 causing heavy damage to valuable imported machinery, which had to be imported again at a cost of Rs. 72.20 lakhs. However, in view of the assurance given to the Committee that the fire service organisation of the Corporation has since been brought upto the standard, the Committee hope that such incidents will not occur in future.

D. Security arrangements

116. In his report on the second fire in January, 1964, Justice Mukherjee commented upon adversely about the security arrangements of the Corporation and observed *inter alia* as follows:—

"There could be no serious doubt that the security arrangements were not only inadequate but also that some of the

personnel manning that service were incompetent. There was, I am constrained to say, almost criminal lack of supervision and control. Deployment of untrained men, never mind if some of them were Ex-Police and Ex-Army men, could alone never be conducive to proper security".

117. As to the reasons for the delay in strengthening the security arrangement the Secretary of the Corporation stated during evidence that although steps were initiated by the Director (Construction), it was not possible to get security personnel from the Army as most of the Army personnel had been called on duty due to Emergency and, therefore, they had to employ some people on muster roll. But subsequently when the Corporation was able to get the security personnel on deputation from Bihar Police and Bengal Police, the muster roll employees were released and there was no muster roll employee now on security duties.

118. The Committee are not satisfied with the reasons for the delay in strengthening the security arrangements. In view of the fact that even subsequently only persons from Bihar and Bengal Police have been engaged for security purposes, the plea of non-availability of army personnel because of emergency seems to be untenable. The Committee feel that as in the case of fire fighting arrangements no serious attention was paid to strengthen the security arrangements and things were allowed to proceed in their own way.

119. The Committee find that the third fire which occurred in September, 1964 also revealed lack of proper security arrangements. According to the Report of the Enquiry Committee which looked into this fire it could be taken for certain that this fire was deliberately caused, and as the police investigation later on confirmed, it was a case of sabotage. The key of the 'E' shed in which the fire was caused was found missing on the morning of 11th September after the incident but was found in the key board again on the 16th morning. The missing and finding of the key remained a mystery. According to the Enquiry Committee Report the security guards on duty and the stores staff could not be absolved of their responsibilities in this regard.

120. As regards the action taken against these persons it was stated that the matter was handed over to the police for investigation. All the four security guards, the store clerk, stores man and store keeper against whom there was suspicion about the missing key were suspended. The police after investigation charge sheeted 14 persons, against whom some substantive evidence could be obtained by them. Out of these 14 persons, five were committed to Sessions Court and the case was *sub-judice*. As regards the stores and

security personnel, the police could not find evidence against them for a criminal action. In the circumstances the departmental proceedings were dropped against these persons.

121. Even granting that the police failed to find any evidence against the security personnel for a criminal action, it is evident from the facts of the case that this fire could not occur without the connivance or negligence on the part of the security guard. The Committee are concerned about the several cases of sabotage in the plants of the Corporation and feel that it is essential that proper measures should be taken to guard against recurrence of such cases. The Committee recommend that there should be proper screening of the security personnel before their appointment to avoid any chance of their complicity in such cases.

Employment of Chief Security Officer as Controller of Stores

122. The Chief Security Officer of the Corporation was adversely commented upon in the Report of Justice Mukherjee. The then Chairman of the Corporation had therefore reported to the Government on 15th February, 1965 that the Chief Security Officer would be relieved from the services of the Corporation as soon as an officer of the I.P.S. from the Bihar cadre was made available. Although an I.P.S. officer joined the Corporation on the 8th July, 1965, the Chief Security Officer continued to work on his post upto January, 1967, and was thereafter appointed as Controller of Stores in Foundry Forge Plant.

123. Asked about the reasons for not honouring the commitment made to the Government, the Secretary of the Corporation stated during evidence that the Security Adviser to the Government of India recommended that the Security Officer should be allowed to remain second in command for sometime. Further, on a representation received from the Security Officer involved it was felt that his responsibility was not such as should debar him from employment altogether and ends of justice would be met if he was transferred to another organisation. As he had the experience of stores in the Defence Department, he was transferred to the stores organisation of the Foundry Forge Plant. The Ministry were however not informed of this change in the decision of the Corporation to relieve the Security Officer.

124. The Committee are constrained to observe that in spite of adverse comments made in a report by an independent Enquiry Committee against the Chief Security Officer and even after the Corporation had made a commitment to the Government in February, 1965 that the Chief Security Officer would be relieved from the service of the Corporation, he was in fact placed in a position with

higher responsibility instead of being relieved from service. The change in decision about him was not even communicated to the Government. The Committee take a serious view of the scant regard paid by the management to the observations in the Report of an independent Enquiry Committee.

125. The Committee also regret to note that the Government did not keep a watch on the actual implementation of the commitment made to them in this regard. They desire that the matter should be examined by the Ministry and suitable action taken.

The Committee also suggest that whenever special Enquiry Committees are set up either by the Government or the Public Undertakings, the action taken on the observations/recommendations of such reports should be watched by the Ministries concerned.

E. Insurance of Plant and Machinery

126. It was noted that the plant and machinery of the Heavy Machine Building Plant, where the fire took place in January, 1964 was not insured. The question of insurance was first taken up by the Corporation with the Indian Insurance Companies Association Pool in 1961. A note was put up for the consideration of the Board of Directors at their meeting held on the 20th January, 1962. According to the minutes of the meeting of the Board of Directors, the decision of the Board was that as the Government had now revised their approach and authorised each management to insure the property of the Corporation at their discretion, the Corporation was justified in effecting insurance of its property wherever found necessary. It was appreciated that although the overall expenditure in the form of insurance might appear large, this was to cover risks of diverse types on assets of a large value. It was, however, felt that the need for taking out storage-*cum*-erection insurance at least in the case of the F.F.P. equipment was more imminent. The Board therefore decided that initially the plant and machinery received for the Foundry Forge Plant only might be insured and based on the experience gained for some time the question of insuring the plant and equipment from Russia for the Heavy Machine Building Plant also might be re-examined.

127. It will be seen from the above minutes that the Board had realised the need for insurance of plant and machinery but decided that the question of insuring the plant and equipment from Russia (for the Heavy Machine Building Plant) might be re-examined based on the experience gained for sometime. However, the matter was placed for the consideration of the Board again only on the 3rd February, 1964 (i.e. two years after the previous decision) when the

Board approved the proposal of the Director (Finance) regarding storage-*cum*-erection insurance of machinery and other equipment of the Heavy Machine Building Plant and the Coal Mining Machinery Plant but desired that the proposal should be referred to the Government for advice, if any, before it was finally implemented.

128. During evidence the Chairman of the Corporation stated that the matter was taken up with the Indian Insurance Companies Association Pool in August, 1963 and talks were held with them in December, 1963. It is however noted that even in February, 1964, when the matter was put up to the Board, the rates of premium, the manner of payment, etc. had not been settled and the Board was requested to accept the proposal for insurance in principle so that further action regarding negotiation for rates and the manner of payment etc. could be taken and settled with the Pool on immediate basis. In the circumstances, the time taken by the Corporation in preliminary talks with the Indian Insurance Companies Association Pool could hardly be justified. It is regrettable that even after a major fire in Hatia storage shed in June, 1963, the urgency of the matter was not realised and no immediate action was taken to insure the plant and machinery of the Heavy Machine Building Plant. The failure to insure the plant and machinery resulted in an avoidable loss of Rs. 72.20 lakhs to the Corporation. The Committee hope that the management will insure valuable plant and machinery wherever necessary and justified.

V

ORGANISATION

General

129. The business of the Corporation is managed by a Board of Directors all of whom are appointed by Government. The three plants are each headed by a General Manager, but none of the General Managers is on the Board of Directors of the company. For co-ordination, particularly in respect of policy and common matters of the projects, a Committee of Management has been functioning in the Corporation. The members of this Committee were Chairman, Project Heads, Financial Adviser and Chief Accounts Officer, Secretary, Chief Engineer (Hqrs.) and Chief of Personnel Division.

A. Board of Directors

130. During the three years from 1964 to 1966, 20 meetings of the Board of Directors of the Corporation were held. A statement showing the number of meetings attended by each Director year-wise is given in Appendix IX. It will be seen therefrom that some of the Directors did not attend even 50 per cent of the meetings of the Board during these years.

131. The above position indicates lack of interest by some of the Directors in the affairs of the Corporation. During evidence the Committee enquired whether at the time of appointment of the Directors it was seen by the Government that only such persons who were likely to take interest in the affairs of the company were appointed on the Board of Directors. The Secretary of the Ministry stated that while reviewing the composition of the Board of Directors the extent of interest which the members of the previous Board of Directors had taken in the meetings of the Board was generally taken into consideration. Further a limit had been imposed on the number of companies on which an officer of the Government could be a member. They were generally not allowed to be on the Board of more than three or four companies.

132. The Committee, however, note that some of the Directors have continued to be on the Board of Directors of the Corporation for the last three years although they had not been attending

majority of the meetings of the Board. The success of any undertaking largely depends on the interest taken by the Board of Directors. The Committee, therefore, recommend that at the time of reappointment of the Directors each year, only those who have shown interest in the affairs of the Company should be considered for reappointment. The Committee feel that in an undertaking of this size and complexity it would be advantageous to have the General Managers on the Board of Directors.

B. Personnel

133. The following table shows the position about the staff requirements as estimated in the Project Reports or as per the organisation manual for each plant and the number of persons actually employed:—

	As per organisational Manual	In position
Foundry Forge Plant		
Technical Staff	1158	457
Administrative staff	502	505
Workers.	6413	2220
TOTAL	8073	3182
H.M.B.P.		
Engineers	952	593
Supervisory	419	381
Workers	3184	2431
Clerical & Stores	602	715
Unskilled	193	152
TOTAL	5380	5643

Structural fabrication shop	Ultimate requirement as per D.P.R.	In position
Engineers	47	40
Supervisors	166	73
Workers	406	80
Clerical & Stores	96	18
Unskilled	720	36
TOTAL	1435	247
H.M.T.P.		
Supervisory	298	166
Workers	1313	572
Others	279	173
	1890	911

134. Besides the persons employed in the three projects, there were 3306 persons employed in the Headquarters of Heavy Engineering Corporation at Ranchi for looking after functions common to the entire Corporation and for maintaining a uniform policy on important matters. Some of the common service departments are: Town Administration, Medical, Training, Railway and Movement, Transport etc.

135. An analysis of the staff position discloses the following points:—

(i) In the F.F.P., the actual production in 1966-67 was only about 3 per cent of the rated capacity. But the staff employed was about 40 per cent of the estimated staff requirements on reaching the rated capacity. The Administrative staff employed (505) was even more than the estimated requirements of staff at rated capacity.

(ii) In the H.M.B.P. the actual production in 1966-67 was only about 18 per cent of the rated capacity. But the staff employed in production was even more than that estimated for production at the rated capacity. It was admitted in Parliament that staff in addition to those in position on

the 1st April, 1967 may not be required to reach the rated capacity. The staff was in excess especially in categories of clerical, stores and unskilled workers.

(iii) In the H.M.T.P. the assembly of machines with the help of imported components started from the end of the year 1966. During 1966-67, the machinery assembled was only 116 tonnes as against the rated production capacity of 10,000 tonnes per annum. But the staff employed was about 50 per cent of the estimated staff requirements at the full rated capacity.

136. As regards the reasons for employment of more persons than the requirements at the present level of production, the Committee were informed that at the present stage of development, when the personnel were under training and had yet to acquire the required skills, the staff strength could not be related to the quantum of output. Persons had to be brought in position in advance as they had to be trained on the job. The staff in the preparatory departments had also to be brought in position somewhat in advance as their activities preceded the actual production in the plant. Moreover the service departments were to be fully manned even in the event of part production. These service departments were also used for construction activities. Further, in the case of the Heavy Machine Building Plant the estimated requirments as per Detailed Project Report/ Organisation Manual did not include the persons employed in certain departments. Staff strength as suggested by the Soviets, did not prove sufficient for departments like Administration, Fire Service, Security, Stores, Purchase, Labour Welfare, Finance, Accounts and maintenance. The Committee, were, however, assured that at no point of time the Corporation would exceed the recommended staff strengths for production in the Project Reports of the three plants barring only those departments which were not included in those reports.

137. It was, however, admitted that the present employment of administrative staff in the Foundry Forge Plant as well as of the clerical and stores and unskilled workers in the Heavy Machine Building Plant was more than the requirements. The reasons for excessive employment of Staff in these categories was that most of the clerical staff which the plant was having at present were employed three or four years back against the needs of construction and its associated activities like Stores, Purchase, Finance, Accounts and Administration. During the construction stage much check was not exercised in the recruitment of staff. The result was that the Corporation was saddled

with additional hands and it was now difficult to retrench them because of fear of labour trouble. The Corporation was, therefore, trying to reorient construction workers and to utilise them for production. This was also one of the causes for low production in the plants.

138. **It is unfortunate that the recruitment of staff by the Corporation during construction was not strictly related to the requirements. Having committed this initial mistake the Corporation now finds it difficult to retrench them and are obliged to carry the extra strength. This has led to lower productivity and higher cost of production.**

139. **In this connection the Committee note that the Estimates Committee (1963-64) which examined the working of this Corporation suggested in para 173 of their 51st Report that "the Corporation should endeavour from the beginning to (i) restrict the number of administrative and supervisory staff, (ii) increase the productivity of direct workers by proper training, and (iii) avoid any over staffing particularly at the initial stage." In pursuance of this recommendation the Corporation had stated that with a view to ensuring that there was no overstaffing even at this stage of construction and production a decision had been taken to freeze recruitment at all levels. Staff was being recruited only when it was absolutely essential. From a statement furnished to the Committee it is however noted that the Corporation has appointed 1,523 more persons in the last three years. The persons recruited include workers and staff for departments like Administration, Stores, Finance etc. in which there was already overstaffing.**

It is regrettable that in spite of the recommendation of the Estimates Committee and the decision of the Corporation to freeze recruitment, the employment of additional staff should have continued in the plants of the Corporation. This only shows that the management has failed to implement its own decisions. The Committee desire that unless technical compulsions require no fresh recruitment should be made till all the existing labour and staff have been gainfully utilised.

140. The Committee also enquired whether any scrutiny had been made about the actual requirements of persons for each job. They were informed that O & M Section of the Corporation which was constituted in April, 1966 was making studies in this regard. The studies so far conducted related to the Departments connected with Headquarters and only a few Departments of plants were taken up. The studies were confined to areas involving clerical activities. 713 non-technical persons were found surplus. The O & M Reports were

still under consideration of the Departments. The O & M Division could not extend its field of study since July, 1967 because of its involvement with deployment of staff declared surplus and in rendering assistance for implementation of their recommendations. Series of discussions have been held for implementing the procedural changes in Purchase and Finance accounting. It will take another 18—24 months to complete the studies in the remaining departments of Headquarters and also cover the Departments belonging to the plants.

141. The Committee are not satisfied with the progress made in locating surplus staff in the plants of the Corporation. They also feel that in order to have a proper assessment of the surplus staff, it would be better to have such an investigation carried out by some expert outside agency.

C. Surplus construction staff

142. During evidence, the Committee were informed that the Corporation was trying to reorient the construction staff by giving them some training and putting them on production jobs. Even then all the civil construction staff could not be adjusted to the needs of mechanical plants and therefore it would not be possible to absorb all of them.

143. In this connection, the Committee also enquired whether there was any system whereby the surplus construction staff from one public sector project could be transferred to the other projects. They were informed that although the Corporation had written on the subject to many public undertakings which were going into construction, the response had not been satisfactory. For instance, the Bokaro Steel Plant preferred to take civil engineering staff from Bhilai Steel Plant. On the other hand the Bharat Aluminium Company Ltd. preferred to make recruitment from the open market.

144. Asked whether it would be helpful if a separate cadre of civil engineers was formed for all the public undertakings, the Secretary of the Department of Industrial Development stated that in his view the creation of a cadre of civil engineers as such would cut across the principle of autonomy of the undertakings. They were, however, in favour of a pool being created in which all the people who had experience of construction in various projects could be enrolled as members and all the projects could draw their requirements from the pool. It could also be provided that any undertaking making recruitment from outside the pool should record reasons for doing so. The pool would, however, be a kind of employment bureau and there was no question of any payment during the period they were not actually appointed by any undertaking.

145. The Committee feel that this would hardly solve the problem as it would be difficult for the undertakings to retrench the surplus construction staff till they find alternative jobs. At the same time they feel that if the public sector undertakings have to work efficiently and to secure low cost of production and adequate return on capital employed, it is necessary that the labour cost which accounts for a substantial portion of the cost of production be kept to the minimum. Since the construction staff is solely employed for the purpose of construction work there is no obligation on the part of the public undertakings to retain them after the assignments for which they had been engaged are over. Thus there is no justification for burdening the public undertakings with surplus construction staff which cannot be gainfully employed by them in production. The matter, therefore, required serious attention of the Government.

146. In this connection the Committee find that the Estimates Committee had in their 51st Report on the Corporation had suggested the building up of strong organisations in the public sector for undertaking construction and erection work. They also suggested that in this context the strengthening of the two existing organisations viz. National Projects Construction Corporation and National Buildings Construction Corporation for undertaking such work may be considered by the Government. In pursuance of this recommendation, the Committee were informed by the Government that apart from National Projects Construction Corporation Ltd. and National Buildings Construction Corporation Ltd. The Government have also since set up Hindustan Steel Works Construction Ltd. More such undertakings will be set up as and when considered necessary. The Committee feel that the entrusting of construction and erection work to central agencies instead of doing it departmentally will go a long way in solving this problem of surplus construction staff. Till the work is done by a central agency there will always be a tendency to absorb the construction staff in production. Since this invariably happens, and in the long run affects the economics of a project, The Government ought to issue directions, if necessary, to get the construction done by N.B.C.C., N.P.C.C. etc.

D. Project Allowance

147. According to general orders issued by the Ministry of Finance, project allowance may be paid to the employees in the large size projects to compensate them for lack of amenities if their execution involves the establishment of large construction organisation and the construction is spread over a number of years. Specific approval of the Government is necessary in each case. The allowance is reduced in stages as and when the amenities have been provided

148. It was noted that although the Corporation has provided several facilities to its employees like subsidised housing, free medical treatment, subsidised transport, subsidised canteen service, free education up to certain standards, etc. still project allowance is also paid to them at the following rates:—

Below Rs. 100/-	12½% pay
From Rs. 100/- to Rs. 300/-	10% pay
From Rs. 301/- to Rs. 500/-	10% of pay subject to a minimum of Rs. 31.25 and max. of Rs. 42.50
Rs. 501/- to Rs. 517/-	Amount by which pay falls short of Rs. 42.50
Rs. 518/- to Rs 600/-	Rs. 25/-
Rs. 601/- to Rs. 699/-	Rs. 30/-
Rs. 700/- to Rs. 1299/-	Rs. 31.25
Rs. 1300/- to Rs. 1600/-	Rs. 37.50
Rs. 1601/- and above	Amount by which pay falls short of Rs. 1636.50.

149. During evidence it was admitted by the Chairman of the Corporation that the project allowance was meant to be paid only when proper amenities were not provided. Several other undertakings like Hindustan Steel Ltd. and National Coal Development Corporation (except in case of certain mines under construction) have also discontinued the payment of project allowance. The Corporation also wished to reduce it at one point of time but did not do so for fear of labour unrest. The matter was still to be discussed with the labour union.

150. The Committee feel that the difficulties anticipated do not justify shelving of an issue of this nature having considerable financial implications. They desire that the management should take an early decision in the matter and the project allowance may be discontinued in accordance with the Rules. The Committee have come across other cases also where project allowance could not be discontinued even after conditions for its payment has disappeared. They therefore desire that the payment of project allowance should be discontinued as soon as the required amenities have been provided.

The Committee have noticed that instead of discontinuing the project allowance after the construction is over, the public undertakings have merged it with pay with the result that the undertakings were burdened with extra expense till the persons concerned retired or left the project. In view of the resultant consequences that follow the

giving of project allowance the Committee recommend that such allowance should not be given in the projects to be set up in future and the Ministry of Finance may withdraw the general orders on the subject.

E. Pay Scales

151. The Committee noted that there were as many as 73 scales of pay in the Corporation. The reason advanced by the Corporation was that initially the scales prevalent in the Government Departments or other public undertakings had been adopted for personnel both on construction and production resulting in so many scales. A committee was set up by the Corporation for rationalisation of various pay scales existing in the Corporation. Out of the 73 scales existing at present the committee dealt with 63 scales for non-industrial workers. This committee, which submitted its report about 1½ years ago, felt that on the non-technical side there were a large number of scales of pay which needed reduction substantially. It recommended adoption of 26 scales of pay by merging some of the scales and abolition of some posts at certain levels keeping in view the fact that employees entrusted with the same level of responsibility or holding posts with the same or similar job specifications were brought on the same scales of pay. The committee also recommended that persons with equal responsibility should have similar designations. However, the decision of the management on the report of the committee has been deferred till the report of the Wage Board for Engineering Industries was received.

152. The Committee find that the Estimates Committee which examined the working of the Corporation in 1963-64 also suggested that it was desirable to rationalise the scales of pay attached to various posts in the Corporation and base them on work studies or job specifications. While accepting this recommendation, the Corporation had informed that the question of reducing the number of scales of pay was engaging the attention of the Corporation and every effort would be made to reduce the number.

The Committee are constrained to observe that in spite of the recommendations of the Estimates Committee and of the committee set up by the Corporation no action has been taken to rationalise the pay scales. The Committee are unhappy at the failure of the Corporation to take the corrective step. They suggest early rationalisation of pay scales by the Corporation.

F. Promotion Policy

153. **Complaints had been received by the Committee that the Corporation was not following a proper promotion policy and there had been certain accelerated promotions.** From the information furnished by the Corporation, it is seen that a circular was issued

by the Corporation in September, 1964 laying down the rules of promotion. However, no channels of promotion had been laid down. Although a committee was constituted to work out the channels of promotion, the report of the committee was stated to be still under consideration of the Corporation.

154. From a statement furnished by the Corporation about the officers (who are at present in the grade of Rs. 700—1150 and above), the Committee find that there had been 32 persons who have been given two or more promotions within a span of last five years. As regards the reasons for these accelerated promotions, it was stated that although the minimum period of service in the lower grade is 3 years, the Heads of Departments may recommend outstanding persons for promotion after two years service. In the case of these 32 officers some belonging to the Industrial Management pool or other services had to be given promotions as they got promotion in their parent departments. In some other cases, the persons were recommended for promotion by the Departmental Promotion Committee.

155. The Committee agree that for the efficient working of any undertaking, merit should be recognised and promotion is by far the best incentive an undertaking can provide to its employees. However, some of the instances of promotions examined by the Committee leave a doubt in their mind whether too rapid promotions were not given than legitimately due. They feel that a minimum period of experience in the lower category is essential before a person is mature enough to shoulder higher responsibilities. In their view even promotion on outstanding merit should also be considered only after completion of minimum period of three years in a lower grade as prescribed by the Corporation.

The Committee recommend that the rule providing for promotion before three years service may be reviewed in light of the above observations. Early action should also be taken to lay down regular channels of promotion to avoid any cause for misgivings.

G. Industrial Relations

156. Like other projects in the Public Sector, the Corporation had its share of occasional labour troubles and stoppage of work. There were 3 strikes in 1964, one each in 1965 and 1966, resulting in loss of 33,542 man days. In 1967 also there were two tool-down strikes in Foundry Forge Plant, one for 7 days in Grey Iron and Non-Ferrous Foundry in the month of May, and another for 5 working days in all the shops in the month of June, 1967.

157. As regards the steps taken by the management for maintaining better industrial relations, the Committee were informed that the management had always been eager to maintain harmonious

relations with the workers for smooth functioning of the plant. Instructions had been given to all levels of supervisory officers to assist in settling the day to day grievances of the workers quickly and at the lowest level. For this purpose they had been instructed to observe scrupulously the prescribed 'grievance procedure' drawn up on the pattern of model grievance procedure framed by the Government of India. Various steps had also been taken for the welfare of the workers. On an average an expenditure of Rs. 81 p.m. was incurred on a worker on fringe benefits like subsidised education, medical, housing, water and recreation facilities.

158. It was further stated that the management was also keen to bring about more and more workers' participation in the various joint consultative committees like Works Committee, Joint Departmental Councils, Emergency Production Committee etc. However, the management was handicapped in their efforts in this regard due to acute inter-union rivalry in the existing labour unions and the absence of a strong and stable union with whom the management could deal as the sole representative of the workers. The acute inter-union rivalry in the recognised unions was hampering the growth of healthy labour management relations in the Corporation. Because of this, it had not been possible to constitute Works Committees in the H.M.B.P. and the HMTP. It had also not been possible to associate representatives of labour on the grievance committees.

159. It needs no emphasis that in the interest of efficient and economic working of a project, it is necessary that there should be complete understanding and co-operation between labour and management. This can be best achieved only if there is proper understanding among the workers themselves and the inter-union rivalry is avoided. The Committee hope that there will be a constant endeavour both on the part of the management and the labour unions to resolve differences through mutual discussions and voluntary arbitration in order to achieve maximum production.

The Committee also desire that steps should be taken by the management to consititute early the Works Committees in all the plants and to have workers representatives on other Committees to promote good industrial relations.

VI

FINANCIAL MATTERS

A. Capital Structure

160. The authorised capital of the Corporation was initially fixed at Rs. 50 crores. It was raised to Rs. 100 crores during 1962-63. Besides share capital of Rs. 100 crores, the Corporation had secured from Government loans amounting to Rs. 78.87 crores. As per Budget provision the position as on 31st March, 1968 was expected to be Rs. 100 crores Equity and Rs. 105.73 crores loans.

B. Capital Estimates

161. The table below shows the cost of each project as estimated in the Detailed Project Reports and as now anticipated:—

	As estimated in D.P.R.	Revised Project cost estimates (1965)	Percentage increase
	(Rupees in crores)		
1. Foundry Forge Project (I & II Stage)	46·60	73·25	57%
(III stage) .	21·34	24·16	11%
2. H.M.B.P.	28·15	47·11	70%
3. H.M.T.P. . .	18·55	20·55	11%
TOTAL . .	114·64	165·07	44%

162. These estimates do not however take into account the effect of devaluation, the expenditure on township, headquarters expenditure and interest charges during construction. If this expenditure

is allocated to the projects, the total capital invested in the three plants will be as shown below:

	Project Cost estimates (Post devaluation).	Share of Township	Share of HQ. Expenditure	Share of interest during construction	Total capital employed
			Rs. in crores.		
H.M.B.P. .	47·97	8·00	3·00	5·68	64·65
F.F.P. . .	111·12	8·00	6·50	22·76	148·38
H.M.T.P. . .	24·47	4·00	1·45	1·37	31·29
TOTAL .	183·56	20·00	10·95	29·81	244·32

163. As regards the reasons for the increase in estimates over the Detailed Project Reports it has been stated that the Detailed Project Reports had given some indications of the likely capital outlays on the projects of the Corporation. After scrutiny of the reports it was found that the Consultants had not included a number of items of costs in the Project Reports. Examples of such items are given below:—

(i) Cost of outside works *e.g.* water works, drainage, sewerage, electric supply, railway sidings and roads.

(ii) Cost of temporary storages and other installations for construction purposes.

(iii) Cost of construction equipment and transport equipment.

(iv) Cost of Detailed Project Reports, Working Drawings, lumpsum fees for consultancy services, cost of technical documentation and organisation manuals, etc.

(v) Salaries, travelling and other expenses connected with the suppliers specialists coming to India for technical services, erection and supervision.

(vi) Expenditure on training of Indian engineers and workers in India and abroad.

(vii) Preliminary expenditure in connection with the Project Planning Staff, establishment charges of the staff employed by the projects, etc. and

(viii) Cost of miscellaneous items, such as, customs duty, railway freight from port to factory, storage and handling charges, etc.

164. It is noted in this connection that the estimates of the items not included in the Detailed Project Reports for the Heavy Machine Building Plant and the Foundry Forge Plant (I and II Stage) were not prepared even before approval of the Detailed Project Reports by the Government in November, 1959 and April, 1960. It was only subsequently in June, 1960 that an estimates of extra capital cost on account of these itemes were submitted to the Government.

165. The question of increase in the capital cost estimates of the projects was considered by the Estimates Committee (1963-64). That Committee observed that it was not correct to undertake a project on the basis of incomplete estimates and to subsequently increase the outlay thereon, which has in any case to be agreed to by the Government, a feature which was fairly common to most of the projects and which had to be discountenanced. That Committee recommended that the final estimates of the various projects be immediately prepared and placed before Parliament with proper explanation for variations between the Detailed Project Report estimates and the anticipated cost. It is however regrettable that even after more than seven years from the submission of the original estimates by the Corporation in June, 1960 these estimates have not yet been approved by the Government, not to speak of their being placed before Parliament.

166. During evidence the Secretary of the Ministry stated that he did not at all feel happy over the time taken in the approval of these estimates. The representative of the Ministry of Finance also admitted that the whole matter was unsatisfactory and should be set right. As a matter of policy the estimates should be sanctioned before the work commenced except for certain limited works where exigencies of work required specific sanction for commencing those works before the total estimates were sanctioned.

167. Explaining the reasons for the delay the Secretary stated that in the case of such big projects it took quite sometime to examine the estimates in fair detail. Quite often, in the initial stages the estimates were not based on detailed calculations and deficiencies which came across were brought to the notice of the project authorities to furnish further information. In the meantime because of the urgency of work, certain works were being allowed to be taken up

even though the complete estimates had not been sanctioned. On receipt of detailed information from the projects the estimates were again examined by the Ministry. A tendency had developed in the Ministries to call for at this stage the actuals of the works already completed in order to sanction the estimates on the basis of the actuals at least for the works already completed. So further information about the actuals was called for and by the time that information was received some more works were completed. This vicious circle went on resulting in delay in sanctioning of the estimates. In the case of Heavy Engineering Corporation also calling of further information and details had taken time and the sanctioning of the estimates was delayed. The Secretary, however, assured that these estimates would be approved within the next six months.

168. The facts as stated above are a sad commentary on the manner in which the Capital estimates of the projects have been dealt with by the Ministries. The Committee have in the past also deprecated the cases of delay on the part of the Ministries in sanctioning the estimates until the whole process becomes a *post facto* affair. The Committee would again like to reiterate that the complete estimates should be called for well in advance and sanctioned by the Government before any work is taken up. Then alone it would be possible for the Ministry to have any check over the actual expenditure against the estimates therefor.

169. The Committee enquired about the steps taken to avoid such delays in sanctioning the estimates. The representative of the Ministry of Finance stated during evidence that some months back certain orders had been issued to ensure quick approval of project estimates by the Ministry of Finance. It had been provided that the Financial Adviser would be the focal point and he would tackle the estimates himself by holding discussions with other sections or the Ministries concerned. Certain time limits had also been laid down and it had been provided that the estimates should generally be approved in about 4—6 weeks from the time of their receipt in the Ministry of Finance.

170. The Committee hope that these instructions would be carefully followed in the Finance Ministry. They also desire that the reasons for the delays in sanctioning the estimates in the administrative Ministries should also be examined and similar instructions issued to streamline the procedure for avoiding unnecessary delays in the sanctioning of the estimates there.

C. Financial Results

171. The plant-wise losses during the year 1966-67 and the accumulated losses upto 31st March, 1967 are as under:—

	Losses for the year 1966-67	Accumulated losses upto 31-3-1967
		Rs. in crores
H.M.B.P	4·20	6·85
F.F.P.	2·00	2·72
H.M.T.P. .	0·03	0·03
	6·23	9·60

172. The main reason for the losses suffered by the plants is that the projects being in the initial stage of production, the production was much lower than the rated capacity. According to a study made recently, the profitability at full production in respect of the Heavy Machine Building Plant, the Foundry Forge Plant and the Heavy Machine Tools Plant in the year 1970-71 is expected to be as shown below:—

	F.F.P.	H.M.B.P.	H.M.T.P.
		Rs. in lakhs	
Gross Block	14838·00	6465·00	3129·00
Less depreciation provision . .	4748·00	1441·00	243·00
Net Block . . .	10090·00	5024·00	2886·00
Working capital.	1670·00	3757·00	373·00
TOTAL CAPITAL EMPLOYED	11760·00	8781·00	3259·00
Gross profit (before interest) . .	1131·00	1227·00	220·00
% Gross profit to capital employed. .	9·6%	14%	6·7%
Net profit	540·00	619·00	77·00
% of net profit to capital employed	4·6%	7%	2·3%

173. As approximately 50% of production, (in value) of the FFP, will ultimately be required by the HMBP and the HMTP, the total working capital of the three projects taken together is expected to be less than if computed separately as shown above. After making

necessary adjustments on this account the consolidated financial position will be as shown below:—

	Rs. in crores
Gross Block . . .	244·32
Less Depreciation Provision	64·32
Net block (a)	180·00
Working capital (b)	50·00
Total capital employed (a+b) . . .	230·00
Sales (excluding inter-project transfers).	10·100
Gross Profit	20.00
% of gross profit to capital employed.	9%
Net Profit after taking into account the interest charges.	10·00
% of net profit to capital employed.	4·5%

174. It will be seen from the above analysis that the gross profit at full production in 1970-71 is expected to be 9 per cent of the capital employed and the net profit after taking into account the interest charges will be only 4·5 per cent. The Committee were also informed that by 1970-71, there would be an accumulated loss of about Rs. 20 crores and it would take the Corporation about 3-4 years to wipe off the losses. As such the real profits will be only from 1975-76, i.e. sixteen years after the establishment of the Corporation and even then the net profit will be at the rate of 4·5 per cent of the capital employed.

The Committee are unhappy to observe that the expected profitability of the plants of the Corporation is so low. The main reasons for the low profitability are the higher capital investment and higher cost of production due to low productivity and large inventories etc. Concerted efforts are therefore called for to improve the operational and financial working of the Corporation.

VII

TOWNSHIP

A. Expenditure on Township

175. The total capital outlay on township of Heavy Engineering Corporation at Ranchi is estimated to be Rs. 20 crores which comes to about 10% of the total capital cost of the projects. The expenditure incurred upto the 31st March, 1967 was Rs. 15 crores.

176. In this connection the Committee noted that one of the reasons for high expenditure on township was that the land acquired for township was much in excess of requirements. Out of 4688.53 acres of land acquired at a cost of Rs. 2.22 crores, only 1800 acres of land has been utilised for township *i.e.* 294 acres for houses and the rest for non-residential buildings, roads, open spaces, shopping centre, etc. The number of dwelling units constructed works out to 3.25 units per acre of the total land utilised for township.

177. According to an assessment made in 1964, 14000 houses will be needed by the Corporation by 1970-71. Out of these, the Corporation has already provided residential accommodation to 1500 employees. It was proposed to construct only 3000 more houses in the lower category from 1968-69 onwards in a phased manner, subject to the availability of funds. There are also no immediate prospects of expansion of the projects of the Corporation.

178. It is evident that the land acquired for the township was much in excess of requirements. It is also seen that out of 1,800 acres of land utilised for the township, the actual area used for houses was only 16.3 per cent of the total area. Apparently there has been lack of proper planning in the use of land. The Committee have in the past also emphasised the need for utmost economy in the expenditure on township as it adds to the capital cost of the projects and affects the cost of production. The Committee trust that having acquired such large surplus land, steps would at least now be taken by the Corporation for the proper utilisation of this land.

In this connection they would also invite attention to the following recommendation of the Committee made in para 158 of their 8th Report on Townships and Factory buildings:

> **"The Committee feel that in view of the food shortage in the country it would be desirable if the land which has been**

acquired for expansion and is not being used is leased out temporarily for cultivation. Such an arrangement would provide some income to the undertakings, besides augmenting agricultural production."

B. Piecemeal Construction of temporary Quarters

Audit Report (Commercial), 1966, Section VI(1), pages 154—156

179. In November, 1961 the company assessed the requirements of accommodation for staff in pay ranges upto Rs. 125 per month at 1,957, 3,588 and 4,539 tenements for periods ending December, 1962, March, 1963 and June, 1963 respectively. As there was delay in acquiring land for township, it was decided to construct temporary houses utilising a part of the land given for the factory.

180. Against the above requirements, work orders were issued to 4 contractors [Messrs. Modern Builders/Messrs. East Jamuria and Co. (P) Ltd., Messrs. Nauratan Das and Company and Messrs. R. L. Modi and Sons] between December, 1961 and February, 1962 for constructing 1,000 tenements only at their tendered rates stipulating that the contruction should be completed by May-July, 1962.

181. In their meetings held on 18th, 19th and 21st May, 1962 the Committee of Directors decided to construct 1,000 tenements more. The work of construction of 1,000 additional tenements (500 double-roomed and 500 single-roomed) was awarded to the above four contractors on the 5th September, 1962 at 4½ per cent above their previous tendered rates for civil portion and 2 per cent above for the water supply and sanitary installations. The work was to be completed by January/February, 1963.

182. On the 5th September, 1962 itself the Committee of Directors decided to construct 2,000 more tenements and the work orders for their construction were issued in December, 1962 to the two existing contractors [Messrs. East Jamuria and Company (P) Ltd. and Messrs. Nauratan Das and Company] and to the two new contractors (M/s. K. L. Bhasin and Co. and M/s Ram Lal). Open tenders were not invited on grounds of urgency, and the contracts were awarded at the following negotiated rates :—

Civil works portion	2% above the rates accepted on the second occasion	
Internal Water Supply	14%	"
Internal Electrification works	205%	"

The additional expenditure on the construction of these 2,000 houses was Rs. 7,93,642 as compared to the rates for 1,000 houses, work orders for which were issued in September, 1962.

183. It will be seen from the above that the decision to construct 2,000 more houses was taken on the 5th September, 1962—the date on which the orders for 1,000 houses were issued. The orders for the second lot of 2,000 houses were, however, issued four months later, at the negotiated rates much higher than the previous rates, resulting in an extra expenditure of Rs. 7,93,642.

184. During evidence the Committee were informed that the Corporation decided as a matter of policy to build as few temporary quarters as possible. Decision was, therefore, taken in May, 1962 to construct only 1,000 temporary quarters in the first instance hoping that as soon as land for permanent township was available further quarters might be constructed thereon. However, the land for the permanent township could not be obtained even till August/September, 1962. There was difficulty in attracting trained operational workers because of non-availability of housing accommodation and there was considerable pressure from staff for accommodation facilities. It was, therefore, decided to take up construction of these additional houses.

185. As regards the reasons for not issuing the work orders in respect of all the 3,000 houses in one lot in September, 1962 the Chairman of the Corporation stated that the decision to construct 1,000 quarters having been taken by the Board in May, 1962, the orders for these quarters were placed by the Chief Engineer on the 5th September, 1962. The decision for constructing 2,000 more quarters was on the other hand taken by the Board on that date.

186. The Committee are not satisfied with the explanation of the management in this case. Considering that the orders for 1,000 houses were placed on the same day on which the Board decided to construct 2,000 more houses, they feel that with proper co-ordination it should have been possible to place the orders for all the 3,000 quarters in one lot. Even if the Corporation failed to do so, the Committee see no reason as to why the orders for the additional 2,000 quarters could not be placed immediately after the decision of the Board, with the existing contractors on the same terms and conditions as for the earlier 1,000 houses. It is surprising that the Corporation had to negotiate for these 2,000 quarters and it was only after four months that the orders were placed on the two existing contractors and on two new contractors at the rates considerably higher than the previous ones, resulting in extra expenditure of Rs. 7,93,642.

187. The Committee also find that according to an order issued by the Government in 1962 [Ministry of Commerce and Industry letter No. Pr. C. 7(1)/61, dated the 16th May, 1962], the Board of Directors can incur without prior approval of Government, capital expenditure on the approved objectives of the company upto a limit of Rs. 50 lakhs. As the value of 2,000 tenements worked out to Rs. 90·10 lakhs, it required the approval of the Government. The approval was, however, not obtained as the work was split up into four different estimates and awarded (on the same date) to four different contractors. **The Committee take a serious view of the manner in which the approval of the Government was by-passed merely on such technical grounds.**

188. **The Committee feel that the full facts of the case have not come to light. They desire that the matter should be thoroughly examined by a high powered Committee and the responsibility fixed.**

C. Loss in the manufacture of bricks

Audit Report (Commercial) 1966—pp. 156-157.

189. In order to meet a portion of the requirements of brick for construction of the township and to stabilize market rate of bricks in and around Ranchi, the Corporation decided in March, 1961 to undertake manufacture of bricks by importing 10 brick-making machines from a foreign country at a total cost of about Rs. 5 lakhs. The soil tests conducted in August, 1961 and December, 1961 by the Central Building Research Institute showed that the clay in most of the cases was highly plastic and that the briquettes made therefrom cracked during sun-drying. But even then the Corporation went ahead with the scheme. The machines were received in May, 1962 and an expenditure of Rs. 1·57 lakhs was incurred on the construction of sheds etc. The trial run of the first machine, erected in September, 1962, indicated that the bricks made by the machine were defective and that there was clogging in the machine itself. The foreign experts, who were consulted in the matter in April, 1963, reported that the soil of Ranchi was not suitable for brick manufacture and that ordinary earth should be mixed with black clay.

190. In January, 1964, eight out of the ten machines commenced working and upto May, 1964 they were utilised for about 1,700 machine-hours (against 24,000 machine-hours available) to manufacture about 11·47 lakh bricks. The cost of manufacture per 1,000 bricks worked out to Rs. 104 as against the cost of Rs. 32 anticipated originally. The market rate prevailing in February, 1964 was Rs. 42. With reference to this rate there was a loss of Rs. 71,263 in respect of the limited quantity manufactured upto May, 1964. In working out the loss of Rs. 71,263 the expenditure on trial runs amounting to.

Rs. 77,600 has not been taken into account. Besides, depreciation has been worked out on the capital cost of the machines reduced by the estimated realisable value, there being thus an undercharge of depreciation to the extent of Rs. 53,500.

191. The Chief Engineer suggested in July, 1964 that the machines might be disposed of as the bricks produced were having more than 3 times the normal crushing strength for bricks and accordingly were of only limited use in buildings in the township. The Management decided in July, 1964 to dispose of the machines. Tenders were invited in November, 1964 for the sale of eight machines, but none of them could be disposed of till January, 1966. The two machines which were transferred to Coal Mining Machinery Project, Durgapur in July, 1963 were also lying unused. Four out of the eight machines were subsequently sold to certain parties. The sale price of these machines is higher by Rs. 25,774 than their depreciated book value. The remaining four machines were still lying with the Corporation.

192. During evidence the Committee were informed by the Chairman of the Corporation that the opinion of the Central Building Research Institute was that although the soil was all right*, only one machine might be got on an experimental basis. But the management decided that in view of the large demand of bricks only one machine would not serve the purpose. Therefore the management decided to go in for all the 10 brick-making machines.

193. The Committee cannot help the conclusion that the purchase and installation of the machines at a cost of over Rs. 6 lakhs had been injudicious. It is regrettable that although the Central Building Research Institute suggested that only one machine might be purchased on an experimental basis, the Corporation went ahead with the purchase of 10 machines without making a comprehensive investigation about the utility of machine-made bricks and the suitability of the soil. The Committee also find that the order for the machines had been placed in March, 1961 whereas preliminary tests of soil were conducted in September, 1961 and the technical advice of the Central Building Research Institute was received in December, 1961. They see no justification for placing the order even before carrying out proper soil tests or before obtaining technical opinion. Having already placed the order, the Corporation perhaps found it more convenient to ignore the advice of the C.B.R.I. As subsequent events proved, the decision to go ahead with the purchase of all the ten

*In the preliminary report of the Central Building Research Institute received by the Corporation on 20-2-61 it was stated that "visual observations show that no difficulty is likely to arise in manufacturing bricks from these soils".

machines was incorrect and resulted in large infructuous expenditure and loss of foreign exchange.

194. The Committee desire that early action should be taken to dispose of the remaining four machines. The Committe would also like the body which is looking after the surplus machinery in public undertakings to be more vigilant as brick-making machines have been bought by N.B.C.C. from abroad while surplus machines were lying idle with the Corporation.

D. **Avoidable expenditure on the purchase of water meters**

Audit Report (Commercial) 1967—Section XIV (pages 190-191)

195. In August, 1961 the Company decided that A and B type quarters where taps had been installed should be provided with independent meters as soon as possible. In February, 1964 the company further decided to recover from its employees occupying A, B, C, D, E and F type quarters charges for water used in excess of the prescribed free quantity. Accordingly, 6,912 water metres valued at Rs. 6·02 lakhs were procured by the company between 7th February, 1963 and 19th January, 1965 on the basis of the orders placed by the Director General, Supplies and Disposals between 24th January, 1962 and 30th April, 1964. Out of 6,912 metres received, 2,129 were installed at a total cost of Rs. 1.09 lakhs during the period from April, 1963 to June, 1965.

196. In November, 1965, the company decided to supply water free of charge to employees of low income groups and to charge the occupants of superior type quarters (*i.e.* C, D, E and F type quarters) at flat rates with effect from the 1st December, 1965. The work of installation of water meters was, therefore, discontinued.

Thus the company incurred an avoidable expenditure of Rs. 6·02 lakhs on the purchase of these meters. Besides the expenditure of Rs. 1.09 lakhs incurred on the installation of meters proved infructuous.

197. During evidence the Committee were informed that an agreement was reached with the labour union on the 10th February, 1964 according to which the management of the Corporation agreed to allow certain free limits upto which no water charges were recoverable and to charge for the extra consumption at certain rates. But when the installation of meters was taken up it was found that these could not be fixed in the temporary quarters because of the existing system of pipe line. It was felt that the recovery of the water charges from the occupants in the permanent colony for the same category of quarters but not from those in the temporary quarters would lead to an anomalous position and might create labour troubles.

It was also found that on account of the decision to reduce substantially the rate for water charges in respect of employees drawing pay upto Rs. 500 per month, the installation of water meters became an uneconomic proposition. Therefore it was decided to introduce flat rates for senior officers.

198. The Committee regret to note that at the time of placing orders for the water meters, the fact that the temporary quarters would have a system of pipelines in which it will not be possible to fix the meters was overlooked. They also find that out of 6,912 water meters purchased by the Corporation, through DGS&D, the orders for 3,400 meters were placed by the DGS&D in January, 1964 and for 2,600 meters on 30th April, 1964. All these 6,000 meters were received still later between 16th July, 1964 and 19th January, 1965. Had the management, soon after the agreement of 10th February, 1964 with the Labour Union, examined whether it would still be an economic proposition to instal the meters or not and requested the DGS&D to cancel the existing orders or at least not to place any fresh order, they could have avoided a substantial amount of expenditure on the purchase of meters. The Committee desire that the matter should be investigated and responsibility fixed.

199. The Committee enquired about the steps taken for the disposal of surplus meters. They were informed that out of 6,912 meters 4,780 were lying in stock. But the 2,132 meters which had already been installed would have to be removed and the charges for their removal etc. would come to about Rs. 9,000. Efforts were made to dispose of these meters in the past but the price offered was not considered to be adequate. The Corporation was now negotiating with Delhi Municipal Corporation for the sale of these meters. **The Committee desire that the meters should be disposed of without delay to avoid unnecessary locking up of capital and loss on account of depreciation.**

E. Hostel Accommodation

200. The Corporation had constructed five hostels at a cost of Rs. 33.89 lakhs for accommodating the Engineers and Artisan trainees.

The occupancy of these five hostels during 1966-67 and 1967-68 was as follows:—

	1966-67	1967-68
1. Engineers Hostel I . . .	66%	100%
2. Engineers Hostel II . . .	52%	52·9%
3. Artisan Hostel I	8%	Vacant up to 25-8-1967.
4. Artisan Hostel II	Nil.	Occupied by muslim evacuees thereafter.
5. Artisan Hostel III	100%	100%

201. The reasons advanced for low occupancy was that single seated rooms in the Engineers Hostel were converted into double seated rooms resulting in excess accommodation. There was also no training programme on account of lack of demand.

202. **Considering the needs of trainees for accommodation for a limited period, the Committee consider that incurring of large expenditure on building of such hostels on a permanent basis is open to question. They feel that certain blocks of houses should have been temporarily used for accommodation of the trainees so that these could be released for accommodation of staff when no longer required for the trainees. Now that these hostels have been built at a heavy cost, immediate steps should be taken for their best alternative use.**

VIII

DESIGN AND RESEARCH

A. Design and Research facilities

203. The most important link in the organization of heavy machinery manufacture is the basic technical documentation, *viz.* the design drawings of new machines and description of the production processes. The economics of the plant as well as technical and economic standards of its products are directly dependent on the quality of such technical documentation. Machine design and production process must at the same time be such as would provide for the most efficient utilization of the equipment and plan. The manufacture of machinery according to the designs and production processes worked out by an outside design and engineering bureau does not in most cases come up to these requirements. The USSR team on the HMBP therefore, recommended the establishment within the plants proper self-sufficient design and engineering Departments charged with the preparation and constant improvement of machine designs and production processes. The team also recommended that as a further stage of the development of scientific and research work in the country it was advisable to establish a Central Institute for basic designing of the heavy machinery.

204. The number of design offices set up by the Corporation and the number of persons employed therein are shown below:—

	Degree holders	Diploma holders
1. Heavy Machine Building	265	103
2. Central Construction Design Unit	96	63
3. Heavy Machine Tools	21	7
	382	173

205. The Committee, however, find that the design offices of the Corporation are mainly engaged in making only shop drawings for the manufacture of equipment based on basic designs brought out from abroad. An amount of Rs. 179.43 lakhs has been paid so far by the Heavy Machine Building Plant for designs and drawings and technical documentation. A commitment for Rs. 110·00

lakhs for 1st and 2nd phase of the HMTP has also been made. The cost of designs works out from 8 to 25 per cent of the equipment depending upon the type of equipment.

206. The need for a sound design and research organisation for such a complex unit like the Heavy Engineering Corporation cannot be overemphasised. It is not desirable for the Corporation to depend entirely on the bought-out basic designs for the manufacture of equipment. The design units should therefore be suitably strengthened for the preparation and constant improvement of the original machine designs and production processes.

207. As regards the setting up of the Central Institute for basic designing and research work, the Committee were informed by the Secretary of the Department of Industrial Development that there had been discussions with the Soviet authorities on the question of setting up a Central Designing Institute. The USSR Government had offered to assist in setting up of the institute and made a provision for this purpose in a credit for 300 million roubles extended in December, 1966.

As the institute would essentially covers the needs of steel plants, the Ministry was examining in consultation with the Department of Iron and Steel the scope of the activities of the proposed institute and the pattern of assistance that would be needed. An outline of the proposed project had been received and was already being studied. A decision was likely to be taken in about six months.

208. The Committee regret to note the delay in the setting up of the Central Institute for basic designing and research in heavy machinery and equipment. They find that even in 1963-64 the Estimates Committee in their Report on the Corporation urged the need for setting up immediately such an Institute. Inspite of the recommendations of the Committee and the fact that the USSR Government offered to assist in the setting up of the Institute, not much headway has been made in this direction. The Committee desire that the setting up of this Institute should be expedited.

B. Import of Drawings and Designs

209. In his quarterly Financial Review of the period ending the 30th September, 1967, the F. A. and C.A.O. of the Corporation has pointed out that the HMBP is being required to pay more towards the cost of the design documentation to Bokaro Steel Plant than it should. It appears that the Bokaro Steel Plant has obtained the drawings for all the equipment that is to be supplied by the Corporation at a flat rate of 8 per cent of the cost of equipment from the USSR. All these drawings are being passed on to the Corporation irrespec-

tive of fact whether these were required or not. In fact for several items to be supplied to Bokaro, the HMBP has alrady got the drawings. The HMBP has specifically told Bokaro Steel Ltd. that for about 9,000 tonnes of equipment drawings are available and they need not obtain the drawings from the USSR. Inspite of this, drawings are being passed on to the HMBP.

210. This is a serious matter involving avoidable loss of foreign exchange. The Committee fail to understand as to how the Government allowed the import of drawings without ascertaining from the Corporation whether these were available with them or not. They recommend that in future the Government should exercise great care before allowing the imports of designs and drawings for equipment to be manufactured by the Corporation. Scrutiny of orders placed for design documentations but not executed so far may also be made in order to take remedial measures, if possible.

Oil Drilling rigs

211. The Corporation spent considerable time and expenditure on designing and preparing technology for producing oil drilling rigs model 75 BU. The Committee were informed that based on recorded note of discussions held with some officials of Oil and Natural Gas Commission on the 29th July, 1963 the HMBP in right earnest undertook work on manufacture and supply of one BU 75 rig during 1964-65 and five rigs in 1965-66. Although the O.N.G.C. did not place any firm order even then the Corporation imported complete design and technical documentation for these rigs from the U.S.S.R. at a total cost of Rs. 4:25 lakhs. The H.M.B.P. design office spent more than six months in making detailed working drawings for these rigs. The cost involved for the above work was Rs. 62,500. Certain components for one rig were also imported from the U.S.S.R.

212. Subsequently in July, 1964, the O.N.G.C. informed the Corporation that an appraisal of probable drilling depths at which the Commission will operate in future indicated that in most areas oil prospects lie beyond the drilling range of BU 75 rigs. The ONGC did not therefore intend to purchase any additional BU 75 rigs. Thus a financial loss of Rs. 4,87,500 was suffered by the Corporation due to the expenditure already incurred on these rigs.

213. During evidence the Committee enquired as to why the Corporation incurred such large expenditure on the purchase of designs and technical documentation without formal orders having been placed by the ONGC. They were informed that the manufacture of well drilling rigs was within the manufacturing range of the Corporation and it wanted to build up its archives.

214. The reason advanced for incurring such a heavy expediture by the Corporation (Rs. 4.87 lakhs) without any firm order from the ONGC is hardly convincing. The Committee recommend that before any work is taken up for execution from any party, it should be ensured by the public undertakings that there is firm commitment from the party so that it can be held liable for payment of compensation in case the order is cancelled or the goods are not subsequently accepted.

IX

CONCLUSION

215. The Heavy Engineering Industry is considered a base for the economic and industrial development of any country. It produces capital equipment and machinery vitally needed for the establishment of various other industries thereby accelerating the progress of a country. The satisfactory working of Heavy Engineering Corporation Ltd. therefore assumes great significance.

216. An important point which engaged the attention of the Committee was the large surplus capacity in the plants of the Corporation. In the case of the Heavy Machine Building Plant, originally it was decided to have a plant of 45,000 tons capacity in the first stage to be expanded to 80,000 tons in the second stage. But later on the Government decided to set up the plant with 80,000 tons capacity from the very beginning. The capacity created in this plant is sufficient for manufacturing steel plant equipment for a million tons per year. But at present the position is that because of absence of any firm decision about the future steel development programme, there are not adequate forward orders with the plant and it is apprehended that the plant would be practically idle from 1970-71. There is also excessive surplus capacity in the other two plants of the Corporation. **Unless orders are placed immediately, these plants set up at a heavy capital investment of Rs. 244 crores instead of paying any return on capital employed will result in a dead loss of Rs. 34.35 crores per annum, from 1970-71 on account of fixed charges. To remedy this alarming situation, the Corporation is taking up steps for product diversification. But the plant having been set up mainly for the manufacture of equipment for steel industry, the diversification, though inevitable, will mean more investment in balancing equipment and will also reduce the production of the plant. The situation therefore calls for immediate steps for finalising the steel development programme during the next ten years as well as for export promotion.**

217. **While on the one hand the Corporation is having the problem of lack of adequate forward orders to utilise the capacity from 1970-71 on the other hand the present position is that there are great delays, even upto one year, in the execution of orders. There were serious delays in the execution of orders for Hindustan Steel Ltd., Bokaro Steel Plant and the Ministry of Defence.**

The main reason for these delays was lack of proper planning and execution of production programme. It was noticed that in the Heavy Machine Building Plant while on the one hand there was idle machinery to the extent of 70 per cent, on the other hand the workers were idle to the extent of 54 per cent. As a result there was great shortfall in production which was only 62 per cent of the planned output in 1966-7. The low output coupled with heavy capital investment, low productivity of labour and high inventories, etc. have resulted in high cost of production which in some cases was even more than double the selling price. The high cost of production also affected the exports and the Corporation was not able to secure any export orders during the last three years.

218. The Corporation has so far suffered heavy losses and the total loss up to 1966-67 amounted to Rs. 9.60 crores. The Corporation expects to make net profit after writing of the past losses only in 1975-76 (sixteen years after it was set up) and that too at the rate of 4.5 per cent of the capital employed (Rs. 230 crores).

The overall picture that emerges out of this study is not very bright or hopeful. The Committee hope that Government will analyse the reasons for the unsatisfactory working of the Corporation and take immediate remedial measures in the light of the observations and recommendations of the Committee.

NEW DELHI:
April 8, 1968.
Chaitra 19, 1890 (*S*).

D. N. TIWARY,
Chairman,
Committee on Public Undertakings.

APPENDIX I

(Reference para 26 of the Report)

No. 296-Adv(C)/Cir-2/66

GOVERNMENT OF INDIA

MINISTRY OF FINANCE

(Department of Coordination)

Bureau of Public Enterprises

New Delhi, dated the 4th November, 1966.

OFFICE MEMORANDUM

Subject:—*Importance of detailed soil investigation before deciding on location of projects.*

It has been observed that lack of proper and detailed soil investigation before selection of a site for location of projects, has led to change of sites resulting in infructuous expenditure, revision of plans and drawings, extra expenditure on foundations, and consequent delay in construction. To avoid such contingencies in future, it is of utmost importance that detailed soil investigations are carried out by a competent agency and the results thereof should be got examined by a high level technical team, along with other technical matters relating to the project. Organisations, such as the Centre Soil Mechanics Research Station of the Central Water and Power Commission, New Delhi, the Central Building Research Institute, Roorkee, and the Central Road Research Institute, New Delhi, and certain other soil research stations of the state Governments are fully equipped to carry out the required field investigations and sibmit reports thereon.

2. The Ministry of Industry etc. are requested to bring this to the notice of the existing public undertakings and impress upon them the imperative necessity for carrying out soil investigations through any of the competent agencies referred to above, before selecting a site for setting up of plants.

3. This matter should also be kept in view and arrangement made for detailed soil investigation before deciding the location of new projects in future.

Sd./- (R. C. DUTT),
Secretary to Govt. of India
and Director General,
Bureau of Public Enterprises.

To

All Ministries/Departments of the Government of India.

217(aii)LS—6.

APPENDIX II

(Reference para 26 of the Report)

No. 91-Adv(c)/Cir-17/67

GOVERNMENT OF INDIA

MINISTRY OF FINANCE

(Department of Coordination)

Bureau of Public Enterprises

New Delhi, dated the 21st March, 1967.

OFFICE MEMORANDUM

Subject:—Soil investigation before deciding on location of Projects.

This office Memorandum No. 296-Adv(c)/Cir-2/66, dated 4th November, 1966 stressed the importance of carrying out detailed soil investigations before deciding on the location of projects. It was mentioned that certain organisations would be able to carry out field investigations and submit reports thereon. Further particulars obtained from these organisations for carrying out the investigations are given below for information.

2. The Central Soil Mechanics Research Station of the Central Water and Power Commission is fully equipped under U.N. special fund, and during the Fourth Plan will form the nucleus of an Asian Centre for research and coordination in Soil Mechanics and Foundation Engineering. The Research Station caters for investigations in soil mechanics, rock mechanics, foundation engineering, field investigation and specialised laboratory and field testing. Investigation works will be undertaken with their own equipment and staff, local assistance in the form of labour etc. being provided by the project authorities. An estimate will be prepared after the site particulars and nature of work has been indicated. The amount of the estimate will have to be deposited with the Accounts Officer, C.W. & P.C.

The Central Road Research Institute, New Delhi is fully equipped to provide design and consultancy service in foundation engineering. Normally, the consultancy assignments relate to bridge foundations, special foundation treatment for highway embankments, harbour structures,

machine foundations, special structures such as chimneys, water tanks etc. and multi-storeyed buildings. Before undertakings a consultancy job the quantum of work involved will be examined by the C.R.R.I. to decide whether the job is acceptable. Only works that involve foundation analysis and/or consulting advice on the part of C.R.R.I. would be undertaken. Routine sub-soil investigations without consulting advice are seldom undertaken. An estimate will be prepared based on site plan and nature and quantum of work involved. The estimated cost is to be deposited in advance.

4. The Ministry of Industry etc. are requested to bring this to the notice of the public undertakings for their information.

Sd/- (R. C. DUTT),

Secretary to the Government of India,
and Director General, Bureau
of Public Enterprises.

To

All Ministries/Departments of the Government of India.

APPENDIX III

(*Ref.* para 32 of the Report)

Statement of Contracts awarded without execution of formal agreements

Sl. No.	Name of work	Name of contractors	Contract Value	Period on which contract awarded	Period on which contract signed	Period of delay
1.	Constn. of Grey Iron Foundry Bldg. No. 01.	M/s. Richardson & Cruddas Ltd.	90·37 lakhs	July/61	Dec./66	4½ years.
2.	Constn. of cladding of (i) Steel Foundry—02 (ii) Forge Shop—03 (iii) Rough Machine shop—04	M/s. B.B.J. Ltd.	405·78 lakhs.	Oct./61	Not yet accepted.	
3.	Fabrication & Transportation of foundation bolts, nuts etc. for 02,03 & 04.	Do.	9·20 lakhs.	Jan./62		5 yrs. Contractor has signed the agreement in April, 67.
4.	Constn. of casting cleaning shop bldg. No. 05.	M/s. Bridge & Roof.	69·34 lakhs.	July/61	Not yet accepted.	
5.	Constn. and cladding of Gas Plant Bldg. No. 20.	M/s. Kumardhubi Engg. Works.	2870· lakhs.	May/61	Feb./66	5 3/4 years.

6.	Civil Works consisting of foundation and plinth superstructure etc. for 09.	M/s. Engineerig Constn. Co.	12·24 lakhs.	June'61	Jan.'65	3 yrs. 7 months.
7.	Preparation, design and drawings etc. for bldg. Nos. 01, 02, 05 and 256.	Do.	6·16 lakhs.	April' 61	July'64.	3 yrs. 3 months.
8.	Constn. of bldg. No. 08 . .	Do.	26·55 lakhs.	Nov.'62	July'65	2 yrs. 8 months.
9.	Design & constn. of civil works in bldg. Nos. 03, 23, 25 and 80 (Group-I) 04, 15, 16, 24, 70 & 71 (Group-II)	M/s. B.B.J.	213 lakhs.	March'63	April' 67	4 years.
10.	Design & Construction of it & internal water supply in Bldg. Nos. 06, 07, 73 & 82.	M/s. Bridge & Roof Co. (I) Ltd.	7·81 lakhs.	Dec.'61	Nov. '64	3 years.
11.	Design & Construction of Civil and Sanitary works in Bldg. Nos. 21, 22, 20, 72 and 81.	M/s. Mckenzies	61·06 lakhs.	Dec.'61	Not yet accepted	
12.	Construction of Civil and Sanitary works in Bldg. Nos. 01, 02, 05 and 26.	M/s. Gammon (I) Ltd.	383·41 lakhs.	April' 62	Do.	
13.	Construction of soaking furnaces and chimneys in 04 and 03 . . .	Do.	87·12 lakhs.	May'62	June'67	5 years.
14.	Fabrication and erection fuel gas pipe Line in FFP.	M/s. Structural Engg. Works.	27·33 lakhs.	Feb.'63	Dec.'63	10 months.
15.	Pile and Pile caps in 03 and 04 (I/II) and 02, 04 and 05 (III/I) Stage.	M/s. Cenemtation Co.	129·94 lakhs.	Mar.'63 April'65	Jan.'66 Dec.'65	3 years. 8 months.
16.	Erection of 4 Nos. of cooling system and Cooling Towards.	M/s. Gammon India Ltd.	23·80 lakhs.	Feb.'63	Apr.'65	2 years.

APPENDIX IV

(*Reference* para 35 of the Report)

Statement of works taken up without detailed estimates and technical sanctions

Sl. No.	Name of work	Name of Contractors	Contract value	Estimates value	Date of start	Date of tech. sanction	Period of Delay	Remarks
1	2	3	4	5	6	7	8	9
			(Rs. in lakhs)	(Rs. in lakhs)				
1.	Construction of Grey Iron Foundry Bldg. No. 01	M/s. Richardson & Cruddas Ltd.	90·37	117·20	10-7-61	Not yet accorded.		
2.	Constn. and Cladding of (i) Steel Foundry—02 (ii) Forge Shop—03 (iii) Rough Machine Shop—04.	M/s. B.B.J.	405·78	02—284·74 03—186·05 04—132·81 603·60	20-9-61	Do.		
3.	Fabrication and Transportation of Foundation Bolts, Nuts etc. for 02, 03 an 04.	Do.	9·20		27-10-61	Do.		

4.	Constn. of Casting Cleaning Shop Bldg. No. 05	M/s. Bridge & Roof Co. (I) Ltd.	69·34	109·78	10-7-61	Do.		
5.	Construction and Cladding of Gas Producer Plant Bldg. No. 20.	M/s. Kumardhubi Engineering Works Ltd.	28·70	40·61	1-6-61	Do.		
6.	Civil works consisting of Foundation and Plant Superstructure etc. for 09.	M/s. Engineering Construction Co.	12·24	18·75	28-7-61	Do.		
7.	Preparation of design and drawing etc. for Bldg. Nos. 01, 02, 05 and 26.	Do.	6·16		28-4-61	Do.		
8.	Construction of Bldg. Nos. 08 and 30.	Do.	26·55	31·30	16-4-62	Do.		
9.	Design and Construction of civil works in Bldg. Nos. 03, 23, 25 and 80 Group-I. 04, 15, 16, 24, 70 and 71 Group-II.	M/s. B. B. J.	213	332·06	3/4-1-62	(i) Feb. '66 (ii) Jan. '66 (iii) Dec. '65	4 yrs. for bldg. 80 4 yrs. for bldg. 15 3 yrs. for bldg. 16.	
10.	Design and Construction of civil and internal water supply in Bldg. Nos. 06, 07, 73 and 82.	M/s. Bridge & Roof Co. (I) Ltd.	7·71	64·22	20-12-61	Not yet accorded.		
11.	Design and Constn. of civil and sanitary works in Bldg. Nos. 20, 21, 22, 72 and 81 Group-II	M/s. McKenzies	61·06	55·94	20-12-61	Do.		
12.	Constn. of civil and sanitary works in Bldg. Nos. 01, 02, 05, and 26.	M/s. Gammon (I)	383·41 401·10	377·16 23·94	1-8-62 (for bldg. No. 26).	July '67	5 yrs.	This is for 01 shop only

1	2	3	4	5	6	7	8	9
13.	Construction of soaking Furnace and Chimney in 03 and 04.	M/s. Gammon (I) Ltd.	87·12	96·81	14-5-62	Not yet accorded.		
14.	Erection of 4 Nos. of cooling system Cooling towards (Mech.)	Do.	23·80	28·86	24-7-63	July '67	4 years.	
15.	Fabrication & erection of Fuel, Gas Pipe Lines, in FFP (Mech.)	M/s. Structurals Engg. Works Ltd.	27·33	..	10-1-64	Not yet accorded,		
16.	Pile and Pile caps in 03 & 04 I/II & III/I stage, 02, 04 and 05.	M/s. Cementation Co. Ltd.	129·94 (1 crore +29·94 lakhs)		19-9-64 for I & II stage. 18-10-65 for III/I stage.	Dec. '65	1 year.	
					(i) Sept. '65 starting	Before,	04/III/I stage.	
					(ii) July '67.		02/III/I stage.	

N. B. Only major works have been indicated.

APPENDIX V

(Reference para 75 of the Report)

HEAVY MACHINE BUILDING PLANT

Analysis of cost of production of principal items produced during 1966-67

Sl. No.	Product	Qty. produced M. T.	Manufacturing Cost						Material cost	Total cost of products per tonne	Selling price per tonne
			Salary & Wages	Power & Fuel	Depre-ciation	Other overhead	Other Charges interest	Total *			
1	2	3	4	5	6	7	8	9	10	11	12
1	F. F. P. Structurals .	2287	743·53	39·01	398·22	515·24	130	1826	1193	3019	1400
2	S. F. W. Structurals .	571	582·63	30·57	312·05	403·75	132	1461	1215	2676	1400
3	6th B. F. Structurals .	2706	503·72	26·43	269·79	349·06	110	1259	1007	2266	1840
4	Cranes . . .	768	754·92	39·61	404·33	523·14	524	2246	4819	7065	6246
5	C.I. Floor Plates H MTP	269	2400·24	125·93	1285·53	1663·30	258	5723	2277	8000	3500
6	Excavators . . .	244	1284·07	67·37	687·73	889·83	1038	3967	8635	12602	8896
7	Slag ladle cars . .	1368	942·56	49·45	504·82	653·17	481	2631·	4423	7054	6273

(*) The high cost of manufacturing expenses is because of the fact that the full amount of the fixed charges are required to be absorbed by a small quantum of output in relation to the optimum capacity, thus resulting in a very large amount of fixed charges per unit of production.

1	2	3	4	5	6	7	8	9	10	11	12
8	B.F.Equipment & Coke-oven Equipment .	1563	1784·34	91·72	936·38	1211·56	345	4338	3187	7520	6273
9	Lifting mechanism for Gandak Barrage .	89	13007·33	682·41	6966·51	9013·75	137	29807	1262	31069	5936
10	Rolls for B. S. P. . .	23	427·88	22·45	229·16	296·51	..	976	(*)	976	429
11	Components for Radial Drilling machine-HMTP . . .	12	1887·31	99·02	1010·81	1307·86	..	4305	(*)	4305	3000

(*) Material supplied by customer.

APPENDIX VI

(Reference para 75 of the Report)

FOUNDRY FORGE PLANT

Statement showing cost of production and sales rates in certain work orders

Hqr. No.	Bill	Name of the Party	Description of material	Work order No.	Cost of production per tonne	Sales rate per tonne	Loss per tonne
1	2	3	4	5	6	7	8
					Rs.	Rs.	Rs.
1	2	Hindustan Steel, Rourkela .	N.F. Blast Tuyers 5 Nos.	36—58—0003	23,440	22,000	1,440
2	17	M/s. Tin Plate Co., Jamshedpur.	G.I. Clear Chill Rolls No. 502 .	31—51—0009	6,230	5,000	1,230
3	19	Bhilai Steel Plant, Bhilai .	G.I. Ingot Moulds 130, 134, 138, 157, 158, 161, 142, 152, 156 and 159.	31—24—0001	1,013	650	363

1	2	3	4	5	6	7	8
					Rs.	Rs.	Rs.
4	32	Bhilai Steel Plant, Bhilai .	G.I. Ingot Moulds No. 176, 166, 163, 168, 179, 170, 160 and 167.	31—24—0001	1,013	650	363
5	42	Tin Plate Co., Jamshedpur	Rolls Nos. 320, 330 and 500 .	31—51—0009	6,330	5,000	1,330*
6	46	Bhilai Steel Plant, Bhilai .	G.I. Moulds (135, 140, 165, 169, 172, 173, 174, and 178).	31—24—0001	1,013	650	363
7	48	Bhilai Steel Plant, Bhilai .	Roll (Russian Imported) Roll (BD-802)	HMB P.W.O.	1,450 580 2,400	CIF Customs etc. Machining	
					4,430	3,077	1,353

* Included HMBP machining cost of Rs. 2,500/- per tonne.

APPENDIX VII

(Reference para 84 of the Report)

A—HEAVY MACHINE BUILDING PLANT

Product-wise Production programme, orders in hand surplus capacity.

(Figures in M/Tonnes)

Sl. No.	Name of products		As per DPR	1967-68	1968-69	1969-70	1970-71
1	2		3	4	5	6	7
I.	Coke Oven Equipment		7,700				
	As programmed by HMBP	(a)		3717	4479	5521	5848
	Orders.	(b)		3717	8000	5400	..
	Gap.	(c)		..(—)	3521	(+)121	(+)5848
II.	Blast Furnace		5,500				
		(a)		6425	4541	6063	9877
		(b)		6425	8200	8800	..
		(c)		..(—)	3659	(—)2737	(+)9877
III.	Steel Making Equips.		7,000				
		(a)		..	4780	5000	5148
		(b)		..	6000	5800	..
		(c)		..	(—)1220	(—)800	(+)51,48

1	2		3	4	5	6	7
IV.	Crushing & Grinding equipments		3,150				
		(a)		1340	1051	2098	2315
		(b)		1340	..	400	..
		(c)		--	(+)1041	(+)1698	(+)2315
V.	Rolling Mills Equipments		34,500				
		(a)		3077	6558	11230	16324
		(b)		3077	7900	10000	4000
		(c)		..	(—)1342	(+)1230	(+)12324
VI.	Crane Equipments		6,570				
		(a)		2089	3770	4475	6570
		(b)		2089	6700	3100	..
		(c)		..	(—)3930	(+)137	+)65,70
VII.	Oil/Water Drilling Rigs. .		5,500				
		(a)		1254	500	611	934
		(b)		1254	500	600	2000
		(c)		..	Nil	(+)11	(—)10,66
VIII.	Press & Forging equipments		1,360				
		(a)		..	200	1300	1300
		(b)		..	..	..	..
		(c)		..	(+)200	(+)1300	(+)1300
IX.	Spare parts		1,080				
		(a)		1088	1000	1000	1000
		(b)		1088	2000	1000	..
		(c)		..	(—)1000	..	(+)1000

X.	Excavators		4,950				
		(a)		4404	2034	3248	5060
		(b)		4404	2270	1000	..
		(c)		..	+764	+2248	+5060
XI.	Mine Equipment		880				
		(a)		..	..	..	112
		(b)		..	..	..	..
		(c)		..	..	..	+112
XII.	Marine Diesel Assembly		..				
		(a)		..	..	..	1284
		(b)		..	..	..	..
		(c)		..	..	..	+1284
XIII.	Reduction Gears		..				
		(a)		..	250	390	520
		(b)		..	..	..	..
		(c)		..	+250	+390	+520
XIV.	Misc. equipment		1,810				
		(a)		2846	2007	2094	2138
		(b)		2846	7600	1000	2000
		(c)		..	—5593	+1094	+38
	HMBP (total)		80,000				
	Mech, & Structural	(a)		26240	32170	43030	58430
		(b)		26240	49170	37100	8000
		(c)		..	—17000	+5930	+50430
	Structurals		25,000				
	(Steel Fabrication workshop)	(a)		5760	10730	16170	20270
		(b)		5760	10730	2050	..
		(c)		..	..	+14120	+202070
	GRAND TOTAL		105,000				
		(a)		32000	42900	592000	78700
		(b)		32000	59900	39150	8000
		(c)		..	17000	+20050	+70700

B—FOUNDRY FORGE PLANT

Production programme, order position and surplus capacity.

Figures in M/Tonnes

Sl. No.	Item	1967-68				1968-69				1969-70				1970-71			
		Capacity	Firm orders	Anticipated	Gap	Capacity	Firm orders	Anticipated	Gap	Capacity	Firm orders	Anticipated	Gap	Capacity	Firm orders	Anticipated	Gap
1.	G. I. Castings	6840	6840	..	..	16200	2330	13870	..	23700	..	21300	2400	28700	..	8900	1980
2.	Ingot Moulds	3100	3100		..	4300	410	..	3890	5500	..	..	5500	6200	..	..	620
3.	G. I. Rolls	3050	7883	..	2267	4700	..	..	4700	7200	..	..	7200	9650	..	..	965
4.	Non-ferrous Castings	306	83	70	153	450	..	140	310	575	..	160	415	640		40	600
5.	Steel Castings	2355	2355	..	..	6200	4820	1380	..	13300	1640	8000	3660	24100	..	1600	22500
6.	Steel Rolls	225	188	..	37	700	..	..	700	850	..	..	850	2650	..	..	2650
7.	Forgings	2030	1429	..	601	6150	425	2500	3225	12650	..	3500	9150	19550		600	18950
8.	Forged Rolls	..	..	..	..	300	13.5	..	286.5	1700	..	..	1700	2650	..	..	2650

C.—HEAVY MACHINES TOOLS PLANT

MACHINE TOOLS PLANNED ON ORDER EXPECTED ORDERS AND GAP.

	1967-68	1968-69	1969-70	1970-71
Planned Nos. .	37	93	132	187
On order Nos. .	4	2	..	..
Expected Nos. .	27	26	35	11
Gaps . .	13	55	97	172

APPENDIX VIII

(Reference para 103 of the Report)

Foundry Forge Project

Procurement of material in excess of requirements:

An electrical work of the value of Rs. 6.10 lakhs for inside lighting installation of factory buildings was awarded to Messrs General Electric Company of India (Pvt.) Ltd., Calcutta, in May, 1963. According to the contract, the firm supplied materials worth Rs. 1.75 lakhs for installation and laying of electrical cables but it was seen that materials worth Rs. 0.95 lakh only were used in the work. Supply of materials worth about Rs. 80,000 was unnecessarily obtained in excess due, it is understood, to defective preparation of the tender papers. Included in this amount of Rs. 80,000 is the value of cables worth Rs. 60,000 approximately, although cables worth about Rs. 36 lakhs were in stores at the end of 1963-64. The material obtained in excess of requirements have not yet been utilised.

Heavy Machine Building Project

(a) *Purchase of Jib Cranes*

An order was placed in 1961-62 through D.G.S. & D. on a firm for the supply of 27 Jib cranes of two tons capacity valuing Rs. 3,43,500. Delivery was to be completed by 30th November, 1963. The hoists were imported against foreign exchange assistance for an amount of Rs. 1,28,250 and steel was also supplied by the Project authorities amounting to Rs. 31,343. The first crane was supplied on 14th January, 1966 and in February, 1966 six more cranes were supplied. By August 1966 out of 27 cranes, 22 were supplied when the order for the balance of five cranes was withheld by Controller of Stores and Purchase. Only after receipt of 22 cranes, it was found that eight cranes were required as per the D.P.R. 14 cranes costing Rs. 1.8 lakhs are now lying in stores and the supplier is in possession of five hoists imported from our foreign exchange release valuing Rs. 23,750. The order for 27 cranes was apparently placed without assessing the correct requirements.

(b) *Purchase of Winches*

In January, 1962 order was placed for 10 winches valued at Rs. 6,62,000 with delivery within a period of 9 to 15 months. The supply was actually completed in December, 1964. The work for which the winches were required was however completed before the receipt of these winches. Action to dispose of the winches lying in stores is being taken.

(c) *Import of consumable materials for the statfile*

An Indent was raised by Dy. C.P.O. on 3rd May, 1963 for Statfile Recorder Model 70 mm. The requirement was approved by the Management in view of the demand for copying out the valuable technical documents imported at high rates and also obtained from indigenous sources.

Order was placed with M|s. Agfa Gevart India, in April 1964, valued Rs. 1,32,708. The main equipment was imported from West Germany (Free Foreign Exchange Area) against actual Users' Import Licence arranged by the Corporation to the value of Rs. 53,679.20. Consumable Stores (Part quantity) valued about Rs. 25,000 was also imported along with Main Equipment. The materials along with the Main Equipment were received in June 1965. The consumable stores of Indian origin worth over Rs. 30,000 was also included in the order. This was also received in the same month. Out of this Enlarging Papers of Indian origin 50 rolls valued Rs. 6,367 was returned to the firm being excess to requirement and due to fear of deterioration for want of proper storage facilities with the Corporation.

Out of the total imported consumable materials valued Rs. 25,000 a part quantity valuing Rs. 10,006.86 was collected from the firm's premises leaving the balance valuing Rs. 14,993.14 with them for safe custody as the microfilming lens and air conditioning storage facilities were not available with the Corporation.

After a lapse of about 16 months, the question was raised on 18th September, 1967 by the Purchase Department regarding the disposal of a large quantity of these items like document papers, transparent film etc. as they would be beyond the normal requirement and validity period of the materials will be expiring very soon.

It appears that proper indent consistent with requirement, rate of consumption, storage facilities was not made with the result that the materials worth Rs. 15,000 were rendered surplus. Other concerns and Government Departments have been now requested to make use of these surplus materials.

APPENDIX IX

(Reference para 130 of the Report)

No. of Board Meetings attended by each Director.

Year	Name of Directors	No. of meetings held while he was Chairman/ Director	No. of meetings attended
1964	Dr. A. Nagaraja Rao, Chairman.	1	1
	Maj. Gen. E. Habibullah	5	4
	Shri H. V. Narayana Rao.	6	4
	Shri R. V. Subrahmanian	6	5
	Dr. B. D. Kalelkar	6	2
	Shri B. N. Sinha	3	..
	Shri A. B. Ganguli	1	..
	Shri O. N. Mishra.	6	4
	Shri T. R. Gupta	6	6
	Shri H. N. Ray	5	4
	Shri M. S. Rao	6	2
	Shri S. T. Raja	4	2
	Shri S. Moolgaokar	4	2
	Shri R. T. Sinha	3	3
	Shri R. C. Dutt	..	..
	Shri S. K. Majumdar	1	1
	Shri N. S. Pandey	..	..
1965	Shri T. R. Gupta, Chairman	9	9
	Shri H. V. Narayana Rao.	1	..
	Shri O. N. Mishra	9	9
	Shri M. S. Rao	9	4
	Dr. B. D. Kalelkar	9	3
	Shri S. T. Raja.	9	7
	Shri S. Moolgaokar.	9	1
	Shri S. K. Mazumdar	9	6
	Shri R. V. Subrahmanian	..	..
	Shri R. T. Sinha	..	..
	Shri T. P. Singh.	8	3
1966	Shri T. R. Gupta, Chairman	5	5
	Shri M. S. Rao	5	1
	Shri T. P. Singh.	4	4
	Shri O. N. Mishra	5	5
	Dr. B. D. Kalelkar	5	2
	Shri S. T. Raja	4	3
	Shri S. K. Majumdar	5	3
	Shri S. Moolgaokar	5	2

APPENDIX X

Summary of Conclusions/Recommendations

S. No.	Reference to Para No. in the Report	Summary of Conclusion/Recommendation
(1)	(2)	(3)
1.	25-26	The Committee find that the pile foundation which has been advanced as one of the reasons for delay in construction, had to be resorted to because of inadequate soil investigation before the selection of site for the setting up of the project. The need for proper soil investigation was emphasised by the Estimates Committee in para 64 of their 51st Report (1963-64). The Committee were informed that the attention of the Public Undertakings has been drawn to the importance of proper soil investigation through any of the existing specialised Government agencies before selecting a site for setting up of a plant. The Committee trust that these instructions will be followed in future so that a decision with regard to the type of foundation required is taken at the right time.
2.	29	The original concept of setting up of Foundry Forge project was that this Plant which has a metallurgical base will supply all the forgings and castings required by the Heavy Machine Building Plant to meet its full needs for the 80,000 tons annual production of heavy machinery. Because of delay in commissioning of the F.F.P., the requirements of forgings and castings for the H.M.B.P. had to be met from other sources including imports of heavier range of castings and forgings not available indigenously. The value of steel castings and forgings obtained from indigenous sources during 1964-65 to 1966-67 amounted to Rs. 52.95 lakhs. Besides, castings and forgings of the value of Rs. 75.50 lakhs had to be imported during the same period.
	30-31	The Committee regret to note the inordinate delays in the construction and commissioning of the projects of the Corporation even as compared to the schedules drawn up by the management itself in 1962. Even granting that some delays might be unavoidable in

(1)	(2)	(3)
		complex plants like those of the Corporation due to certain unforeseen circumstances, the delays to the extent of more than two years as in the case of the Foundry Forge Plant can hardly be justified. The delays in the procurement of materials, designs, drawings, plant and machinery, etc. could have been avoided to a large extent with proper planning and co-ordination and by having close liaison with the authorities concerned. What is regretted is that even the revised schedule drawn up for the Foundry Forge Plant as late as 1966 would not be adhered to and there was likely to be a delay of 4-5 months in commissioning of the shops as compared to that schedule. It was admitted during evidence that though in the case of plants of the size of the Heavy Machine Building Plant and the Foundry Forge Plant a period of 5-6 years for completion of construction might be necessary, these should not have taken as much as 8 years. The delays in construction and commissioning have resulted in considerable loss of production and drain on limited foreign exchange resources because of imports necessitated as a result of shortfall in supplies from these plants. The Committee trust that steps would at least now be taken to complete the construction and commission all the plants expeditiously.
3.	34	The Committee find that not only were certain works taken up without preparation of Detailed Estimates and obtaining technical sanction, but in some cases such sanction has also not been accorded even so far although these works were taken up for execution as far back as 1961. Such inordinate delays in obtaining technical sanction can hardly be justified.
	39	The Committee are unhappy over the delays in the preparation of detailed estimates and in execution of formal agreements with the contractors for certain works. It was noted that in several cases the actual quantity of work done was much more than the original estimates and additional payment had to be made to the contractors. In the absence of detailed

(1)	(2)	(3)
		estimates there cannot be any effective technical or financial control over the works. The absence of formal agreements is also fraught with risk of financial loss in case of dispute with the contractors. The Committee find that even in his Quarterly Review for the period October—December, 1965 the Financial Adviser & Chief Accounts Officer of the Corporation had pointed out the absence of such detailed estimates and formal agreements with the contractors in a large number of cases. It is regrettable that in spite of the observation of the FACAO delays in this regard have persisted. The Committee desire that immediate action should now be taken to complete the detailed estimates and finalise the agreements with the contractors which are still pending.
4.	42	It is surprising that in spite of the fact that the construction of all the projects of the Corporation is nearing completion and consequently the tempo of inward shipment has considerably declined, the port rent should have increased from Rs. 11.3 per ton in 1964 to Rs. 20.2 per ton in 1966-67. Apparently the matter has not been given the attention it deserves. The Committee desire that the reasons for increase in the incidence of port rent should be examined and responsibility fixed. Steps should also be taken to avoid any undue hold-up at the port and payment of unnecessary port rent in future.
5.	50	The reasons advanced for the shortfall in production in the F.F.P. in 1966-67 even as compared to the revised estimates when the actuals of six months production were available are hardly satisfactory. One of the reasons advanced is that there were construction delays due to which certain equipment and facilities were not commissioned in time. That it was not possible for the management to forecast with reasonable accuracy the construction schedule for even the coming six months does not speak well of the planning and organisational efficiency of the Corporation which has nearly eight years of construction experience.

(1)	(2)	(3)
6.	51	Another reason advanced for shortfall in production is that because of delays in construction, about 200 workers and 50 supervisors could not be transferred from the construction side to the production side thereby affecting the production. For the proper discharge of their duties, it is essential that the persons should be in position well in time so that they could be familiar with the jobs. The Committee fail to understand as to how the plant depended on untrained persons which were yet to join from the construction side. It appears that there was hardly any phased programme for the training and development of workers according to the needs of production.
7.	52	The Committee view with concern the substantial shortfall in production in the F.F.P. as compared to the annual targets fixed. The shortfall in production not only affects the working of this plant but also the production in the H.M.B.P. and the H.M.T.P. which depend on this plant for the supply of castings and forgings. The satisfactory working of this plant therefore assumes added significance. The Committee, therefore, desire that steps should be taken by the management to fix realistic targets taking into consideration all the factors and to ensure that the targets so fixed are actually fulfilled.
8.	59	The Committee regret to observe that little effort seems to have been made to improve the working of the plants. In the case of the Heavy Machine Building Plant even in 1967-68 the actual production was only 6,180 tons as against the planned production of 12,200 tons for the half year ending the 30th September, 1967 or about 50 per cent of the planned output. Similarly in the Heavy Machine Tools Plant, as against the production programme for the manufacture/assembly of 36 machines in 1967-68, the number of machines assembled during the half year ending the 30th September, 1967 was only 9. This is a sad state of affairs. The shortfall in production especially in the Heavy Machine Building Plant not

(1)	(2)	(3)
		only affects the working of this plant, but also the timely delivery of goods to the customers. In many cases the Corporation failed to make deliveries according to the commitments made. Further, the shortfall in production is also likely to affect the import contents of the product as the same may have to be increased in order to adhere to the delivery schedule. This as well as the high incidence of fixed charges on lower output affects the cost of production. The Committee therefore desire that a thorough enquiry should be made into the reasons for continued low output in these plants and steps taken to improve their working.
9.	62	The Committee view with concern that even after three years of commencement of production in this plant, while on the one hand the valuable machinery costing Rs. 16.39 crores remained idle for 70 per cent of the machine hours available, on the other hand there was idle labour to the extent of 54 per cent. In view of such a high percentage of idle men and machinery it is not surprising to find that there was delay in execution of orders in more than 71 per cent of the cases during the last three years as pointed out in para 67 of this Report. This serious situation calls for immediate remedial measures to ensure proper utilisation of labour and machinery. From the break-up of idle time of machinery it is seen that the reasons for the idle machinery to the extent of 21.3 per cent was want of operators. It is regrettable that while on the one hand the machines remained idle to such an extent for want of operators, on the other hand the workers were idle to the extent of 54 per cent of the labour hours available. The Committee were informed that the operators required were for big and sophisticated machines. They however find that the Corporation have secured for this plant alone the services of 373 foreign experts and of another 242 Indian persons trained abroad besides large number of persons trained in other

(1)	(2)	(3)
		plants/undertakings in India and in the Central Training Institute of the Corporation. That the Corporation should still be short of trained operators for certain machines, shows that no proper thought was given to the selection and training of right types of persons for the running of this plant. This has led to the anomalous position of shortage of suitable persons for running the plant and at the same time a large force of idle workers. The Committee recommend that the Government should carefully analyse the reasons for this alarming situation and take immediate remedial measures.
10.	63	One of the reasons for idle machinery was lack of scientific planning for production for different shops. As pointed out by the F.A. & C.A.O. of the Corporation, at present planning is done in a general manner without specific reference to the machine-wise available capacity and without taking into consideration the normal time in terms of standard time, required to complete the various jobs, with the result that it is difficult to analyse which part of idle time relates to want of load and which part to other reasons. In the absence of such planned loading of the shops, it is difficult to ensure proper utilisation of machines. The Committee, therefore, desire that early action should be taken to work out the standard hours for all jobs. This would also help the plants in working the incentive bonus scheme for the workers. The norms so fixed could of course be reviewed in the light of experience gained on production in different shops.
11.	66	The Committee regret to note that it should have taken the Corporation so long to realise the deficiencies in these departments and to take necessary remedial measures. They trust that it would at least now be ensured by the Corpoartion that as far as possible no work is held up or machinery or labour remain idle for want of materials.

(1)	(2)	(3)
12.	72	The Committee are unhappy over the serious delays in the execution of orders which not only affect production in Heavy Engineering Corporation but also the manufacturing programme of their customers. Such delays are also likely to result in financial loss by way of penalty for non-delivery of products according to schedule. In case the delays in the execution of orders persist, the customers will have second thoughts before placing orders on Heavy Engineering Corporation. This the Corporation can ill afford at present when it is already short of orders. The Committee, therefore, desire that immediate steps should be taken by the Corporation to ensure that the delivery dates are adhered to.
13.	74	The Committee find that the Ministry receives regularly the monthly progress reports and also the Quarterly Financial Reviews from the Corporation. It is, therefore surprising that the Ministry should wait till the customers bring the delays in execution of orders to their notice. The very purpose of submitting these reports is defeated, if timely action is not taken by the Ministry to take up with the management the defects noticed as a result of examination of these reports. The Committee believe that the delays could have been minimised to some extent if the Ministry had taken greater interest in the reports submitted to them. They desire that suitable instructions should be issued by Government to ensure that these reports are studied by the Ministries concerned and remedial measures taken on deficiencies noticed. Failure on the part of the officers of the Ministries to take appropriate action should be enquired into and the responsibility fixed.
14.	77	The Committee are constrained to observe that in the case of certain items, the selling price does not cover even all the direct charges in respect of items such as raw materials, salaries and wages, and power and fuel not to speak of indirect charges like depreciation, interest, other over-heads, etc. This is a

(1)	(2)	(3)
		serious matter and calls for urgent action on the part of the Corporation to examine the reasons for such high cost of production. The high cost of production not only affects the financial working of the Corporation but also its competitive position in the international market. Because of lack of sufficient internal demand, it is vital for the Corporation to enter the export market. But it was admitted by the Chairman of the Corporation that although they had tendered in a number of cases, they could not secure any order mainly because of very high cost of production and the international price being not sufficient even to cover the cost of raw materials. The Committee, therefore, urge that concerted efforts should be made by the management to reduce the cost of production, through improved productivity and reduction in inventories, wastages of materials and better utilisation of men and machinery.
15.	83	It needs no emphasis that the products manufactured should be of standard quality and according to the requirements of the consumers. The Committee, therefore recommend that there should be rigid quality control at every stage of production to obviate complaints from customers and to inspire confidence in the products of the Corporation.
16.	91	The Committee are perturbed at the lack of orders for the Heavy Machine Building Plant. In their opinion one of the major causes leading to the present situation is the decision of the Government to revise the initial capacity of the Heavy Machine Building Plant. The capacity of the Heavy Machine Building Plant was initially to be 45,000 tons in the first stage to be expanded to 80,000 tons in the second stage. But the Government subsequently decided to have the capacity of the plant as 80,000 tons from the very beginning. It was also decided to revise the capacity of the Foundry Forge Project to 80,000 tons so as to be in step with the

(1)	(2)	(3)
		Heavy Machine Building Plant. The revision in the capacities of the plant has resulted in delays in construction and additional expenditure. Before deciding to increase the capacity of the Heavy Machine Building Plant from 45,000 tons to 80,000 tons, it was expected of the Government to ensure whether there were reasonable chances of corresponding development of the iron and steel industry. The limited resources of the country and the need for balanced development of all sectors of economy called for a cautious approach. The Secretary of the Ministry agreed during evidence that there should be proper assessment of demand, the projects should be started on a conservative basis and the expansion should be thought of only when capacities created have been fully utilised. The Committee cannot help reaching the conclusion that if the original capacities had not been revised these units would have gone into production much earlier, there would have been lesser capital investment and the Corporation would not have faced the problem of lack of demand and idle capacity. The Committee trust that in future Government would make more realistic assessment of demand especially when setting up plants with such heavy capital investment.
17.	93	These plants set up at a capital investment of Rs. 244 crores instead of paying any return on capital employed will result in a dead loss of Rs. 34.35 crores per annum from 1970-71 on account of fixed charges. This is an alarming position and calls for immediate steps to ensure proper utilisation of the capacities created in these plants. In addition to the steps being taken by the Corporation for product diversification, there is an urgent need for firm decision by the Government about the expansion of steel plants in the next ten years. Concerted efforts should also be made to promote exports through proper assessment of demand for the products of the Corporation in other countries. In

(1)	(2)	(3)
		this connection the Committee also feel that it would help exports if facilities are offered by the Government for supplying plant and equipment on deferred payment terms. While granting long terms credits to the neighbouring countries, certain turn key projects for establishment in those countries could form a part of package deal. This would help to increase exports and utilise the surplus capacities in these plants. The Committee trust that the matter would receive urgent attention of the Government.
18.	95	It is regrettable that not much headway has been made in regard to standardisation of steel plant equipment. In 1963-64 when the Estimates Committee examined the working of Heavy Engineering Corporation, they were informed that the Corporation has come to an understanding with HSL regarding standardisation of blast furnace designs. That Committee urged the need for early standardisation of other equipment in close consultation with the users. The Committee are constrained to observe that the position is no better even today and except the blast furnaces no other equipment has been standardised. Needless to say that there is urgency for concerted efforts in this direction. The standardisation of equipment would not only help to reduce the time lag in the manufacture of the equipment but also the cost of production, as the design costs range from 10 per cent to 25 per cent of the total cost of the equipment.
19.	97	The Committee have in the past also (para 92, 13th Report) pointed out that setting up of plants on turn key basis should be confined to cases where time is of essence or where there is lack of necessary technical skill and know-how in the country. In fact, with the setting up of heavy engineering units like Heavy Engineering Corporation, Heavy Electricals (India) Ltd. and the experience gained by the steel plants personnel in erecting and running the steel plants, a stage has been reached when it should

(1)	(2)	(3)
		be possible to set up future steel plants without any foreign collaboration.
20.	99	The Committee welcome the step being taken up by the Ministry to set up a sort of consortium for taking up turn key jobs for setting up Steel plants. They consider that by virtue of its being in a position to make major contribution in the supply of plant and equipment for the steel plants, Heavy Engineering Corporation can play a leading role in such a consortium. The Government will of course have to carefully examine the existing gaps in the facilities available in the country for equipment design and engineering and measures will have to be taken to cover up such gaps in order to enable any consortium to take up the work of setting up a steel plant from its conception to its commissioning.
21.	103	The Committee regret to note that items of steel were purchased much in excess of requirements without carefully assessing the actual need. They find that there had been several other cases where materials costing lakhs of rupees were purchased without carefully assessing the actual requirements. Some of the instances as pointed out by the F.A. & C.A.O. in his reports for the Quarters ending June and September, 1967 are given in Appendix VI. The Committee desire that these cases should be examined and the responsibility for the purchase of materials in excess of requirements fixed.
22.	104	Because of injudicious purchases of materials, stores valuing Rs. 94.66 lakhs were lying idle on the 1st April, 1967 out of which stores worth Rs. 27.9 lakhs had not moved for more than three years. What is worse is that in spite of heavy inventories in a large number of cases, the production suffered for want of materials. The Committee cannot help observing that the system of planning and purchasing of stores is defective and needs urgent review to avoid unnecessary locking up of working capital

(1)	(2)	(3)
		in inventories and considerable loss to the Corporation because of heavy inventory carrying cost.
23.	110	Considering that the cost of raw materials accounts for a major portion of total cost of production for any item, it is essential that there should be strict watch over consumption of raw materials. The Committee, therefore, recommend that the norms of consumption should be fixed on a scientific basis and should not be exceeded without legitimate reasons. They suggest that the cost of excess consumption should be worked out separately as this would help the management in reviewing the extent of such excess and taking remedial measures.
24.	115	The Committee regret to note that not only did the Corpoartion fail to take necessary precautions for fire fighting from the very beginning, but even after the fire in June, 1963, no urgent action was taken to implement the recommendations of the Director (Construction). The result was that there was another major fire in January, 1964 causing heavy damage to valuable imported machinery, which had to be imported again at a cost of Rs. 72.20 lakhs. However, in view of the assurance given to the Committee that the fire service organisation of the Corporation has since been brought upto the standard, the Committee hope that such incidents will not occur in future.
25.	118	The Committee are not satisfied with the reasons for the delay in strengthening the security arrangements. In view of the fact that even subsequently only persons from Bihar and Bengal Police have been engaged for security purposes, the plea of non-availability of army personnel because of emergency seems to be untenable. The Committee feel that as in the case of fire fighting arrangements no serious attention was paid to strengthen the security arrangements and things were allowed to proceed in their own way.

(1)	(2)	(3)
26.	121	Even granting that the police failed to find any evidence against the security personnel for a criminal action, it is evident from the facts of the case that the fire which occurred in September, 1964 could not occur without the connivance or negligence on the part of the security guard. The Committee are concerned about the several cases of sabotage in the plants of the Corporation and feel that it is essential that proper measures should be taken to guard against recurrence of such cases. The Committee recommend that there should be proper screening of the security personnel before their appointment to avoid any chance of their complicity in such cases.
27.	124	The Committee are constrained to observe that in spite of adverse comments made in a Report by an independent Enquiry Committee against the Chief Security Officer and even after the Corporation had made a commitment to the Government in February, 1965 that the Chief Security Officer would be relieved from the service of the Corpoartion, he was in fact placed in a position with higher responsibility instead of being relieved from service. The change in decision about him was not even communicated to the Government. The Committee take a serious view of the scant regard paid by the management to the observations in the Report of an independent Enquiry Committee.
28.	125	(i) The Committee also regret to note that the Government did not keep a watch on the actual implementation of the commitment made to them in this regard. They desire that the matter should be examined by the Ministry and suitable action taken. (ii) The Committee also suggest that whenever special Enquiry Committees are set up either by the Government or the Public Undertakings, the action taken on the observations/recommendations of such reports should be watched by the Ministries concerned.

(1)	(2)	(3)
29.	128	During evidence the Chairman of the Corporation stated that the question of insurance of plant and machinery of the HMBP was taken up with the Indian Insurance Companies Association Pool in August, 1963 and talks were held with them in December, 1963. It is, however, noted that even in February, 1964, when the matter was put up to the Board, the rates of premium, the manner of payment, etc. had not been settled and the Board was requested to accept the proposal for insurance in principle so that further action regarding negotiations for rates and the manner of payment etc. could be taken and settled with the Pool on immediate basis. In the circumstances, the time taken by the Corporation in preliminary talks with the Indian Insurance Companies Association Pool could hardly be justified. It is regrettable that even after a major fire in Hatia storage shed in June, 1963, the urgency of the matter was not realised and no immediate action was taken to ensure the plant and machinery of the Heavy Machine Building Plant. The failure to insure the plant and machinery resulted in an avoidable loss of Rs. 72·20 lakhs to the Corporation. The Committee hope that the management will insure valuable plant and machinery wherever necessary and justified.
30.	132	The Committee, however, note that some of the Directors have continued to be on the Board of Directors of the Corporation for the last three years although they had not been attending majority of the meetings of the Board. The success of any undertaking largely depends on the interest taken by the Board of Directors. The Committee, therefore, recommend that at the time of reappointment of the Directors each year, only those who have shown interest in the affairs of the Company should be considered for reappointment. The Committee feel that in an undertaking of this size and complexity it would be advantageous to have the General Managers on the Board of Directors.

(1)	(2)	(3)
31.	138	It is unfortunate that the recruitment of staff by the Corporation during construction was not strictly related to the requirements. Having committed this initial mistake the Corporation now finds it difficult to retrench them and are obliged to carry the extra strength. This has led to lower productivity and higher cost of production.
	139	In this connection the Committee note that the Estimates Committee (1963-64) which examined the working of this Corporation suggested in para 173 of their 51st Report that "the Corporation should endeavour from the beginning to (i) restrict the number of administrative and supervisory staff, (ii) increase the productivity of direct workers by proper training, and (iii) avoid any over staffing particularly at the initial stage." In pursuance of this recommendation the Corporation had stated that with a view to ensuring that there was no overstaffing even at this stage of construction and production a decision had been taken to freeze recruitment at all levels. Staff was being recruited only when it was absolutely essential. From a statement furnished to the Committee it is, however, noted that the Corporation has appointed 1523 more persons in the last three years. The persons recruited include workers and staff for departments like Administration, Stores, Finance etc. in which there was already overstaffing. It is regrettable that in spite of the recommendation of the Estimates Committee and the decision of the Corporation to freeze recruitment, the employment of additional staff should have continued in the plants of the Corporation. This only shows that the management has failed to implement its own decisions. The Committee desire that unless technical compulsions require no fresh recruitment should be made till all the existing labour and staff have been gainfully utilised.

(1)	(2)	(3)
32.	141	The Committee are not satisfied with the progress made in locating surplus staff in the plants of the Corporation. They also feel that in order to have a proper assessment of the surplus staff, it would be better to have such an investigation carried out by some expert outside agency.
33.	145	The Committee feel that creating of a pool of civil engineers would hardly solve the problem as it would be difficult for the undertakings to retrench the surplus construction staff till they find alternative jobs. At the same time they feel that if the public sector undertakings have to work efficiently and to secure low cost of production and adequate return on capital employed, it is necessary that the labour cost which accounts for a substantial portion of the cost of production be kept to the minimum. Since the construction staff is solely employed for the purpose of construction work there is no obligation on the part of the public undertakings to retain them after the assignments for which they had been engaged are over. Thus there is no justification for burdening the public undertakings with surplus construction staff which cannot be gainfully employed by them in production. The matter, therefore, requires serious attention of the Government.
34.	146	In this connection the Committee find that the Estimates Committee had in their 51st Report on the Corporation had suggested the building up of strong organisations in the public sector for undertaking construction and erection work. They also suggested that in this context the strengthening of the two existing organisations viz. National Projects Construction Corporation and National Buildings Construction Corporation for undertaking such work may be considered by the Government. In pursuance of this recommendation, the Committee were informed by the Government that apart from National Projects Construction Corporation Ltd. and National Buildings Construction Corporation Ltd., the Government

(1)	(2)	(3)
		have also since set up Hindustan Steel Works Construction Ltd. More such undertakings will be set up as and when considered necessary. The Committee feel that the entrusting of construction and erection work to central agencies instead of doing it departmentally will go a long way in solving this problem of surplus construction staff. Till the work is done by a central agency there will always be a tendency to absorb the construction staff in production. Since this invariably happens, and in the long run affects the economics of a project, the Government ought to issue directions, if necessary, to get the construction done by N.B.C.C., N.P.C.C., etc.
35.	150	The Committee feel that the difficulties anticipated do not justify shelving of an issue of this nature having considerable financial implications. They desire that the management should take an early decision in the matter and the project allowance may be discontinued in accordance with the Rules. The Committee have come across other cases also where project allowance could not be discontinued even after conditions for its payment had disappeared. They therefore desire that the payment of project allowance should be discontinued as soon as the required amenities have been provided. The Committee have noticed that instead of discontinuing the project allowance after the construction is over, the public undertakings have merged it with pay with the result that the undertakings were burdened with extra expense till the persons concerned retired or left the project. In view of the resultant consequences that follow the giving of Project allowance the Committee recommend that such allowance should not be given in the projects to be set up in future and the Ministry of Finance may withdraw the general orders on the subject.
36.	152	The Committee find that the Estimates Committee which examined the working of the Corporation in 1963-64 also suggested that it was desirable

(1)	(2)	(3)
		to rationalise the scales of pay attached to various posts in the Corporation and base them on work studies or job specifications. While accepting this recommendation, the Corporation had informed that the question of reducing the number of scales of pay was engaging the attention of the Corporation and every effort would be made to reduce the number. The Committee are constrained to observe that in spite of the recommendation of the Estimates Committee and of the committee set up by the Corporation no action has been taken to rationalise the pay scales. The Committee are unhappy at the failure of the Corporation to take the corrective step. They suggest early rationalisation of pay scales by the Corporation.
37.	155	The Committee agree that for the efficient working of any undertaking, merit should be recognised and promotion is by far the best incentive an undertaking can provide to its employees. However, some of the instances of promotions examined by the Committee leave a doubt in their mind whether too rapid promotions were not given than legitimately due. They feel that a minimum period of experience in the lower category is essential before a person is mature enough to shoulder higher responsibilities. In their view even promotion on outstanding merit should also be considered only after completion of minimum period of three years in a lower grade as prescribed by the Corporation. The Committee recommend that the rule providing for promotion before three years service may be reviewed in light of the above observations. Early action should also be taken to lay down regular channels of promotion to avoid any cause for misgivings.
38.	159	It needs no emphasis that in the interest of efficient and economic working of a project, it is necessary that there should be complete understanding and cooperation between labour and management. This

(1)	(2)	(3)
		can be best achieved only if there is proper understanding among the workers themselves and the inter-union rivalry is avoided. The Committee hope that there will be a constant endeavour both on the part of the management and the labour unions to resolve differences through mutual discussions and voluntary arbitration in order to achieve maximum production. The Committee also desire that steps should be taken by the management to constitute early the Works Committees in all the plants and to have workers representatives on other Committees to promote good industrial relations.
39.	165	The question of increase in the capital cost estimates of the Projects was considered by the Estimates Committee (1963-64). That Committee observed that it was not correct to undertake a project on the basis of incomplete estimates and to subsequently increase the outlay thereon, which has in any case to be agreed to by the Government, a feature which was fairly common to most of the projects and which had to be discountenanced. That Committee recommended that the final estimates of the various projects be immediately prepared and placed before Parliament with proper explanation for variations between the Detailed Project Report estimates and the anticipated cost. It is, however, regrettable that even after more than seven years from the submission of the original estimates by the Corporation in June, 1960 these estimates have not yet been approved by the Government, not to speak of their being placed before Parliament.
40.	168	The reasons advanced for the delay in approval of estimates are a sad commentary on the manner in which the Capital estimates of the projects have been dealt with by the Ministries. The Committee have in the past also deprecated the cases of delay on the part of the Ministries in sanctioning the estimates until the whole process becomes a *post facto* affair.

(1)	(2)	(3)
		The Committee would again like to reiterate that the complete estimates should be called for well in advance and sanctioned by the Government before any work is taken up. Then alone it would be possible for the Ministry to have any check over the actual expenditure against the estimates therefor.
41.	170	The Committee hope that the instructions issued by the Finance Ministry to ensure quick approval of project estimates would be carefully followed in the Finance Ministry. They also desire that the reasons for the delays in sanctioning the estimates in the Administrative Ministries should also be examined and similar instructions issued to streamline the procedure for avoiding unnecessary delays in the sanctioning of the estimates there.
42.	174	The gross profit at full production in 1970-71 in the projects of the Corporation is expected to be 9 per cent of the capital employed and the net profit after taking into account the interest charges will be only 4.5 per cent. The Committee were also informed that by 1970-71, there would be an accumulated loss of about Rs. 20 crores and it would take the Corporation about 3-4 years to wipe off the losses. As such the real profits will be only from 1975-76, *i.e.*, sixteen years after the establishment of the Corporation and even then the net profit will be at the rate of 4.5 per cent of the capital employed. The Committee are unhappy to observe that the expected profitability of the plants of the Corporation is so low. The main reasons for the low profitability are the higher capital investment and higher cost of production due to low productivity and large inventories etc. Concerted efforts are, therefore, called for to improve the operational and financial working of the Corporation.
43.	178	It is evident that the land acquired for township was much in excess of requirements. It is also seen that out of 1800 acres of land utilised for the town-

(1)	(2)	(3)
		ship, the actual area used for houses was only 16.3 per cent of the total area. Apparently there has been lack of proper planning in the use of land. The Committee have in the past also emphasised the need for utmost economy in the expenditure on township as it adds to the capital cost of the projects and affects the cost of production. The Committee trust that having acquired such large surplus land, steps would at least now be taken by the Corporation for the proper utilisation of this land. In this connection they would also invite attention to the following recommendation of the Committee made in para 158 of their 8th Report on Townships and Factory buildings: "The Committee feel that in view of the food shortage in the country it would be desirable if the land which has been acquired for expansion and is not being used is leased out temporarily for cultivation. Such an arrangement would provide some income to the undertakings, besides augmenting agricultural production."
44.	186	The Committee are not satisfied with the explanation of the management for the piecemeal construction of temporary quarters. Considering that the orders for 1000 houses were placed on the same day on which the Board decided to construct 2000 more houses, they feel that with proper co-ordination it should have been possible to place the orders for all the 3000 quarters in one lot. Even if the Corporation failed to do so, the Committee see no reason as to why the orders for the additional 2000 quarters could not be placed immediately after the decision of the Board, with the existing contractors on the same terms and conditions as for the earlier 1000 houses. It is surprising that the Corporation had to negotiate for these 2000 quarters and it was only after four months that the orders were placed on the two existing contractors and on two new contractors at the rates considerably higher than the previous ones, resulting in extra expenditure of Rs. 7,93,642.

(1)	(2)	(3)
45.	187	The Committee take a serious view of the manner in which the approval of the Government for construction of quarters was by-passed merely on technical grounds.
46.	188	The Committee feel that the full facts of the cases have not come to light. They desire that the matter should be thoroughly examined by a high powered Committee and the responsibility fixed.
47.	193	The Committee cannot help the conclusion that the purchase and installation of the brick making machines at a cost of over Rs. 6 lakhs had been injudicious. It is regrettable that although the Central Building Research Institute suggested that only one machine might be purchased on an experimental basis, the Corporation went ahead with the purchase of 10 machines without making a comprehensive investigation about the utility of machine-made bricks and the suitability of the soil. The Committee also find that the order for the machines had been placed in March, 1961 whereas preliminary tests of soil were conducted in September, 1961 and the technical advice of the Central Building Research Institute was received in December, 1961. They see no justification for placing the order even before carrying out proper soil tests or before obtaining technical opinion. Having already placed the order, the Corporation perhaps found it more convenient to ignore the advice of the C.B.R.I. As subsequent events proved, the decision to go ahead with the purchase of all the ten machines was incorrect and resulted in large infructuous expenditure and loss of foreign exchange.
48.	194	The Committee desire that early action should be taken to dispose of the remaining four machines. The Committee would also like the body which is looking after the surplus machinery in public undertakings to be more vigilant as brick making machines have been bought by N.B.C.C. from abroad while surplus machines were lying idle with the Corporation.

(1)	(2)	(3)
49.	198	The Committee regret to note that at the time of placing orders for the water meters, the fact that the temporary quarters would have a system of pipelines in which it will not be possible to fix the meters was overlooked. They also find that out of 6912 water meters purchased by the Corporation, through DGS&D, the orders for 3400 meters were placed by the DGS&D in January, 1964 and for 2600 meters on 30th April, 1964. All these 6000 meters were received still later between 16th July, 1964 and 19th January, 1965. Had the management, soon after the agreement of 10th February, 1964 with the Labour Union, examined whether it would still be an economic proposition to instal the meters or not and requested the D.G.S.&D. to cancel the existing orders or at least not to place any fresh order, they could have avoided a substantial amount of expenditure on the purchase of meters. The Committee desire that the matter should be investigated and responsibility fixed.
50.	199	The Committee desire that the meters should be disposed of without delay to avoid unnecessary locking up of capital and loss on account of depreciation.
51.	202	Considering the needs of trainees for accommodation for a limited period, the Committee consider that incurring of large expenditure on the building of such hostels on a permanent basis is open to question. They feel that certain blocks of houses should have been temporarily used for accommodation of the trainees so that these could be released for accommodation of staff when no longer required for the trainees. Now that these hostels have been built at a heavy cost, immediate steps should be taken for their best alternative use.
52.	206	The need for a sound design and research organisation for such a complex unit like the Heavy Engineering Corporation cannot be over-emphasised. It is not desirable for the Corporation to depend entirely on the bought out basic designs for the manufacture of

(1)	(2)	(3)
		equipment. The design units should therefore be suitably strengthened for the preparation and constant improvement of the original machine designs and production processes.
53.	208	The Committee regret to note the delay in the setting up of the Central Institute for basic designing and research in heavy machinery and equipment. They find that even in 1963-64 the Estimates Committee in their Report on the Corporation urged the need for setting up immediately such an Institute. Inspite of the recommendations of the Committee and the fact that the USSR Government offered to assist in the setting up of the Institute not much headway has been made in this direction. The Committee desire that the setting up of this Institute should be expedited.
54.	210	The import of design documentation by the Bokaro Steel Plant from the U.S.S.R. which were already available with the HEC is a serious matter involving avoidable loss of foreign exchange. The Committee fail to understand as to how the Government allowed the import of drawings without ascertaining from the Corporation whether these were available with them or not. They recommend that in future the Government should exercise great care before allowing the imports of designs and drawings for equipment to be manufactured by the Corporation. Scrutiny of orders placed for design documentations but not executed so far may also be made in order to take remedial measures, if possible.
55.	214	The reason advanced for incurring such a heavy expenditure by the Corporation (Rs. 4.87 lakhs) on design and technical documentation, etc. without any firm order from the ONGC is hardly convincing. The Committee recommend that before any work is taken up for execution from any party, it should be ensured by the public undertakings that there is firm commitment from the party so that it can be held liable for

(1)	(2)	(3)
		payment of compensation in case the order is cancelled or the goods are not subsequently accepted.
56.	216	Unless orders are placed immediately, these plants set up at a heavy capital investment of Rs. 244 crores instead of paying any return on capital employed will result in a dead loss of Rs. 34.35 crores per annum from 1970-71 on account of fixed charges. To remedy this alarming situation, the Corporation is taking up steps for product diversification. But the plant having been set up mainly for the manufacture of equipment for steel industry, the diversification, though inevitable, will mean more investment in balancing equipment and will also reduce the production of the plant. The situation therefore calls for immediate steps for finalising the steel development programme during the next ten years as well as for export promotion.
57.	218	The overall picture that emerges out of this study is not very bright or hopeful. The Committee hope that Government will analyse the reasons for the unsatisfactory working of the Corporation and take immediate remedial measures in the light of the observations|recommendations of the Committee.

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