COMMITTEE ON PUBLIC UNDERTAKINGS

(THIRD LOK SABHA)

ELEVENTH REPORT

ROURKELA STEEL PLANT OF HINDUSTAN STEEL LIMITED

(MINISTRY OF STEEL & MINES)

LOK SABHA SECRETARIAT
NEW DELHI

May, 1965
Vaisakha, 1887 (Saka)

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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 Eleventh Report on the Rourkela Steel Plant of Hindustan Steel Limited.

2. This Report is based on the examination of the working of the Rourkela Steel Plant upto the year ending 31st March, 1964. The Committee took the evidence of the representatives of the Hindustan Steel Ltd. on the 16th, 18th and 19th January, 1965 and the Ministry of Steel & Mines on the 22nd January, 1965.

3. The Report was adopted by the Committee on the 4th May, 1965.

4. The Committee wish to express their thanks to the Officers of the Ministry of Steel & Mines and the Hindustan Steel 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/individuals who, on request from the Committee, furnished their views on the working of the Steel Plant.

5. 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 Rourkela Steel Plant, by Comptroller and Auditor General of India.

NEW DELHI; PANAMPILLI GOVINDA MENON,
May 7, 1965 *Chairman,*
Vaisakha 17, 1887 (S). *Committee on Public Undertakings.*

I

INTRODUCTORY

Background.

The Industrial Policy Resolution of 1948 stated that the iron & steel Industry would be a field in which 'the State would be exclusively responsible for the establishment of new undertakings'. In pursuance of this policy Rourkela was the first steel plant to be taken up in the public sector. Negotiations for the setting up of this plant were started in 1953 with M/S. Krupp and M/S. Demag of West Germany. In that year a Memorandum of Association was signed with a combine of firms consisting of M/S. Fried Krupp, Essen and M/S. Demag, Aktiengesellschaft, Duisburg. The agreement provided for technical and financial participation of the combine in the construction of a new steel plant with an initial capacity of 5 lakh tonnes, estimated to cost Rs. 80 crores. The combine was also appointed consultants for the project on a fixed fee of Rs. 2.148 crores. It submitted a preliminary report in May, 1954 and a detailed project report in January, 1955.

Change in the capacity of the plant.

2. In the meantime it was decided to double the capacity of the Rourkela project from 5 lakh tonnes to one million tonnes as part of the overall steel development programme during the Second Plan period. Consequently, a supplementary agreement was entered into with the consultants in July, 1955 for submitting a revised project report and the amount of fees payable to them was raised to Rs. 2.853 crores. The detailed project report for the one million tonne steel plant was finalised in November, 1955 and accepted by Government of India in February, 1956.

Formation of H.S.L.

3. The construction and management of the Rourkela Steel Plant was entrusted to Hindustan Steel Limited, which was formed in January, 1954 under the Companies Act. The other two steel plants in the public sector viz. Bhilai and Durgapur were also entrusted to the management of the company in April, 1957.

Examination of HSL by Estimates Committee.

4. The working of the Hindustan Steel Limited and its three plants, including the Rourkela Steel Plant which is presently under examination of this Committee, was examined by the Estimates Committee in 1958-59. The recommendations and conclusions of that Committee are contained in their 33rd Report (Second Lok Sabha). The action taken by Government on these recommendations and the Estimates Committee's comments that on are contained in the Second Report of that Committee (Third Lok Sabha). This Committee did not consider it fruitful to cover the aspects, which were examined in detail by that Committee.

II

ERECTION AND COMMISSIONING

Delay in erection/ commissioning.

5. According to the programme of industrial development envisaged in the Second Five Year Plan the Rourkela Steel Plant was expected to go into production by the end of 1959. The Project Report of the Rourkela Steel Plant however, did not specify scheduled dates of commissioning of the various units. It only indicated the period required for the commissioning of each unit, from the date of commencement of the contract. In 1958, however, a statement of tentative dates for the commissioning of various units was prepared by the management and furnished to the Public Accounts Committee. These dates, however, could not be adhered to. A statement showing the tentative dates, the dates of actual completion and commissioning of the units and the delay in each case is given in Appendix I It would be seen therefrom that compared to the tentativ estimates, there had been considerable delay in commission ing of various units which range from two to forty months

Non-commissioning of Units even after erection.

6. In this connection it is noteworthy that even after the completion of erection there had been considerable delay in the commissioning of the following two units:—

Unit	Date of completion of erection	Date of commissioning	Period of delay
Coke Oven Battery No. 3 . .	1-10-1959	7-11-1962	37 months
Blast Furnace No. 3 .	10-6-1960	6-1-1962	19 months

Reasons for Delay.

7. The delay in the commissioning of the various units was ascribed to the following reasons:—

(i) Delay in site formation work due to increase in quantities and shifting of sites;

(ii) Delay in civil engineering works of foundations due to increase in quantities.

(iii) Delay in finalisation of contracts as complete layout and detailed drawings of plant and machinery were delayed.

(iv) Delay in transport of equipment, procurement of structurals from manufacturers according to schedule.

(v) Difficulty in securing civil engineering contractors of the requisite experience.

In this connection, the Committee understand that there were about 60 Civil Engineering, fabrication, erection and labour contractors, 36 German main plant suppliers and erection contractors and five other miscellaneous foreign contractors connected with the setting up of Rourkela Steel Plant. In the absence of proper co-ordination of the work of these numerous contractors, some of the units were delayed while others were completed earlier. But even the latter units could not be commissioned as they were inter-dependent.

8. The delay in the commissioning of the two units referred to in para 6 was stated to be due to the delay in commissioning of Rolling Mills. Although the orders for rolling mills were placed at the same time as those for the blast furnaces and coke oven batteries, it took a longer time to complete the erection of rolling mills, particularly the cold rolling mills, as more foundation and Civil Engineering work had to be done than originally envisaged. It was explained that in the absence of rolling mills, pig iron or steel ingots could not be produced as the Rourkela Steel Plant was primarily designed for the production of finished steel. The only pig casting machine which also did not function properly on account of poor maintenance could not handle the pig iron produced. There were also no arrangements for the stocking of steel ingots for long. Further, constant supply of the raw materials in requisite quantity was also not assured to warrant the commissioning of these units.

Investigation into reasons for delay suggested.

9. *The Committee regret to note the inordinate delay in the erection/commissioning of the various units at the Rourkela Steel Plant. Even granting that some delays were unavoidable in a complex project like a steel plant, there can hardly be any justification for the delay of 40 months in commissioning some of the units. Viewed against the impression given to the Estimates Committee in* 1959, *that there would only be a delay of about six months in the completion of the Rourkela Project and the plant as a whole would be commissioned by September,* 1960, *these enormous delays are a matter of concern. What is worse is that the Third Coke Oven Battery and the third blast furnace could not be commissioned for* 37 *months and* 19 *months respectively even after their erection due to delay in commissioning of rolling mills. The loss of production due to delay in*

commissioning of the units has been substantial. The Committee recommend that the reasons for the delay in the commissioning of various mills particularly rolling mills need to be investigated and responsibility fixed.

Delay in taking action on Estimates Committee's recommendations.

10. *The Committee were informed that as a result of the recommendations made by the Estimates Committee in their 2nd Report (Third Lok Sabha) in 1962, Government had instructed Hindustan Steel Limited to analyse and study the reasons for the delay in the completion and commissioning of the various units of the three steel plants so as to profit by this experience and avoid the recurrence of such delays in future. The Committee regret to observe that the results of the study if any, made have not been communicated* to them so far. The Committee cannot but observe that the management has not treated the recommendation of the Estimates Committee with the attention it deserves.*

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*The Ministry of Steel and Mines (Department of Iron & Steel) under their O.M. No. Parl (6)-1/65 dated the 26th April, 1965 forwarded a two page report on the results of the study made by Hindustan Steel Limited about the reasons for the delay in completion and commissioning of various units of the three steel plants. Due to delay in the receipt of the report the Committee have not been able to examine whether this report could serve the purpose which the Estimates Committee had in view.

III

PRODUCTION

A. Rated Capacity

Production below rated capacity.

11. The Rourkela Steel Plant is designed to produce flat products such as plates, sheets strips and tin plates as also large diameter pipes. The rated capacity for the various units and the actual production during the years 1961-62, 1962-63 and 1963-64 were as follows:—

(Tonnes in lakhs)

Products	Rated capacity	Actual Production		
		1961-62	1962-63	1963-64
Coke . . .	10·45	7·18	9·27	10·98
Blast Furnaces (hot metal) .	9·18	4·57	7·73	8·29
Steel ingots .	10·00	3·54	7·00	8·00
Blooming & Slabbing Mills .	8·95	2·38	5·87	6·52
Plates . . .	1·70	·74	1·63	1·68
H.R. Strip Mill (coils) .	6·03	1·13	3·34	4·30
C.R. Mills (sheets)	1·70	0·16	·83	1·24
Tinning lines .	·50	0·008	·08	·16
Pipes . . .	1·00	·36	·28	·28
Total Saleable Steel	7·08	1·86	4·16	5·63

Reasons for not reaching rated capacity.

12. It would be seen from the above table that the production in all the units except coke ovens was much below the rated capacity till 1963-64. The main reasons for the production being lower than the rated capacity were stated by the management to be:

(i) In 1961-62, the Rolling Mills were gradually being taken into operation and, there was gradual increase in production.

(ii) In 1962-63, production in most of the units of the Rolling Mills was expected to attain the rated capacity but due to the illegal strike and the resultant lockout in the Blast Furnace Department during April, 1962, the production

of ingot steel and finished steel suffered a set back.

(iii) In 1963-64, the main reasons for the short-fall of targets were the labour trouble in steel melting shop, Slabbing Mill and civil disturbances towards the end of the year.

However, from September, 1964 there was steady progress in the production which was more than the rated capacity in most of the shops.

13. *Considering that the first Blast Furnace at Rourkela was commissioned in February, 1959, the Committee cannot help observing that the time taken for reaching the rated capacity has been too long. The Committee hope that the tempo of production achieved since September, 1964 would be maintained.*

Delay in appointing foreign technicians to run L. D. Convertors.

14. The Committee enquired why even in steel melting shops, which were commissioned four years ago the production of steel ingots was only 80% of the rated capacity. It was stated during evidence that although for the commissioning of L.D. convertors, which was a new process, there was an Austrian team, adequate arrangements were not made for the services of German technicians for the running of such convertors. The expectations that Indian Engineers who were trained in Germany would be able to run the L.D. Convertors did not materialise. It was only in late 1961 that German technicians were appointed to run these convertors.

In this connection the Committee were informed that the trainees who were sent to Germany for training in running steel plants were not actually allowed to handle the machines.

15. *The Committee are unable to appreciate as to why Hindustan Steel Limited did not consider it necessary to secure the services of suitable German technicians for running these shops in the initial stages when they were aware that the L.D. process was a new technique adopted in India and the Indian trainees did not acquire any experience of actually handling such machines. It is not as though there were no foreign technicians in Rourkela because even in 1960 there were 72 German and Austrian Engineers employed at the Plant on other jobs. While the Committee appreciate the endeavour to entrust the running of L.D. convertors to Indian Engineers, they regret to observe that it should have taken Hindustan Steel Limited about 1 year to realise that the Indian technicians were not fully capable of running these shops and to arrange for the services of German technicians. Evidently the failure of the management to take timely action in this regard resulted in avoidable loss of production.*

B. Pipe Plant

16. A plant for the production of steel pipes by the electric resistance welding process was established at Rourkela as an adjunct to the steel plant at an estimated cost of Rs. 3.78 crores. The decision to set up the plant was taken in anticipation of the demand for line pipes from the Indian Oil Industry without any detailed assessment of the requirements.

Plant working much below rated capacity.

17. The capacity of the plant is 10,000—15,000 tonnes of welded pipes per month (*i.e.* 1,20,000 to 1,80,000 tonnes per annum) depending on the size of the pipes. As against this, the actual production of pipes was, however, only 27,811 and 28,238 tonnes (about 25% of the rated capacity) during 1962-63 and 1963-64 respectively. The failure to increase the production of pipes is stated to be on account of fluctuating demand for the pipes. The Committee, however, note that large quantities of various types of large diameter pipes were imported during this period for the oil industry.

Import of Pipes.

18. In this connection it came to the notice of the Committee that 45,000 tonnes of 12" pipes were imported from Japan by the Indian Refineries Limited for the Haldia-Barauni-Kanpur pipeline between October, 1963 and June, 1964. Explaining the reasons for the import, it was stated by the Indian Oil Corporation that there was a certain fixed programme for the laying of these pipe-lines. After assessing the capacity of Rourkela Plant with reference to past production and the requirement of pipes for other pipelines, the department of Iron and Steel agreed to the import of 45,000 tonnes of pipes from Japan and to place an order for 15,000 tonnes of pipes on Rourkela Steel Plant for this project.

Failure to supply Pipes according to delivery schedule.

It was also admitted during evidence by the Secretary of the Ministry of Steel & Mines that Rourkela had repeatedly failed to supply pipes according to the promise made. The rate of delivery hardly exceeded 2,000 tonnes against a promise of 4,000 tonnes per month.

Non-receipt of Orders in time.

19. Regarding coordination with the consumers, the Committee were informed by the Secretary of the Ministry of Steel & Mines that the Ministry of Petroleum and Chemicals had failed to intimate their requirement in respect of pipes to Hindustan Steel Limited sufficiently in advance so as to enable them to plan their production accordingly, although the necessity for it had been repeatedly emphasised on them. The Committee are informed that at present there is lack of orders with the pipe plant. On the basis of the orders in hand it was expected that it would be possible to work the pipe plant with one shift only till the middle of June, 1965.

20. To summarise, the working of the pipe plant discloses the following disquieting features:—

(i) the plant was set up in anticipation of demand for pipelines without any detailed assessment of demand.

(ii) it has been working to less than one-fourth of its rated capacity. The supplies of pipes from the plant have not hitherto been according to schedules agreed to necessitating large imports.

(iii) At present there is lack of orders. The orders in hand will keep the plant working till June, 1965 on one-shift basis and if the position does not improve soon it may necessitate the shutting down of the plant set up at a cost of Rs. 3·78 crores for an indefinite period.

(iv) There was lack of co-ordination between the Ministry of Petroleum & Chemicals, Indian Oil Corporation & O.N.G.C. on the one hand and the Ministry of Steel & Mines and Hindustan Steel Limited on the other.

Advance assessment of demand for pipes suggested.

This position is inexcusable and merits serious attention of the H.S.L. and the Government. As long as there is indigenous capacity for the production of any item its import should not normally be permitted. The Committee see no reasons as to why with proper planning it should not be possible for the Government Departments/Undertakings to assess their requirements of pipes well in time and to intimate them to the Rourkela Steel Plant in advance to enable the latter to plan their production programme accordingly. The Committee recommend that suitable instructions should be issued by Government to all concerned.

C. Fertilizer Plant

Working up to 50% of rated capacity.

21. The adoption of the L.D. process at Rourkela Steel Plant results in large quantities of nitrogen being released from the Oxygen Plant, for the profitable utilisation of which a Fertilizer Plant has been set up at a cost of about Rs. 23 crores. This Plant was commissioned in November, 1962. Although it has been designed to operate on four streams with an annual rated capacity of 5,80,000 tonnes of nitro-limestone, the plant was working on one stream only (¼th of the rated capacity) for the initial 1½ years and since September, 1964 on two streams. As a result the Plant suffered a loss of about Rs. 2·4 crores approximately in the year 1963-64.

Reasons.

22. The main reasons for working the plant much below its rated capacity is the non-availability of sufficient coke oven gas which could provide the required hydrogen for producing fertilizer. The plant has been designed to handle 70,000 cubic metres of gas per hour. However, the total gas that can be produced in the coke ovens would

be only 49,000 cubic metres and the net gas available for the fertilizer plant is only 46,000 cubic metres. Further, the actual hydrogen content in the gas being only about 52% as against the estimated 59%, the total hydrogen available for the fertilizer plant from the one million tonne steel plant will be about 23,000 cubic metres per hour as against the designed capacity of 40,000 cubic metres. Thus, the fertilizer plant can only work up to 58% of its rated capacity. It is estimated that even after the expansion of the Rourkela Steel Plant to 1·8 million tonne capacity, there will still be a shortage of about 8,500 cubic metres of hydrogen per hour limiting the production of the fertilizer plant to 80% of its rated capacity.

23. The Committee were informed during evidence that the assessment of the quantity and quality of gas available from the coke ovens was made by the then Technical Adviser of Hindustan Steel Limited (Dr. Klinar). There had since been deterioration in the quality of coal available. An Expert Committee was appointed in June, 1964 under the Chairmanship of Dr. Zaheer to look into the question of availability of gas and to suggest alternative sources of hydrogen for the fertilizer Plant. According to the Report of this Committee it would be necessary to instal additional equipment involving capital investment of Rs. 169 lakhs for steam reforming of Naphtha and conversion of the melting shop furnaces and Reheating furnaces in the steel plant to oil firing.

Productions of by-products also affected.

24. The inadequacy of coke oven gas also affected the production of Benzol which was only 44% and 58% of the rated capacity in 1963-64 and 1964-65 (April-December, 1964), respectively. The low production also increased the cost of production of Benzol products which in 1963-64 was much higher than the selling price. Further, because of low content of sulphur in the coke oven gas the Sulphuric Acid Plant set up at a cost of Rs. 17 lakhs in August, 1960 has not been commissioned so far.

Enquiry into reasons for delay in taking remedial measures suggested.

25. *The Committee regret to observe that a proper assessment of the quantity and quality of gas available from the coke ovens was not made before deciding the size of the various by-product plants based on this gas. After the first coke oven battery had been commissioned in September, 1958, and the quantity and quality of gas available became known, the capacities of the by-product plants, should have been reviewed. The Committee are concerned to note that no such action was taken. It is only in 1964, after more than 5 years, that the Ministry decided to set up an Expert Committee to look into this matter. It is evident that there has been no proper planning in the matter of the designing of the by-product plants. The result has been that (a) the sulphuric acid plant (cost Rs. 17 lakhs) remains idle, (b) the production at the Benzol Plant is only 56% of the rated capacity and (c) the Fertiliser*

Plant (cost Rs. 23 crores) is working only up to 50% of the rated capacity. Even after expansion of the Steel Plant to 1·8 million tonnes, the Fertiliser Plant will not reach the rated capacity unless additional equipment costing Rs. 169 lakhs is put up. This is a remarkably bad record of planning and the Committee recommend an investigation to fix responsibility.*

The Committee also recommend that expeditious action be taken to see that the Fertiliser and other by-products plants work to their rated capacity.

Changes in the Administration of Rourkela Fertilizer Plant

26. The Government of India transferred the management of the Rourkela Fertilizer Plant to the Fertilizer Corporation of India with effect from 1st April, 1963. It has, however, been transferred back to Hindustan Steel Limited with effect from 1st May, 1964. The original decision was stated to have been apparently taken on the consideration that Fertiliser Corporation had not only designed, engineered, procured and built a substantial part of the Rourkela Fertilizer Plant but it also had acquired experience to successfully run it. This decision was also in furtherance of Government's policy of central co-ordination of all the public sector fertilizer factories. The Corporation however, faced difficulties in running the Plant due to shortage of gas and power. The prices for the supply of feed stock and utilities *viz.*, coke oven gas, Nitrogen, power, etc. demanded by Hindustan Steel Limited were about six times of the rates in the Project Report and were absolutely uneconomical from the point of view of fertilizer production. The plant suffered a total loss of Rs. 2.30 crores (approximately) during 1963-64. As the terms and conditions about the transfer had not been settled earlier, differences and disputes arose between the two Undertakings. Government, transferred back the management of the Rourkela Fertilizer Plant to Hindustan Steel Limited with effect from 1st May, 1964. During the relevant period both the Fertilizer Corporation of India and Hindustan Steel Limited were under the same administrative ministry.

Changes in management of Fertilizer Plant commented.

27. *It is surprising that the management of the Fertilizer Plant was transferred to Fertilizer Corporation without settling the terms and conditions thereof which resulted in*

*At the time of factual verification the Ministry of Steel & Mines stated that a preliminary examination of the Zaheer Committee Report conducted by the Hindustan Steel Steel Limited discloses that the gas output estimated by the Zaheer Committee at the 1.8 million tonne stage is somewhat conservative and that, while no doubt balancing additions to the Fertilizer Plant would be necessary, it might not be to the extent suggested by the Zaheer Committee. Further, the balancing additions are required not only to correct hydrogen insufficiency, but to improve the performance of the carbon-di-oxide scrubbing plant and the gas purification plant, both of which were designed for a much lower proportion of impurities than has actually been the experience.

differences and disputes subsequently. Since both the Hindustan Steel Limited and the Fertilizer Corporation were under the same administrative ministry at that time, it should have been possible for the Ministry to settle the dispute. If there were genuine difficulties in the supply of gas, power, etc. in adequate quantities and at economical rates, the proper course was to remove these difficulties as transfer of the plant back to Hindustan Steel Limited was no solution of the real problem of the economical working of the plant. The Committee therefore, desire that the reasons for the actual rates of feed stock and utilities being much higher than the Project Report estimates should be analysed and steps taken to improve the working of the plant.

D. Quality of Products

Defects in quality.

28. The Quality of products at Rourkela has also not been satisfactory. There have been complaints from the customers about various defects in the plates and sheets, etc. Some of the sheets are stated to be brittle and some with crumpled surface. The plates are wavy and have laminations. It has also not been possible to maintain uniformity in quality. It was also brought to the notice of the Committee that there were delays and difficulties in obtaining steel of tested quality.

Observations of Solveen Commission.

A Commission of Experts (Solveen Commission) which examined the working of the Rourkela Steel Plant three times had also drawn attention to the defects in quality of Rourkela products in their successive Reports. In spite of their adverse comments in this regard in their 1st and 2nd Reports (May, 1962 and January, 1963), the position continued to remain unsatisfactory and the commission had to observe again in their 3rd Report (February, 1964) that the quality of the products was still not of normal standards.

Reasons for quality defects.

29. The Committee were informed that the defects referred to above were due to shortage of experienced staff, spares parts and difficulties in getting raw materials of required specifications, etc. The plant administration was now paying special attention to these problems and as a result there has been improvement in the quality of the products.

Low production of tested quality steel.

30. As regards low production of tested quality, the General Manager stated that it was mainly in the case of plates that the demand for the tested quality was more than the production thereof. Steps had been taken to increase the production of plates of tested quality and it was 65 per cent of the total production during 1963-64. The Committee were also informed that a scheme of pre-sale service had also been evolved to establish contacts with major consumers to discuss problems of mutual interest.

Rigid quality control suggested.

31. *It needs no emphasis that the products manufactured should suit the requirements of the consumers. The Committee would therefore, urge that there should be rigid quality control at every stage of production to ensure proper quality of the products manufactured.*

E. Cost of Production

Comparison with Project Report Estimate.

32. The following table shows the percentage increase in actual works cost of production in September, 1964 (when the production of ingot steel was 108 per cent of its rated capacity) as compared to the project estimates:

Name of Item	Percentage increase in works cost of production as compared to Project Report Estimates.
Steel Ingots (Open hearth)	41%
Steel Ingots (L.D.)	84%
Plates .	43%
H.R. Coils .	31%
C.R. Sheets.	18%
Tin Plates .	90%

It would thus be seen that inspite of the plant having reached the rated capacity the actual cost of production was much higher than the Project Report Estimates. The reasons for higher cost of production are stated to be:

(i) higher cost of raw materials like washed and unwashed coal, iron ore, limestone and tin etc.;

(ii) higher cost and lower iron content of Barsua Ore;

(iii) higher cost of services like electricity, gas, water and oxygen;

(iv) lower yields in slabs, plates, C.R. plates and C.R. Sheets.

(v) lower production in tin plates due to the working of 4 pots only as against 6 pots provided in the Project Report.

Cost of production higher than at other two steel plants.

33. The production of steel ingots at Rourkela is 25 per cent by open hearth process and 75 per cent by L.D. process. In 1963-64 the cost of production of steel ingots at Rourkela was higher than the other two steel plants of Hindustan Steel Limited *viz.* Bhilai and Durgapur. In

the case of steel ingots by open hearth process which is common to the three steel plants, the works cost was higher by more than Rs. 40 per tonne. This was stated to be due to higher cost of raw materials and higher operating charges. Even for steel ingots by L.D. process in which the operating cost and overheads are lower than in open hearth process, the works cost at Rourkela was higher by Rs. 19 per tonne due to higher cost of raw materials.

Comparison with other countries.

34. As regards comparison of cost of production with that in other countries, the Secretary of the Ministry admitted that judged from the selling prices of other countries, the cost of finished steel in India was substantially higher. The following table compares the Indian prices for some of the products manufactured by Rourkela Steel Plant with those in U.K. and Japan.

	India	U.K.	Japan
	Current prices (excluding excise duty element of Rs. 62/- included in the prices for the purpose of equalising freight	Home prices as on 19-1-1965	Home prices as on 15-1-1965
Medium Plates	640	615	529
H.R. Sheets	705	605	n.a.
C.R. Sheets	789	705	635

Need for concerted efforts to reduce cost of production.

35. *Considering that in the L.D. process of steel making adopted at Rourkela the operating cost and overheads are lower than in open hearth process at other steel plants, it is a matter of concern that the cost of production of steel should be higher at Rourkela. This calls for strict control over cost especially in respect of raw materials. The higher cost of production not only affects the financial working of the plant but has adverse repercussions on the production costs of the steel based industries whose products are unable to compete in the international market. The Committee therefore feel that there is need for concerted efforts on the part of plant management to reduce cost of production.*

Working out of standard cost suggested.

36. *The Committee also recommend that early steps be taken to work out the standard cost of production for various items and the actuals compared with the standard cost regularly with a view to taking remedial measures in cases where there are variations. The standard costs*

should also be reviewed periodically in view of technological developments and the expansion of the plant.

Coke rate

Factors affecting cost of production.

37. The most important factor affecting the cost of production is the consumption of fuel which accounts for nearly 30 per cent of manufacturing cost of ingot steel. The following table shows the consumption of coke which is the main item of fuel per tonne of production in the three Steel Plants of Hindustan Steel Limited in 1963-64 and in some other major steel producing countries in 1961:—

	Kg.
Rourkela	921
Durgapur	917
Bhilai	834
West Germany . . .	803
U.S.A.	708
U.S.S.R. (1960) . . .	723
Japan .	599*

It will thus be seen that the coke consumption rate in Rourkela was higher than that in other two Steel Plants of Hindustan Steel Limited as well as those in other countries.

Delay in adoption of new techniques of cost reduction commented.

38. *In this connection the Committee note that increasing use is being made of sinter in various countries to reduce the consumption of coke. Besides reduction in the coke consumption, this results in increased production, utilisation of fines and consequently overall reduction in the cost of production. The Committee find that in India also sinter has been used with advantage in TISCO, and at Bhilai Steel Plant since* 1961. *However, there had been delay in putting up such a plant at Rourkela which has only recently been commissioned. Considering that there has also been delay in setting up beneficiation plant at Barsua Mines as pointed in para* 46 *infra, the Committee feel that management has been slow in adopting new techniques of cost reduction. It is vital that the plant should economise on the use of fuel not only to conserve limited coking coal resources in the country but also to reduce its own cost of production. The Committee therefore desire that more attention should be paid to the raw materials preparation and application of new techniques.*

*In 1962 the coke rate in Japan decreased to 552 Kg. currently the rate is to be nearer 500 Kg.

Productivity

39. The labour productivity is another factor affecting cost of production. The table below shows the labour productivity in terms of ingot steel per year per man employed at Rourkela and the incidence of salaries and wages on the total cost of production in the three steel plants of Hindustan Steel Limited.

	Productivity tonnes/ man year	Percentage of salaries and wages to the total cost of production
	1963-64	1963-64
	(Tonnes)	
Rourkela . .	42·50	11·7%
Bhilai . . .	48	11·5%
Durgapur . .	52	9·3%

Thus among the three Steel Plants of Hindustan Steel Limited productivity in Rourkela was the lowest in 1963-64. Because of low productiity, the incidence of salaries and wages on the total cost of production was also the highest. It has been stated that during 1964-65 there had been some improvement in labour productivity.

40. In this connection the overall manning of the plants and the productivity of labour in U.S.S.R. and Czechoslovakia are of interest. Comparison with other countries.

Country/Plant	Annual ingot steel output (in tons)	Approx. total number of employees	Productivity (approx.) tonnes/ man-year.
U.S.S.R. :			
Stalino	10,14,000	14,000	72
Makeyevka	27,00,000	20,000	135
Axovastal	25,70,000	19,000	135
Zaporoz hsal . . .	32,00,000	19,000	135
Hounedorira . . .	15,00,000	18,000	83
Kremicovzi	12,65,000	9,860	128
CZECHOSLOVAKIA :			
Nhkg	20,00,000	23,000	877
Trinec	20,00,000	18,000	111

Thus it would be seen that the labour productivity of Rourkela was much lower than that in Czechoslovakia and USSR. The low productivity at Rourkela becomes all the more marked when it is considered that the labour productivity in USSR is estimated to be only 55 to 60 per cent of that of the U.S.A.

Scope for improvement in labour productivity.

41. *The Committee realise that while comparing labour productivity with plants in different countries, the size of the plant, the extent of mechanisation, the quality of raw materials, etc. have to be taken into account. Nevertheless they feel that there is considerable scope for improvement in labour productivity in a modern plant like the Rourkela Steel Plant. The Committee, therefore, desire that the various factors affecting the labour productivity should be analysed and remedial measures taken.*

IV

RAW MATERIALS

42. The main raw materials required for the manufacture of Iron & Steel are iron ore, coking coal, limestone, manganese ore, and delomite. The annual requirements of the raw materials for 1964-65 at Rourkela were as under:—

(In lakhs of tonnes

Iron Ore .	16·45
Coal . .	17·30
Limestone	5·68
Manganese ore	1·19
Dolomite . .	1·63

A. Iron Ore

Working of Barsua Mine.

43. According to the project Report for Rourkela Steel Plant, the entire requirements of Iron Ore for the plant were to be met from their mechanised mines at Barsua at a distance of about 80 kilometres from Rourkela. However, this mine has not been able to supply ore of the required specifications. According to the initial investigations of the deposits by the Indian Bureau of Mines and the Project Report, the mine was scheduled to produce ore having 60 per cent iron content on an average. But the actual iron content in the ore has generally turned out to be of the order of 58 per cent only. On the other hand, the Alumina/silica ratio in the ore has been higher than originally assessed and provided for in the Project Report. The result is that the plant has to blend the Barsua ore with the high grade Iron ore purchased through the State Trading Corporation, in the ratio of 75 per cent to 25 per cent. This is one of the factors which has contributed to high cost of production at Rourkela.

44. The Committee further note that the Barsua Mines have not been worked to their rated capacity. In 1963-64 they were worked to 71% of their capacity. The percentage of fines which were originally estimated to be 35% only, have increased to 55%. The cost of production at these mines, which was estimated at Rs. 8.97 per tonne in the project report, has also gone up to Rs. 18.71 in 1963-64.

The Committee desire that the reasons for the unsatisfactory working of the Barsua Mines should be investigated and efforts made to increase its production and reduce the cost of raising.

Delay in setting up Beneficiation Plant.

45. The Committee note that the National Metallurgical Laboratory, Jamshedpur submitted a Report in March, 1962 suggesting the beneficiation of Barsua ore to improve its quality. It was estimated that by reduction of alumina content in the ore, there would be a saving of about Rs. 25.52 per tonne in production cost of pig iron. The Beneficiation Plant has not been installed so far. The Chairman Hindustan Steel Limited stated during evidence that technical opinion was divided about the economic feasibility and the advantages of beneficiation. However, it has now been decided to go in for this plant.

46. *The Committee observe that in USSR most of the iron ore reserves have only 37% iron content on the average. But in order to increase blast furnace output and to decrease coke consumption, great attention is paid to the beneficiation and preparation of all ores. It has been estimated that the net decrease in cost of iron production is three to five times more than the additional cost involved in beneficiation. Inspite of experience of other countries and experiments conducted by National Metallurgical Laboratory on Barsua ore itself, there was protracted discussion about the suitability of such a plant. Now that it has been decided to go in for this plant, the Committee trust that steps would be taken to set up the plant without any further delay.*

B. Lime Stone

Defects in Purnapani Crushing & Screening Plant.

47. To meet the requirements of limestone, the Rourkela Steel Plant has set up its own quarry at Purnapani about 32 kilometres from Rourkela. The Crushing and Screening Plant there has not yet been commissioned, and the limestone is being raised manually. In addition the plant has to draw part of its requirements of limestone from Birmitrapur. The plant at Purnapani erected by M/s Jacks Gammon was to be handed over to Rourkela Steel Plant in September, 1962. Various defects were noticed during the trial runs of the plant and its capacity was also found short. The contractors who were responsible for these defects were asked to rectify them. They took more than two years to do so and it was only in December, 1964 that guarantee tests were carried out. The Report of the tests is still awaited.

Additional expenditure on purchase of limestone.

48. Due to the non-commissioning of the limestone plant, the Rourkela Steel Plant had to purchase from out side sources 1·09 lakhs and ·94 lakhs tonnes of limestone during 1962-63 and 1963-64 respectively. It was stated that as against the estimated cost of production from Purna-

pani crushing plant of Rs. 8.95 per tonne F.O.R. Purnapani, the limestone purchased from M/s Bisra Stone Lime Co. Ltd. was Rs. 10.51 per tonne F.O.R. Birmitrapur.

49. *The Committee regret to note that it has taken the suppliers more than two years to rectify the defects in the Purnapani Crushing and Screening Plant. In the meantime limestone had to be raised manually resulting in lower output and higher cost of production. Besides, limestone had to be procured from other sources involving additional expenditure. The Committee trust that the plant would now be commissioned without any further delay and compensation realised from the contractors.* Delay in Commissioning regretted.

C. Inventory Control

50. The total value of inventories—raw materials, stores and spare parts, finished and semi-finished products during the last 3 years was as follows: High stocks of stores & spares.

(Rs. in millions)

	1961-62		1962-63		1963-64	
	Value	Percentage of consumption/ sale	Value	Percentage of consumption/ sale	Value	Percentage of consumption/ sale
	Rs.		Rs.		Rs.	
Raw Materials	15·12	21·63	16·22	12·92	20·97	13·9
Stores & Spare parts	44·37	108·94	112·88	209·35	177·13	248·15
Finished & semi-finished Products	76·11	55·61	115·29	37·09	82·46	17·75
	135·68		244·39		280·56	

It will be seen that the value of inventories has been rising from year to year. The closing stock of raw materials and finished and semi-finished products as on

31-3-1964 represented about 2 months consumption/sale but the closing stock of stores and spares amounted to about 30 months consumption.

:Spares.

51. As regards the high stock of spare parts which amounted to Rs. 91 million on 31-3-1964 as against the consumption of Rs. 34 millions during the year, it was explained during evidence that a large percentage of the stock of spares was of "insurance spares" *i.e.* spares which have to be imported from other countries. It takes a long time to procure these spares from abroad and therefore, they had to be stocked in sufficient quantities to take care of unforeseen breakdowns.

Absence of proper Catalogues etc. of spares.

52. The Committee, however, note that there had been various procedural and organisational deficiencies in the procurement and storage of spares. There are no proper catalogues, nomenclature and vocabulary of spares. Further as pointed out in the Report of Solveen Commission, the spares and replacement stores are being stocked plant wise. The result is that even parts which are common to different plants are being stocked at each of the plants resulting in excessive procurement, utilisation of more storage space and heavy accumulation of spares.

Delay in Procurement.

53. There has also been delay in the procurement of spares. In this connection the Solveen Commission observed as follows:

> "The official channels through which spare parts must be procured is much too complicated and cannot be controlled by the respective departments. It has been found that urgent requirements were seriously delayed by offices incapable of judging neither the necessity nor the urgency of procurement. Reminders of the different plant sections were not attended to. These abnormal conditions have to result in serious impediment of production. At present the period from the date an item is needed and ordered until the delivery of such an item is estimated in some cases as much as 24 to 36 months."

Failure to build up purchase organisation.

54. *It is thus evident that the procedure and arrangements for the procurement and stocking of spares leaves much to be desired. It has resulted in the accumulation of heavy inventories and blocking of capital thereon apart from unnecessary expenditure on their care and maintenance. On the other hand there has been shortage of certain items of spares which have hampered repair work and affected production. As referred to in para 55 infra avoidable expenditure had to be incurred on airlifting of spares in some cases. All this happened on account of failure to build up a purchase organisation and*

to lay down clear cut procedure for the procurement and stocking of spares.

A cell is stated to have now been formed under Chief Superintendent (Engineering Services) to prepare catalogues nomenclature and vocabulary of spare parts. They have also taken over the function of scrutinising the indents for spares originating from the various maintenance units. The Committee trust that with the setting up of this cell there would be better control over the procurement and stocking of spares.

55. The expenditure incurred in foreign exchange on the airlifting of spare parts during the years 1961-62 to 1963-64 was as follows:— Air lifting of spares.

1961-62	Rs. 3·81* Lakhs*	(This included airfreight for certain equipment also)
1962-63	Rs. 3·05 Lakhs	
1963-64	Rs. 1·75 Lakhs	

56. A specific instance of extra-expenditure of Rs. 1,38,660 in airlifting of spares, pointed out in para XII (4) of the Audit Report (Commercial), 1964 is given below:—

"In March, 1959 the consultants of the Rourkela Steel Plant recommended that two additional Wobblers be purchased and kept in stock for the Blooming and Slabbing Mill. The suppliers (who were also the contractors for supply, erection and commissioning of the Blooming and Slabbing Mill) had sent their quotations in May, 1959 but the Project Authorities asked for and obtained details regarding delivery period, terms of payments only in January, 1960. The actual order was placed still later on 16th July, 1960 after obtaining the sanction of the Committee of Directors and release of foreign exchange by the Ministry. The supply was to be completed within 6—8 months.

The suppliers, however, defaulted, but the delay in supply was not pointed out to them till 6th December, 1961, when the Blooming and Slabbing Mill broke down and the two Wobblers costing Rs. 59,000 had to be airlifted at an extra cost of Rs. 1,38,660 (being the difference between air-freight of Rs. 1,47,250 and sea-freight of Rs. 8,590). Out of this a sum of Rs. 1770 (3 per cent of the contract value) was deducted from the bill of the suppliers as plenty but it was not accepted by them.

Investigation into reasons for heavy expenditure on airlifting suggested.

57. *Such heavy expenditure on airlifting indicates lack of vigilance and proper planning on the part of management. The Committee recommend that the reasons therefor may be investigated and responsibility fixed.*

Delay in release of foreign exchange.

58. One of the difficulties in procuring spares in time was stated to be the delay in release of foreign exchange. It has been pointed out that inspite of the half yearly sanctioning of foreign exchange budget, which represent the limits up to which commitments may be allowed to be entered into, specific sanction of the Deptt. of Economic Affairs is required to be obtained in each case before the project actually enters into foreign exchange commitments. The only exception to this is where a certain amount of foreign exchange is released as a "blanket" licence. It has been suggested by Hindustan Steel Ltd. that it would be helpful if after the foreign exchange budget is sanctioned, the project is left free to incur expenditure without further reference to Government. This is stated to be the practice with the steel plants in the Private Sector. The Committee were informed by the representative of the Ministry of Finance that this matter was under consideration. *The Committee desire that the decision in this regard should be expedited. In any event, procedure should be simplified so that there is no delay in the release of foreign exchange.*

Stock of Stores.

59. The Committee find that even in case of indigenous stores the value of stock was Rs. 60 million in 1963-64. This is equivalent to 14 months' consumption during the year. There is absence of proper cataloguing of stores and fixation of minimum and maximum limits for stocking them. Although the job was taken up by the stores department about two years ago, only 9, out of 39 groups of stores have been catalogued so far.

60. In this connection the Committee note that as early as January 1962, the Committee on Plan Projects examined the stores position of Rourkela and found that the stock of stores was heavy and much in excess of current requirements. They also made various suggestions for bringing down these stores and felt that if these suggestions were implemented the stock of regular use 'A' items (those few major ones that tie up most of the inventory investment) could be kept down to 1 to 3 months supply while those of other items may fluctuate between 3 to 9 months. It was admitted by the General Manager that the stock of stores should not be more than 6 months' consumption as against the present stock which represented more than 14 months' consumption.

Reduction of inventories suggested.

61. *The Committee are concerned to note that despite the recommendations of the Committee on Plan Projects, the position about the stock of stores is not satisfactory.*

Excessive inventories not only tie up capital but also cost a great deal to carry them by way of storage, staff, deterioration, interest charges. The Committee recommend that effective steps should be taken for the reduction of inventories. .. ..

62. *The Committee note that the plant has not yet prepared any stores manual. Steps should be taken to prepare such a manual at an early date. The Committee feel that it would be desirable to have a standard stores manual for the Public Sector steel plants.*

Need of Standard Stores Manual.

V

TRANSPORT

Non-availability of suitable wagons.

63. The great bulk of raw materials used in the production of iron & steel, and the movement of semi-finished and finished products require adequate and well-organised internal and external transport arrangements. The Committee were informed that while there had been no difficulty with regard to movement of finished material, in case of raw materials there has been occasional difficulty in getting wagons of suitable type. For example the plant is planned for self discharging wagons but right from the inception it had to carry on with non-self-discharging type of wagons for coal.

64. The Committee would invite attention to the following extracts from a letter received by the H.S.L. from the Director, Traffic (Transportation) Railway Board in March, 1955 itself:

> "It will be appreciated that, unlike general service stock, hopper wagons which are special type of stock do not lend themselves to the most economical utilisation mainly because hopper wagons are not suitable for general traffic and are therefore liable to remain unutilised in one direction. Further, a hopper wagon is more costly than the ordinary type of stock. In the circumstances, there is no question that the use of hopper wagons should be kept down to the very minimum. It is, therefore, regretted that the request for the provision of hopper wagons for the movement of limestone and coal cannot be acceded to. Particularly in the case of Rourkela Steel Plant, as the arrangements for its construction are still under way, it should not be difficult to provide for the acceptance of limestone and coal traffic in ordinary four-wheeler general service stock, both open and covered; the percentage of covered will, of course, be comparatively much smaller. Hopper wagons may, however, be used for this kind of traffic also only when such use is found advantageous to minimise the empty haulage of hopper wagons which have in any case to be used mainly for movement of iron ore."

Failure to provide tipplers commented.

65. *The Committee fail to understand as to how inspite of the fact that the Railway Board had expressed their inability to supply self discharging wagons for the movement of coal in the initial stages of construction of Rour-*

kela Steel Plant, the Hindustan Steel Ltd., did not consider it necessary to provide tipplers for unloading the wagons. The failure to do so resulted in delays in the clearance of wagons which not only affected adversely the production programme but also resulted in payment of heavy demurrage charges. The Committee were assured that provision for tipplers has been made in the expansion programme of Rourkela Steel Plant. They trust that this would be kept in mind to avoid similar situations in the new steel plants.

Demurrage Charges

66. The following was the amount of demurrage charges billed by the Railways on the Rourkela Steel Plant during the years 1960-61 to 1963-64:—

	Rs. in lakhs
1960-61	19·26
1961-62	29·37
1962-63	27·00
1963-64	22·83

Besides demurrage charges the plant had to pay about Rs. 6·88 lakhs till 31st December, 1963 for damages/deficiencies to the wagons.

67. The following reasons were stated to be responsible for the heavy demurrage charges:

1. Transit time between Bondamunda exchange yard and the Rourkela reception yard has not been taken into account while fixing the free-time.
2. Inadequate free-time on certain types of wagons.
3. Lack of facilities for outward booking round-the-clock.
4. Delay in installation and calibration of weigh-bridges.
5. Inadequacy of loco power for shunting and difficulties due to different types of couplings.
6. Occasional difficulties for movement due to newly formed tracks sinking during monsoon.
7. Shortage of skilled personnel.
8. Receipt of inward raw material in excess of the capacity.

9. Delay in inter-change due to single line working prior to April, 1963.

10. Inclusion of adjustment transhipment loads and sick wagons in the demurrage calculations.

11. Inadequate handling facilities and absence of lights in the storage yard.

12. Additional detentions to outward loads for completion of rakes.

68. The Committee were informed that the matter was constantly reviewed and taken up with the Railways at various levels. As a result of various measures taken to overcome these difficulties the demurrage charges had come down. During 1963-64 in spite of increase in volume of traffic, the demucrrage charges were lower as compared to 1962-63.

Need to reduce demurrage charges stressed.

69. *While the Committee note the reduction in demurrage charges, they cannot help observing that they are still very high. They trust the matter would receive earnest attention of the plant management and steps taken to reduce the demurrage charges.*

VI

PLANT & MACHINERY

A. Breakdowns

70. There had been a number of breakdowns in various units of the Rourkela Steel Plant. The details of these breakdowns and the reasons therefor as furnished to the Committee are at Appendix II.

Breakdowns in Blast Furnaces.

71. It will be seen therefrom that there had been two breakdowns in each of the three blast furnaces, four in slabbing Mill and five in Cold Rolling Mill. The two breakdowns in the blast furnace I occurred in 1961 *i.e.* in less than three years of its commissioning. According to the Report of an Enquiry Committee, these breakdowns were due to bad worksmanship of the refractory lining. The blast furnace was commissioned after the consultants had certified that the job had been done properly and that it may be commissioned. No responsibility could, however, be fixed for the breakdowns either on the consultants or on the contractor. According to the Chairman, Hindustan Steel Ltd., the responsibility of the consultants was to get it commissioned. After commissioning, the proper working of the equipment was the responsibility of the contractor. As the breakdown occurred after the guarantee period, the contractor also could not be held responsible.

Of the nine breakdowns in the Slabbing and the Cold Rolling Mills some were stated to be due to defective design of the machinery.

Responsibility of Consultants for defective designs.

72. *The Committee are unable to appreciate as to how the consultants accepted defective construction of refractory lining of the blast furnace and permitted installation of machines with defective design in the Slabbing and the Cold Rolling Mills. It is unfortunate that no responsibility could be fixed on the Consultants for these defects although they were responsible for the proper commissioning of the plant. In view of this, the Committee suggest that Government should make suitable provisions in future agreements with the Consultants so as to fix their liability for defective designs and bad workmanship.*

B. Repairs & Maintenance

Inadequate repairs and maintenance facilities.

73. The Committee find that one of the reasons for frequent breakdowns was the lack of adequate repairs and maintenance facilities at Rourkela Steel Plant. In this connection they would invite attention to the following observations contained in the Report of the Solveen Commission.

> "The repair gangs in the individual plant sections are not adequately staffed. It is obvious that the

practical experience, the necessary tools and spare and repair parts are missing".

Further the maintenance units were working under the administrative and technical control of the production units. This affected maintenance schedules because in their anxiety to step up production, even necessary repairs including those of precautionary nature were postponed until it was too late and the damage became still greater.

Effect of poor maintenance.

74. Because of inadequacy and the poor maintenance of Iron & Slag ladles the blast furnaces could not be tapped at the right time and were often not emptied properly. An uncontrollable quantity of Iron and Slag was retained in the furnaces causing severe hydrogen explosions resulting in heavy damage to the furance and the lives of men were also endangered. The maintenance of the mechanical units was not up to the required standards. Due to frequent mechanical and electrical breakdowns, blast furnace I had to be checked from time to time, which resulted in irregular production and pig iron of non-uniform analysis thereby affecting the quality of steel. Thus inadequate repairs and maintenance affected both the quantity and the quality of production.

Maintenance of rolling stock.

75. The maintenance of rolling stock taken over from the Railways had also been extremely bad. According to the Solveen Commission out of 500 open cars half of them could only be considered as scrap.

Centralisation of maintenance facilities.

76. The Committee were informed that steps had been taken to increase the capacity of individual repair shops attached to each unit as well as of the Central Repair Shop. The maintenance work has also been centralised under the Chief Superintendent Engineering Services who is directly under the General Superintendent. However, centralisation is not yet complete and the final organisation of Engineering Services departments was under consideration.

Need for carrying out repairs according to schedule stressed.

77. *The availability of equipment for continuous production depends to a large extent on the attention given to its maintenance. It is therefore essential that repairs and maintenance facilities should be adequate, properly planned and carried out according to schedule. It is regrettable that the importance of proper maintenance of plant and machinery was not fully realised by the management in the past. The Committee trust that with the reorganisation of maintenance facilities, independent of production units, greater attention will be paid to maintenance.*

C. Drawings

78. Besides inadequate maintenance facilities, it was stated that the repair work was hampered because of lack of drawings of the parts of the plant and machinery. As per the contract, the contractors were to provide detailed drawings only for the parts which were fast moving and liable to breakage. The plant has now set up a cell to make the necessary drawings. However it will take some time before the work is completed. **Lack of drawings.**

79. *The Committee observe that in some cases even the drawings which were furnished by the suppliers were not kept in proper custody with the result that when they were wanted it was difficult to trace them. This resulted in delay in the procurement of spares and the execution of repairs. The Committee trust that the collection and preparation of such drawings by the Central Spare Parts Cell will be expedited and there would be proper custody of such drawings in future.* **Proper custody of drawings.**

As the preparation of such drawings takes a long time, Government may also examine the possibility of obtaining all necessary drawings including constructional designs, if possible from the manufacturers at the time of entering into agreement for the supply of plant and machinery. **Procurement of drawings from suppliers.**

VII

PERSONNEL

A. General Managers

Frequent changes.

80. The plant organisation at Rourkela is headed by a General Manager. There had been frequent changes in the incumbents of the post of General Manager at Rourkela. Since the inception of the plant in 1954, there have been seven General Managers and during the last four years there were as many as four. The present General Manager of the plant, who belongs to I.A.S. service was appointed in January, 1964. A statement showing the incumbents to this posts and the period for which each of them held this post are given in Appendix III.

Reasons.

81. The Secretary of the Ministry stated during evidence that the changes in the incumbents of the post of General Manager were due to various reasons. The first General Manager retired after about 2½ years. The next incumbent did not prove successful. Some General Managers held the charge for short periods as a stop-gap arrangement till a suitable person was found.

Proper Selection and Minimum tenure suggested.

82. *The Committee feel that many of the shortcomings in the working of the Rourkela Plant were due to frequent changes in the top management. In a complex project like a steel plant it takes time to understand its problems, formulate plans and programme to improve its working and to execute them. It is unfortunate that during the crucial formative years, the Rourkela Steel Plant did not have the continued and effective guidance of one General Manager. The Committee would urge that utmost care should be taken to select the right type of man for this post and a minimum tenure of four to five years fixed for it.* .. ..

Qualifications of General Manager.

83. As regards the desirable qualifications of a General Manager, the Chairman, Hindustan Steel Ltd. stated that if there was a technical man who was also a good administrator he would be the ideal choice. But in a complex industry like a steel plant, it was difficult to get technical man having experience of all the units of a steel plant. Further, the General Manager in a steel plant has under him a General Superintendent who is a technical man. Therefore, it was better to get an experienced man from the general side with sufficient technical background. He felt that, given proper training a man transferred from the Secretariat to a public undertaking would also serve the purpose.

84. *The Committee feel that for a large organisation like Hindustan Steel Ltd., which has been in existence for over a decade now, it should be possible to find suitable personnel from within the industry for manning the top posts. They, therefore, recommend that a systematic plan should be prepared to train and develop managerial talent for manning these posts in the existing and future Steel Plants.*

B. Staff

Excessive Staff.

85. As per project report, the requirements of staff for the million tonne plant was estimated at 6,800. However, the actual staff employed by the plant has been much in excess of that provided in the project report as shown below:—

Project Report Estimate .	6,800
Actual Staff Strength	
at the end of 1961. . .	16,261
at the end of 1962	19,650
at the end of 1963 . .	21,361
at the end of 1964 . .	24,000 (approx.)

86. Besides staff on regular strength, 663 skilled and 618 semi-skilled workers were on an average employed on muster roll for temporary construction work.

87. It was stated that the Project Report did not envisage the requirements of staff for a number of departments, the main being pipe plant, Repair Shops, Medical and Public Health, Offices under Town Administration, Mines & Quarries, construction, etc. However, even if the staff employed in such departments is excluded, the actual staff employed is still more than double of that provided in the Project Report as shown below:—

Category of Personnel	As contemplated in the P.R.	Actual staff as on 31-8-64
Technical Executives . . .	475	719
Highly skilled Workers	1798	1741
Chargemen, skilled workers and operational personnel	1815	6156
Semi-skilled workers and unskilled workers	2045	5243
	6133	13859

88. *As shown in para 85 above in spite of the fact that even in 1961 the actual staff streng'h was 16,261 as against the project estimate of 6,800 no efforts appear to have been made to review the staff strength and restrict the actual employment according to requirements. The result has been that the staff continued to increase and the present strength is about 24,000.*

Proper work study suggested.

89. During evidence it was admitted both by the Chairman, Hindustan Steel Ltd. and the Secretary of the Ministry that the Rourkela Steel Plant was overstaffed. It was proposed to utilise the surplus staff in the expansion programme.

90. *The Committee note that in their 33rd Report, which was presented to Lok Sabha in March, 1959, the Estimates Committee suggested that a job analysis might be carried out and staff strength determined on a scientific basis. They regret to observe that no systematic study has been made so far. Rough assessment for certain categories of staff which is stated to have been made by the management can hardly serve the purpose. The Committee consider that to solve the problem of over-staffing, a scientific assessment of staff is essential. They, therefore, recommend that immediate steps should be taken to carry out such a study to determine the extent of surplus staff. Such staff could then be absorbed in the expansion programme of the plant or employed in the other Steel Plants.*

C. Helpers

91. One of the reasons for over-staffing at the steel plants is the practice of providing helpers to the skilled workers. The number of helpers in the Rourkela as compared to those in Durgapur and Bhillai Steel Plants is shown below:--

	Wage Bill	
	No. of Persons	(Rs. in lakhs)
Rourkela	2,500	40·80
Durgapur	1,080	14·91
Bhilai	707	11·80

92. It has been stated that the figures relating to Durgapur and Bhilai are in respect of helpers provided to maintenance and service departments only, whereas in the case

of Rourkela these figures pertain to both Operational and Maintenance Departments.

93. In evidence the Secretary of the Ministry stated that this was a bad legacy. In the new steel plants attempts would be made not to have helpers as far as possible.

94. *The Committee note that the system of providing helpers is generally followed by all the Public Undertakings. They understand that such a system does not exist in industrialised countries. It leads to overmanning and consequently higher cost of production. The Committee are glad to be assured that helpers would not be provided in future steel plants. Thay recommend that in the existing plants efforts should be made to reduce their number and the existing unskilled helpers should be trained for holding skilled jobs.*

Training of helpers for skilled jobs suggested.

D. Absenteeism

95. The Committee understand that the percentage of absenteeism at Rourkela is on the high side. In this connection, the Solveen Commission has observed as follows:

Observations of Solveen Commission.

> "The abnormally high percentage of absenteeism which according to data of the Energy and Economy Department temporarily reached to 20 to 25 per cent of the full strength in important departments is disquieting. Such conditions are not apt to secure a continuous smelting mill operations and call for a review of shop regulations and personnel policy."

96. *Since experienced men are so short, it would pay to bring down absenteeism by all means. It would be desirable to provide inducements and rewards for high attendance. The Committee trust that effective steps would be taken to reduce the incidence of absenteeism.*

Need to bring down absenteeism.

E. Overtime

97. Although the plant was admitted to be over-staffed, it was found that overtime allowance had to be paid to the employees of Rourkela Steel Plant during the last three years as given below:—

1961-62 . . .	Rs. 5·86	lakhs
1962-63	Rs. 24·90	,,
1963-64 .	Rs. 24·78	,,

98. The Secretary of the Ministry explained during evidence that while there was excessive staff in certain categories like clerical staff etc. the plant was still short of skilled workers and that for operational reasons overtime was paid to the skilled workers.

Reduction in the incidence of overtime suggested.

99. *The Committee are surprised to note that in spite of the fact that the actual strength in all the categories was much in excess of that provided in the Project Report the plant was still short of skilled workers. It shows that the method of recruitment and training of workers has not been satisfactory. Needless to say that the payments of such large amount of overtime on a regular basis not only increase the cost of the end product but also lower the efficiency and morale of the staff. The Committee, therefore, desire that effective measures should be taken immediately to minimise the incidence of such payments.*

F. Working hours for Ministerial (Office) Staff

100. The working hours per week in respect of office and other staff are not uniform in the three steel plants of Hindustan Steel Limited as shown below:—

Bhilai	39	hours
Durgapur . .	38½	,,
Rourkela	36	,,-

Uniformity in working conditions suggested.

101. *It is surprising that even in such matters as working hours there is no uniformity in the three steel plants of the same undertaking* i.e., *Hindustan Steel Ltd. Such disparities lead to discontentment among the workers. The Committee consider it desirable to have uniformity in such matters in the three steel plants.*

G. Training

102. The agreement with the consultants, M/s. I.G.K.D., provided for the training of the personnel for this plant in Germany. Some Engineers were also trained in U.S.A., Canada, Australia, etc. under various Technical Aid Programmes. The total number of persons trained abroad under these schemes was 590. Training was also imparted by Hindustan Steel Ltd. in the technical institute set up at the steel plant to 2686 persons. The expenditure incurred on a trainee in India and abroad was about Rs. 11,000 and Rs. 21,000 respectively.

Posting of trained engineers on jobs other than those for which trained.

103. *The Committee note in this connection that 62 of these trained engineers were posted on jobs other than those for which they were trained. For example persons trained for operation of coke ovens and steel melting shops were posted to purchase and sales departments. Whatever the operational necessity the posting of a trained person on a job other than that for which he has been trained, is a waste of the training given at some cost. This would also appear to indicate that training of personnel is not co-ordinated with the actual needs. The Committee trust that in future proper assessment of requirements of trained personnel for various jobs would be made before arranging for their training.*

H. Industrial Relations

Strikes and Lockouts.

104. Right from 1960 there had been strikes and lock-outs at Rourkela. The details about these are at Appendix IV.

Shop discipline not satisfactory.

105. Besides strike, etc. the shop discipline at Rourkela has also not been satisfactory. The Solveen Commission in First and Second Reports observed as follows:

> "The shop discipline in the plant is unsatisfactory. The Commission satisfied itself that the operating staff often stands out in groups and keeps away from work. Obviously this situation should be remedied.
>
> * * * * *
>
> It was found, for instance, that the sequence of production was held up because crane-drivers stopped for protracted tea breaks when they felt like it although there was no body else to carry on."

Absence of recognised union.

106. The reasons for the unsatisfactory industrial relations were stated to be the absence of a representative and recognised union and inter-union rivalry. Each union had been putting forward demands higher than the other. The result has been that different unions have reacted differently to the management orders and the enforcement of discipline at the shop level became difficult.

107. In evidence the delay in the recognition of the workers union was stated to be due to the delay in receiving the recommendations from the State Labour Commissioner. It was only early in 1964 that the recommendations of the State Labour Commissioner were received and immediately thereafter the workers union was recognised. Consequent on the recognition of the workers union, the labour relations and shop discipline have gradually improved.

Review of procedure for recognition of workers' union suggested.

108. *Considering that delays in the recognition of workers union lead to labour troubles the Committee desire that Government should examine the existing procedure for according recognition to the Unions with a view to expediting it.*

Violation of Industrial labours laws.

109. *The Committee were informed that in 1963 the Orissa State Implementation and Evaluation Committee reported certain violations of Industrial Labour Laws by the Rourkela Steel Plant. The General Manager of the plant admitted during evidence that there had been some instances but assured the Committee that necessary action had been taken to ensure against the recurrence of such breaches. Since then here had been no complaitns in this regard either from the State Labour Commissioner or the State Implementation and Evaluation Committee.*

Labour Laws should be complied with by all Industrial Undertakings whether in the public or private sector. This is all the more necessary in the case of Public Undertakings which are expected to be model employers. It is necessary for the efficient and economic working of an undertaking that there should be complete understanding and cooperation between labour and management. While the management should comply with all Statutory obligations and provide to the workers amenities and good working conditions, it is also the duty of the workers and their unions to cooperate with the management in the maximisation of production and the maintenance of industrial peace. To ensure continuously good industrial relations the Committee would suggest that the management and the workers should enter into long term agreement for settling all their disputes by reference to arbitration rather than by resort to strikes, lockouts or Courts of Law.

Transport Arrangement for Workers

Transport arrangement different in three steel plants.

110. The Rourkela Steel Plant provides transportation facilities to officers on pavment. while the workers use the buses provided by the State Government. In the latter case the management pays subsidy ranging from Rs. 6 to Rs. 11 depending upon the pay of the workers. Departmental buses are however provided for the transport of all employees at Bhilai & Durgapur.

Reasons.

111. Explaining the reasons for following a different practice at Rourkela in this regard it was stated during evidence that departmental buses were initially provided for the workers in Rourkela. But when the management started charging nominal fare from the workers, the State Government treated them as commercial vehicles plying for hire and demanded taxes. This would have rendered the running of buses uneconomical. The Rourkela Steel Plant therefore agreed with the proposal of the State

Government to take over the bus service. Immediately after taking over the bus service, the State Government raised the fare. Ultimately the management had to bear the difference in the fare.

The Committee have been informed that some of the State buses were running late and this has resulted in loss of man hours and necessitated a grace period of 15 minutes to workers. The General Manager stated that the matter was under discussion with the State Government and if the problem was not solved satisfactorily, the management would be compelled to revert to departmental transport for workers.

Uniformity in facilities suggested.

112. *It is evident that the decision to provide State transport to the workers instead of departmental buses has not only resulted in payment of subsidy to the workers but also in heavy loss of man hours on account of 15 minutes grace period given to all the workers and consequent loss of production.* Prima facie *it would be better to provide departmental transport to the workers. The Committee desire that the matter should be examined urgently.*

VIII

FINANCIAL MATTERS

A. Capital Investment

Revision of Estimates:

113. The estimates of capital expenditure on Rourkela Steel Plant for one million tonne capacity have been revised from time to time as shown below:—

	(*Rs. in Crores*)
Original	128·00 (1955)
1st Revision	170·00 (1957)
2nd Revision	213·85 (1957)
3rd Revision	221:33 (1961)
4th Revision ..	230·48 (1963)

It will be noticed that the latest estimates show an increase of 80 per cent over the original estimates.

Reasons for revisions.

114. It was stated that these estimates were sanctioned by Government not at one time but in stages. In order to enter into collaboration agreement and to expedite the inviting of tenders, the first estimates were prepared mostly at Government level with the help of foreign experts and collaborators and in consultation with Hindustan Steel Ltd. These covered the cost of plant and ancillary equipment only. The estimates for other items such as townships, mines and quarries, interest on capital, etc. were added to the original estimates later on by the plant management. The estimates had to be revised again as a result of increase in quantity of civil engineering work and increased cost of erection, increased expenditure on customs duties, escalation, etc.

115. The Committee note that the estimates for expansion of plant to 1·8 million tonne capacity have also shown an upward revision from Rs. 77·65 crores to Rs. 136:91 crores i.e. an increase of over 75 per cent) for similar reasons like non-inclusion of provision for township, ore mines and quarries, etc.

Preparation of comprehensive & realistic estimates suggested.

116. *The Committee do not approve of the practice of obtaining the approval of the Cabinet and Parliament to piecemeal and incomplete estimates of a project as they do not give a true picture of the total financial outlay thereon. They consider that projects, particularly those involving heavy capital outlay should be undertaken on*

the basis of complete estimates which should not only indicate the cost of plant and machinery but also cost of other items like townships, ore mines, quarries, ancillaries, etc. The Committee hope that this will be ensured in future and there would not be wide variations between the original estimates and final expenditure.

117. *In this connection the Committee find that normally the original estimates of the projects are only approved by the Cabinet and the subsequent revisions are sanctioned by the administrative Ministry concerned. In the opinion of the Committee it is desirable that every substantial revision in the estimates should be specifically approved by Cabinet.*

Specific approval of substantial revisions by Cabinet recommended.

B. Financial Results

118. The table below gives year-wise the loss suffered by the Rourkela Steel Plant (including fertilizer plant):

Heavy losses suffered by the Plant.

(Rs. in crores)

Upto	1959-60	2·91
	1960-61	6·59
	1961-62	10·92
	1962-63	10·72
	1963-64	6·25
		37·39
Add net adjustment for prior years and commissioning expenditure of Fertiliser Plant written off		1·55
		38·94

Thus till 31st March, 1964, it has incurred a loss of Rs. 38·94 crores after taking into account interest and depreciation charges.

119. The reasons for the heavy losses suffered are stated to be:

Reasons.

(i) Intial difficulties in the operation of the plant like, breakdowns, lack of trained technical personnel, non-availability of sufficient wagons and consequential inability to work the plant to the rated capacity;

(ii) Inadequacy of the retention prices allowed to the steel plant till February, 1964 which did not cover adequately the costs, particularly higher depreciation and interest charges at Rourkela.

Comparison with other two steel plants.

120. The table below gives the loss suffered by the three Steel Plants of Hindustan Steel Ltd. till 1963-64:—

(Rs. in crores)

Rourkela	38·94
Durgapur	16·99
Bhilai	12·54

It will be noticed that losses suffered at Rourkela were higher than those at other two steel plants. *This has been attributed mainly to the higher depreciation and interest charges at Rourkela. In the opinion of the Committee these reasons alone can hardly justify the heavy losses suffered by Rourkela as flat products manufactured by it fetch higher price than the products of the other two plants.*

Working of the plant unsatisfactory

121. *The Committee realise that heavy industries like steel plants with high capital investment have long gestation periods. Nevertheless, the fact that even after 5 years of the commencement of production (the first blast furnace having been commissioned in February 1959) there was accumulated loss of Rs. 38·94 crores at Rourkela shows that the working of the plant has not been satisfactory. The Committee urge that the Plant Organisation should be geared to continuously work the plant to its rated capacity and effect economy in expenditure.*

C. Contribution to the Third Five Year Plan

122. The Third Plan envisaged that a surplus of Rs. 300 crores would be available from Public Undertakings as their contribution towards the internal resources for financing the Third Plan. Of this the three steel plants of Hindustan Steel Limited were expected to contribute a surplus of Rs. 111 crores. During evidence the Committee were informed that this provision was made without consulting the Hindustan Steel Limited. It was based on an expectation of 10 per cent return on capital and was not realistic one. The Committee find that in the case of Fertilizer Corporation also the assessment of estimated surplus by the Planning Commission had been made without consulting the Corporation.

123. *The Committee regret the manner in which the assessment of the surpluses from the Public Undertakings has been made for the Third Five Year Plan.* Ad hoc *assessment of surpluses is unfortunate as it raises hopes which cannot be fulfilled and exposes the Undertakings to public criticism. The Committee trust that while making provision in the Fourth and subsequent Plans the estimates of surpluses from Public Undertakings would be made on a realistic basis and in consultation with them.*

IX

SALES AND MARKETING

Transactions with a private firm

124. During November-December, 1963, the Oil and Natural Gas Commission purchased about 15:18 kms. pipes (approx. 452 tonnes) of 8" internal diameter in random lengths of 18' to 40' from a private firm of Calcutta instead of purchasing them direct from the Hindustan Steel Ltd., the manufacturer of these pipes. It was explained that in response to open tenders both the private firm and the Hindustan Steel Ltd., had quoted the same rate *viz.* Rs. 1,175 per tonne. Later on, as a result of negotiation the private firm agreed to reduce the price by Rs. 15/- per tonne whereas Hindustan Steel Limited did not agree to any such reduction. The order was therefore placed on the private firm. Sale of pipes to O.N.G.C.

125. The private firm had a standing contract with Rourkela Steel Plant for the supply of these pipes at a rate of Rs. 1175/- per tonne F.O.R. (the rate earlier quoted by them) and the firm, therefore, instructed Rourkela Steel Plant to supply these pipes to ONGC at Ankleshwar and Sibsagar. Thus, these pipes though contracted for by the private firm, were actually supplied by Rourkela Steel Plant direct.

126. The Committee enquired as to how the private firm was able to sell these pipes at rates lower than the price at which these were purchased by them from Hindustan Steel Limited. Neither the Chairman, Hindustan Steel Ltd. nor the General Manager of Rourkela Steel Plant was aware of the price at which the pipes were sold by the private firm. They, however, promised to look into this matter. In this context it has come to the notice of the Committee that the previous Sales Manager of Hindustan Steel Ltd. who was connected with this deal and was discharged from service after due enquiry by the Anti-corruption Department is now an employee of this firm.

127. The Committee understand that the Ministry have since decided to refer the case to the Central Bureau of Investigation for further inquiry. Inquiry by C.B.I.

128. *It is surprising that a Commercial Undertaking like Hindustan Steel Ltd., did not consider it necessary to investigate the reasons as to how a private firm was able to secure an order from another public undertaking for the pipes manufactured by them and for which they* Committee's observations.

had also tendered. It is only after giving evidence before the Committee that the Ministry of Steel & Mines have decided to refer the matter to the Central Bureau of Investigation. As the case is now under investigation the Committee do not wish to comment on its merits.

The Committee however feel that Public Undertakings should purchase their requirements directly from the manufacturing Public Undertakings rather than through private agencies. In this connection they would invite a reference to para 111 of their 5th report on O.N.G.C.

Other transactions with firms.

129. The Committee understand that the Rourkela Steel Plant had difficulties in other contracts also entered into with this firm. They were informed that in July, 1962 a contract was entered into by Hindustan Steel Ltd., with this firm for the sale of 11,000 tonnes of Commercial quality pipes. However out of the above quantity, only 4564 tonnes of pipes were lifted by the firm leaving a balance of 6436 tonnes, which, besides locking capital created problems of storage . The matter was also referred to arbitration. Later on, the Hindustan Steel Limited compromised with the firm. But even then they suffered a loss of interest on capital amounting to Rs. 3,43,090.

Grant or license for setting up electrolytic tin plates plant.

130. In spite of this experience the firm was granted a license by Government for setting up an electrolytic tin plates plant, which it is understood was a second hand one, purchased from an American firm. The application of the firm for the import of black plates for the production of the tin plates was also under consideration of the Government.

131. As regards the reasons for the firm being granted licence for this plant in spite of its dealings with Rourkela Steel Plant being not satisfactory, the Secretary of the Ministry stated that although it was bad on the part of the firm not to honour the contract, there was no formal or informal blacklisting of the firm.

132. *The Committee feel that in view of the fact that the above mentioned dealings between the firm and a Public Undertaking had not been satisfactory, the propriety of granting further licences to the firm needs to be examined.*

Export of Ingots and Slabs

133. In 1960, it was anticipated that the new steel plants of Hindustan Steel Ltd., would have substantial quantities of semifinished steel as there was a time lag between the commissioning of Steel melting shops and the rolling Mills. Negotiations were, therefore undertaken with certain firms for the export of these semis against which other

required categories of steel could be imported under barter contracts. Out of the total volume of transactions under these barter agreements, 67 per cent of the trade amounting to Rs. 4·72 crores was given to the firms belonging to the same group and family.

Change in conditions about Imports.

134. Normally, in the case of barter agreements, imports are made only on licences issued against foreign exchange actually generated and earned by the exporters. However, in this case it was felt by Government that if the imports were allowed only after the exports had taken place, the imports would be available after a considerable lapse of time when the urgent need for them might no longer be there and the Indian Steel Plants would have commenced producing those category of steel. Therefore, Government instructed the Iron and Steel controller in February 1960 to permit the import of steel in categories urgently required in the country even before the actual export of semis took place on the following conditions.

(a) on production of an irrevocable letter of credit assigned in favour of the exporter for the value of the entire export quantity;

(b) in case the exporter was not able to procure an irrevocable letter of credit for the entire quantity of export, then he should furnish an irrevocable bank guarantee equivalent to 15 per cent of the value of the import licence applied for. The guarantee was to be released only on actual export of the full quantity contracted for.

Accordingly, the Iron and Steel controller permitted pre-import of steel by the firms on their furnishing the necessary bank guarantees except in one case where even this condition was not insisted upon on the ground that the steel to be imported by the firm was meant to meet the urgent requirements of Hindustan Steel Ltd., itself.

Failure to Export ingots & slabs according to contracts.

135. Later on, it was found that availing of this concession substantial quantities of finished steel had been imported but exports to the full value contracted for had not been made. Therefore, in October 1960 Government instructed the Iron and Steel controller not to allow pre-import in future contracts under any circumstances. However, this condition was not insisted upon in the cases under consideration, as it is observed from the information furnished by the Ministry that even after the issue of above orders the imports by these firms were allowed to the extent of Rs. 1·49 crores.* The total value of imports made under these barter agreements amounted to Rs. 4·63 crores against which the value of exports was only Rs. 2·32 crores (50 per cent of the imports). There had been claims

*Excluding imports, if any, by a firm about which full information was not available as the relevant files are in the custody of Special Police Establishment,

and counter claims by the Hindustan Steel Ltd., and the parties and the cases were pending in arbitration/courts.

Dispute about delivery & price of imported steel.

136. There had also been disputes about the delivery of imported material and the prices charged therefor. In one instance, long drawn out dispute regarding price and its delivery arose between one of the importing firms and another party of Bombay (M/s Bharat Barrel and Drum Manufacturing Co.), to whom certain quantities of drum sheets imported had been allotted. The case has been taken to the courts and is at present *sub-judice.*

Reasons for non-fulfilment of export commitments.

137. As regards action taken against the firms for their failure to fulfil their export commitment, the Committee were informed that according to the explanation furnished by the firms, Hindustan Steel Ltd. had failed to deliver the material as per terms of the contracts. According to one firm the material supplied was also unsuitable in quality and some shipment had been rejected by the foreign buyer. During evidence it was stated however by the representatives of Hindustan Steel Ltd. that there were two types of contracts. One for tested ingots and slabs and the other for the stock 'as is where is'. In the latter case there was no guarantee that the material would be suitable for rolling.

138. The Committee were informed that the Ministry had now asked the Iron & Steel controller to go into each case carefully and to examine the extent of responsibility of both Hindustan Steel Ltd., and the firms in these cases.

Enquiry into lapses suggested.

139. *The Committee are not happy with the manner in which this matter has been dealt with. Having committed themselves to allow the import of finished steel without pre-export of ingots and slabs, it was expected of Government to watch the performance of the firms for some time and to stop further imports by them, if their performance about the export of ingots & slabs was not satisfactory. It is regrettable that even after the issue of orders by the Ministry in October 1960 not to allow pre-imports these firms were allowed to import steel to the extent of Rs. 1.49 crores without fulfilling their export commitments. It is also surprising that no enquiry was earlier conducted into the reasons for the parties not being able to export steel as required under the agreements. It is only now that the Ministry have asked the Iron & Steel Controller to hold such an enquiry. The Committee however feel that a thorough enquiry should be held in this case at the highest level.*

X

TOWNSHIP

A. Land Utilisation

Land utilisation.

140. The township built by the Rourkela Steel Plant for its employees is spread over 11,177 acres, divided into 20 sectors. The following table shows the land utilisation and cost incurred on townships.

No. of houses built/ under construction	Average No. of Dwelling units in an acre	Total estimated cost on township
15,032	1·34	Rs. 20·82 crores

It will thus be seen that the land has been utilised in construction of township on a lavish scale. Large areas had been acquired, much in excess of requirements, which were lying vacant. It was also admitted that even taking into consideration the built up area, the average density in Rourkela township is only 8·81 dwellings per acre, whereas according to the standards laid down by the Committee on Plan Projects it should be about 12 to 14. It was stated that in the expansion programme steps would be taken to increase the density.

141. It was also noticed that the houses were mostly single storeyed. It was admitted that if the construction had been multi-storeyed the cost would have been reduced. It had now been decided to go in for double-storey construction.

Need for economy on townships.

142. *Since the investment on township and the cost of maintaining it add considerably to the overheads of a project, the Committee feel that there is need for utmost economy in the construction of houses and utilisation of land. Ceiling or norms should also be laid down about expenditure that could be incurred by a Public Undertaking on the township. In this connection they would also invite a reference to paras 13 and 56 of their 8th Report on townships and Factory Buildings of Public Undertakings.*

B. Houses Built

143. On the basis of providing accommodation to 80 per cent staff upto 1.8 million tonne stage, construction of 15,292 houses (including 260 flat type houses for construction staff) had been planned. Out of this 14,335 were

completed and 957 houses were under construction. However, due to over staffing, the houses which should have covered 80 per cent of staff after expansion of the plant would only be sufficient for about 66 per cent of the present staff. It was, therefore, proposed to construct 3,000 more houses. In this connection, the Committee find that about 1,000 houses had been allotted to staff of other Departments of Central and State Governments (i.e. P. & T., Excise, Police, Railways, etc.). *They feel that the Rourkela Steel Plant could not legitimately be asked to bear the additional expenditure incurred on these houses and it should be borne by the respective offices.*

C. Houses lying vacant

144. The Committee noticed that as on 1st August, 1964, 664 houses were lying vacant of which 145 had been vacant for 6 months and more. The loss of rent on this account was stated to be about Rs. 22 per quarter per month on an average.

Reasons. 145. The reason for large number of quarters being vacant was stated to be the aftermath of the communal disturbances in March-April, 1964 and also the fact that in the new sectors not all the amenities had yet been provided. It was stated during evidence that at present the number of houses lying vacant was 266 and allotment orders had been issued in respect of 195 quarters.

Committee's Observation 146. *The existence of vacant houses results in loss of revenue and their non-allotment causes hardship to the employees. A Committee is stated to have been appointed to look into the question of allotment and occupation of houses. It is hoped that with the implementation of the recommendation of that Committee the position would improve.*

D. Cracks in houses

147. During there visit to Rourkela Steel Plant the Committee noted that cracks of varying degree had developed in 812 houses in Rourkela township. Out of these, 328 houses were in one sector only. These houses developed cracks within one year of the completion of construction and most of them required major repairs.

Reasons. 148. During evidence, the General Manager stated that a Committee with Chief Engineer of Rourkela Steel Plant as Chairman, was appointed to look into this matter. According to the findings of this Committee, these cracks were due to the black cotton soil in certain areas. It was explained that at the time the township construction was taken up, only a visual soil examination was done and a laboratory soil investigation was not considered necessary.

Therefore, the foundations of all the township buildings had been planned on a more or less uniform pattern i.e. about 2 ft. below ground level. The General Manager admitted that the foundation should have been of a different type for this particular soil.

149. *The Committee suggest that proper soil investigations should be carried out before taking up the construction of houses to avoid such losses in future.*

Proper soin nvestigatio suggested.

XI

OTHER MATTERS

A. Financial irregularities pointed out in Audit Report (Commercial), 1964.

Civil Engineering work in Iron Ore Mines Para XII (1), *Audit Report*:

150. During negotiations with the successful tenderer in June, 1957 for setting up the Material Handling System at the Iron Ore Mines in the Rourkela Steel Project, the Company decided to award the Civil Engineering work to one of the sub-contractors of the successful tenderer on a negotiated lump-sum rate of Rs. 21 lakhs with the explicit understanding that the work, though executed by a sub-contractor, would form part of the main contract and be supervised by the main contractor. The lump-sum rate was based on the estimate of a total quantity of 5,500 cubic yards of reinforced and structural concrete for which about 500 tons of steel, at the rate of 7 lbs per cu. ft. was estimated to be used. While executing the agreement with the contractor, although a provision was made for payment of increase/decrease in the quantity of work actually done in comparison with the estimated quantity, a similar provision for the steel actually used was not incorporated.

The total quantity of concrete work actually done and paid for was 14,150 cubic yards, but the steel consumed was only 816 tons, while on the basis of the ratio of consumption of steel adopted at the time of entering into contract 1,194 tons of steel should have been used. The project authorities could not make any recovery from the contractor because of non-incorporation of a suitable clause in the agreement even though this could have been done in accordance with the recorded note of the negotiations held on 29th June, 1957. No responsibility was fixed for this omission. The loss to the Project on this account amounted to Rs. 2,83,500 approximately.

The above sub-contractor who was awarded the work, actually sublet it to another contractor with the approval of the project authorities, stipulating that if the consumption of steel was less than 7 lbs. per cft., a recovery of Rs. 1,000 per ton would be made. The other contractor used 816 tons of steel against 1,194 tons expected to be used in the work. Thus, the sub-contractor would have recovered a sum of Rs. 3,78,000 from the other contractor for 378 tons of steel 'less' used in the work.

151. During evidence, the Committee were informed that the terms of contract were settled at the meet-

ing held on 29th June, 1957 which was attended also by the two officials of the Ministries of Finance and Steel, Mines and Fuel who were on the Board of Directors), the technical adviser of Hindustan Steel Ltd., the contractor and the sub-contractor. In the recorded note of the meeting it was stated that the approximate requirement of steel would be 500 tons. But there was no provision for increase or decrease in payment for the quantity of steel actually used. It was, however, admitted by the Chairman, Hindustan Steel Ltd., that there was a clear omission in not including a clause in the original agreement with the contractor for increase/decrease in payment according to the quantity of steel used especially when there were provisions for increased/decreased payment according to the quantity of work done and for variations in quantity and the rates of the materials procured by the contractor. Even later on when the work was sublet by the sub-contractor with the consent of the Hindustan Steel Ltd., there was an omission in not looking into the terms of the sub-contract and to press the condition regarding the recovery of amount for less consumption of steel as provided by the 1st sub-contractor in agreement with the 2nd sub-contractor.

152. As regards fixing of responsibility for the lapse in this case it was stated that the Technical Adviser who was a German, had left the plant by the time this matter came to the notice of Hindustan Steel Ltd. One official of the Ministry who was on the Board of Directors had died.

153. *From the facts placed before the Committee it is evident that the Hindustan Steel Ltd. failed to safeguard their interests by not providing even the basic condition about the variation in the payment to the contractor according to the quantity of steel actually used. The Committee expect the H.S.L. to avoid the recurrence of such cases.*

Loss due to non-weighment of Creosote Oil supplied in petrol wagons to Railways: Para XII (2) of Audit Report.

154. During the period November, 1960 to January, 1961, Creosote Oil, a by-product of the Rourkela Steel Plant, was despatched to the Indian Railways in tank wagons without actual weighment. These wagons were marked with the weight carrying capacity for petrol only. Bills were preferred against the Railways on the basis of the marked capacity of the tank wagons for petrol. Since the specific gravity of Creosote Oil is higher, being nearly 1.4 times than that of petrol, the failure to record actual weight resulted in excess supply to the purchaser. Sample weighments taken by the Project Authorities have revealed that nearly 8-9 tons of Creosote Oil per wagon was supplied in excess. The total loss to the Project on this account has been estimated to be Rs. 1,17,600.

155. The Committee were informed during evidence that at that time there were no specific orders to the effect that the outgoing wagons should invariably be weighed. A departmental Enquiry Committee was appointed in this case which met between 25th January and 2nd February, 1963. According to that Committee they had not been able to find out the circumstances in which petrol wagons containing creosote oil were not weighed earlier and why on the 23rd January, 1961 the wagons were picked out for actual weighment. However, even after 23rd January, 1961, when the first weighment took place, six wagons were despatched to the Railways upto 31st January, 1961 without actual weighment. The difference between the marked capacity of these six wagons and their actual weight was estimated to be 60 tons approximately. The departmental Committee was of the view that whereas the loss in respect of oil wagons despatched prior to 23rd January, 1961 was due to mistake, the loss in respect of 6 wagons despatched after 23rd January, 1961 should have been avoided if correct and prompt action had been taken by the Sales Department.

156. The Chairman, Hindustan Steel Ltd. also agreed that while failure to weigh wagons before 23rd January, 1961 was a mistake as pointed out by the Departmental Committee, non-weighment of six wagons despatched after 23rd January, 1961, was an act of negligence.

157. As regards steps taken to fix the responsibility in this case, the Chairman, Hindustan Steel Ltd. contended that although the difference between actual weight and marked capacity on wagons was detected on 23rd January, 1961, orders in this regard were issued by the Sales Department about eight days later. In between six wagons were despatched by the plant without weighment as they had not received the orders for weighing the quantities despatched. Therefore, it had been difficult to pin down the responsibility on any individual.

Failure to weight wagons commented.

158. *The Committee are concerned to note that in spite of the fact that the facilities for weighing the wagons were available with the plant, petrol wagons were not weighed before their despatch to the Railways, resulting in a loss of Rs.* 1,17,600 *to the Plant. The fact that even after the detection of mistake on the* 23rd *January,* 1961 *the Plant did not start weighing the wagons till the actual orders were received eight days later clearly shows that there was laxity of control on the despatches. The Committee feel that business prudence required that every wagon should have been weighed before despatch.*

Avoidable Expenditure due to Non-Installation of dust catchers in the Power Plant: Para XII (3) of Audit Report.

159. The Steam Boilers of the Power Plant in Rourkela Project have been so designed that they are fuelled with the coke breeze and gases produced in the Coke Ovens and Blast Furnaces. The consultants had made specific provision for "dust catchers" (Mechanical fly ash collector with all accessories) for each boiler in the Technical Specifications for the Power Plant and the suppliers had also tendered in June, 1956 for this item and advised that if an order for dust catchers was not placed, the impellers of the flue gas fans would be subjected to excessive wear.

The Project authorities, however, on the basis of the revised opinion of their Technical Consultants decided in September, 1956 to eliminate it. The coke breeze fuel was used only during the period from December, 1959 to May, 1960 and had to be discontinued thereafter when the fans of one of the steam boilers failed owing to erosion caused by coke breeze in the absence of dust catchers.

160. The damaged fans of the Steam Boiler were repaired at a cost of Rs. 22,470 (approximately), and it was decided that, pending the installation of dust catchers the steam boilers of the Power Plant should be fuelled with coal instead of coke breeze. As a result, the Project had to use a total quantity of 1,29,495 tonnes of coal upto 31st March, 1964 involving an extra expenditure of Rs. 34:39 lakhs (approx.).

The tenders for the dust catchers were invited two years later in June, 1962. *i.e.*, two years after the discontinuance of the use of coke breeze and orders for two ash collectors were placed by cable still two years later on 22nd May, 1964. The equipment has not yet been received.

161. The Committee were informed during evidence that this matter was discussed at a meeting held in Germany on the 18th September, 1956 which was attended by the technical adviser of H.S.L., the Director of the Consultants and the representative of the suppliers. The recorded note of that meeting stated that both the technical adviser and the Director of Consultants decided that the installation of dust catchers was not necessary, although, as pointed out by Audit, the suppliers, had not subscribed to the view of the Technical Adviser and the consultants. However, the expectations on which this decision was based did not materialise.

Reasons for delay in ordering dust catchers.

162. As regards the reasons for the delay of 4 years in placing orders for dust catchers even after the failure of Steam Boiler due to erosion, it was stated that it took about a year to arrive at a decision about the number of dust catchers to be purchased taking into consideration the requirements of coke breeze for the sintering plant. There was also delay in the release of foreign exchange.

163. *The Committee are not happy over the manner in which the Project authorities acted in this case. They find that although the Steam Boiler failed in May, 1960 due to the absence of dust catchers, the matter was not taken up with the technical consultants even up to March, 1962 when the agreement with the consultants had expired. The Committee find no justification for the lapse in this regard. Even granting that initially the Project authorities acted on the advice of their technical consultants, there was a delay of four years in placing the order for the dust catchers after the failure of steam boiler. The result was that the Project suffered a loss of Rs. 35 lakhs up to May, 1964 due to use of coal instead of coke-breeze. The Committee deprecate these inordinate delays which have resulted in heavy losses.*

Extra Payment of Rs. 3,58,398 to a contractor: para XII (5) of Audit Report.

164. In November, 1955 a contract for the construction of a ring road for the township in the Rourkela Steel Project was awarded at an estimated cost of Rs. 16,88,359. It was provided in the contract *inter-alia* that the items of work for which no rates were given in the contract, would be paid on the basis of percentage increase over and above the rates given in the Hindustan Steel Limited Schedule of Rates (with modifications to suit local conditions) which at that time was stated to be under finalisation. During the execution of the work, extra items by way of rock cutting, excavation, etc. had to be undertaken and payment was made at Rs. 300 per % O c. ft. sanctioned in June, 1956, on the basis of Hirakud Schedule of Rates, on the ground that a suitable rate was not available in the Hindustan Steel Limited Schedule of Rates. However, the Central Public Works Department Schedule of Rates which was being taken as the basis for finalising the Hindustan Steel Limited Schedule of Rates provided the rate of Rs. 175 per cent O c. ft. for this item. The failure to make payment according to C.P.W.D. Schedule of Rates resulted in an extra payment of Rs. 3,06,472.

Investigation into reasons for extra payment suggested.

165. The Committee could get no satisfactory explanation for making payment to the contractor on the basis of the Hirakud Schedule of Rates instead of the Central Public works Department Schedule of Rates. *The Committee regret to note that this is another instance where the Project authorities failed to safeguard their financial interests and made avoidable extra payment to the contractor to the extent of Rs. 3·06 lakhs. It is surprising that even after the matter had been pointed out by Audit, no proper enquiry was made in this case with a view to fixing the responsibility for the extra payment. They desire that the matter should be investigated and action taken.*

Infructuous expenditure of Rs. 70,000 on a Diary Scheme: para XII (6) of Audit Report.

166. The Rourkela Steel Project forwarded in June, 1960 to the Head Office a scheme for Cattle Colonisation and Dairy Farm at a capital cost of Rs. 5 lakhs. The Project authorities however, started in April, 1960 (even prior to forwarding the original scheme) the construction of one cattle shed and ten Govalas' quarters which were completed in December, 1960 at a cost of Rs. 41,000. The modified scheme sanctioned by the Government of India in January, 1961 did not provide for cattle sheds and Govalas' quarters etc., but envisaged procurement of milk from outside. Even after receipt of the modified scheme from Government, the Project management took up in July, 1961, the construction of another cattle shed and completed it in November, 1961, at a cost of Rs. 19,000. A Dairy Officer and Sales Assistant were also employed between 9th May, 1960 and 31st March, 1962 and 30th November, 1960 and 31st March, 1962 respectively .After an additional expenditure of Rs. 9,800 had been incurred (bringing the total expenditure to Rs. 69,800) the scheme was finally abandoned in February, 1962.

167. *Evidently the action of the Project authorities to proceed with the scheme and to appoint some staff before the scheme was approved by Government was pre-mature. The Committee trust that the Plant authorities will be more careful in future to avoid such infructuous expenditure.*

B. Tyre retreading plant

168. In December, 1961, Rourkela Steel Plant placed an order for a tyre retreading plant for heavy tyres used in earth moving equipment, etc. The plant costing about Rs. 1·15 lakhs was imported partly from USA and partly from West Germany. However, there had been delay in obtaining the required foreign exchange and in issuing the import license with the result that the plant was only received in January, 1964. Even thereafter, there was delay in the installation of the plant and it has only recently been put into operation. Thus there has been a delay not only in procuring the plant but also in installing it. *The Committee desire that steps should be taken by the authorities to ensure that in future plant and machinery involving large capital investment are put to use without delay.*

C. Research

169. The development and the provision of proper research facilities and the coordination of researches carried out by various agencies is very important for any industry. This is so particularly in the case of Iron & Steel

Industry. The National Metallurgical Laboratory and the Central Fuel Research Institute are conducting vital research for the Indian Steel Industry. Besides these, each steel plant has also got Research and Control laboratories. However, so far there is no co-ordination of the researches carried out by the various organisations.

170. In evidence, the Chairman, Hindustan Steel Ltd. stated that it has now been decided to appoint a senior metallurgist at the Head Office of Hindustan Steel Ltd. to co-ordinate the research activities of the three steel plants. It was also proposed to have a sort of Central Research Institute. To co-ordinate the results of the research carried out at the three steel plants and other agencies it is proposed to associate the three General Managers of the Steel Plants, the Director of National Mettallurgical Laboratory and a representative of Heavy Engineering Corporation with the work of this Central Institute.

Decision to setup Central Research Institute for Steel Technology welcomed.

171. *The Committee welcome the proposal as a step in the right direction. They would suggest that the desirability of associating TISCO and IISCO with this Research Institute may also be considered. The Committee also trust that with the establishment of Central Research Institute more attention would be paid to steel technology.*

XII

CONCLUSION

172. During their examination, the Committee have noticed several disquieting features and shortcomings in the planning, execution and working of the Rourkela Steel Plant which have been referred to in the preceding Chapters. Some of the important ones are given below:—

(i) Inordinate delays in the erection of the various units of the Plant and delays upto 37 months in commissioning of certain units even after completion of their erection. (Para 9).

(ii) Frequent upward revisions of the capital cost of the one million tonne plant which has gone up from the original estimates of Rs. 128 crores to Rs. 230.48 crores. Similarly for the expansion of the Plant the estimates of capital cost have increased from Rs. 77·56 crores to Rs. 136.91 crores. (Paras 116-17).

(iii) Inadequate maintenance facilities and several breakdowns in the various units of the plant. (Paras 72, 77).

(iv) Inordinate delay in reaching rated capacity; some of the Plants *viz.* Fertiliser Plant (costing Rs. 25 crores) and Pipe Plant (costing Rs. 3.78 crores) are still working much below the rated capacity. (Paras 13, 15, 20, 25).

(v) High cost of raw materials because of (a) increasing percentage of fines in Barsua Ore and high cost of raising it and (b) non-availability of lime stone in required quantities from captive quarry due to delay in commissioning of Crushing and Screening Plant. (Paras 44, 49).

(vi) Defective arrangements for procurement and storage of stores and spares resulting in their over-stocking on the one hand and shortages of requisite types of spares and extra expenditure on their air-lifting on the other. (Paras 54, 57, 61, 62).

(vii) Inadequate loading and unloading arrangements resulting in heavy demurrage charges year after year. (Para. 65, 69).

(viii) Excessive employment of manpower. (Paras 88, 90).

(ix) Unsatisfactory industrial relations and lack of proper shop discipline. (Paras 108, 109).

All these have resulted in the over-capitalisation of the Plant, lower production, higher costs and heavy losses.. The Committee have suggested measures to improve the position at appropriate places. . .

173. *The Committee are, however, aware that Rourkela was the first steel plant, taken up for execution in the Public Sector. It had also adopted the latest method of steel making—L. D. process—which was new to the country.. The production of flat products, by this plant, also required a high degree of skill and experience which was not available in the country. The management had to face many unforeseen difficulties in organising the human, material and financial resources required for the execution and running of such a major project. The task was rendered more difficult by frequent changes in the top management.*

174. *The Committee are glad to note that Rourkela Steel Plant has now turned the corner and is working upto the rated capacity since September, 1964. The industrial relations have also since improved. The Committee trust that the management will now direct all i's energies to maintain the tempo of production and to improve the financial position of the Plant. With the achievement of full rated capacity and the expansion which is in hand, this Plant is bound to make a significant contribution to the country's industrial development and will occupy a place of pride in the nation's economy.*

NEW DELHI; PANAMPILLI GOVINDA MENON,

May 7, 1965. *Chairman,*
Vaisakha 17, 1887 (S). *Committee on Public Undertakings.*

APPENDIX I

(*Vide* para 5)

Statement showing the target dates for the completion of the various units of Rourkela Steel Plant, the dates of actual completion and delay in each case.

Name of the Unit	Target dates	Date of completion/ commissioning	Delay from target dates M.	D.
1st Coke Oven Battery .	15-10-58	3-12-58	2	12
2nd Coke Oven Battery	15-2-59	22-3-60	14	7
3rd Coke Oven Battery .	1-7-59	7-11-62	40	6
First Blast Furnace .	1-10-58	24-1-59	3	23
Second Blast Furnace .	1-2-59	11-1-60	11	10
Third Blast Furnace .	1-8-59	6-1-62	29	5
1st Open Hearth Furnance	31-5-59	28-4-59		
2nd Open Hearth Furnace	1-7-59	14-8-59	1	13
3rd Open Hearth Furnace	1-8-59	22-2-60	6	21
4th Open Hearth Furnace	1-9-59	16-5-60	8	15
1st L.D. Converter .	1-9-59	27-12-59	3	26
2nd L.D. Converter .	1-11-59	9-1-60	2	8
3rd L. D. Converter .	1-12-59	31-1-60	2	0
Blooming & Slabbing Mill	April, 1959	15-12-59	8	0
Heavy Plate Mill .	May, 1959	12-9-60	16	0
Strip Mill . .	March, 1960	28-3-61	24	0
Cold Rolling Mill	April, 1960	June-Nov., 1961	14-19 months	
Tinning Plant (3 Lines)	1-4-61	upto 1-8-62	upto 16 months.	

APPENDIX II

(*Vide* para 70)

Details of Breakdowns since inception and Losses resulting therefrom.

Units	Date of occurrence of Breakdowns	Duration in terms of days	Nature & Causes of Breakdown	Estimated Losses	
				Production	value
				Tonnes	Rs.
BLAST FURNACES :					
			Poor work manship in brick laying around the tap-hole;		
Blast Furnace I	8-3-1961	12	Banked for tap-hole repairs	4,764	1,59,096
	9-7-1961	16	Do. . .	6,101	4,31,136
			Inadequate experience in the operation;		
Blast Furnace II	12-5-1960	12	Water entered into the Furnace through a burnt tuyere and obilled the hearth.	4,890	1,59,09
	4-12-1963	9	Banked for repairing the crack in the shell.	6,435	1,97,104

Blast Furnace III					
	12-12-1963	3	Repair of lining in the tap-hole region.	2,940	90,052
	25-12-1963	18	Do.	13,212	4,04,684
			Defective design;		
SLABBING MILL	16-6-1961	44	belts of the spider flange between the armature of lower main drive Motor and its shaft had broken.	25,000	12,24,247
			Defective material as well as defective design;		
	7-12-1961	25	breakdown of the tap spindle articulation head and the top roll wobbler.	20,800	6,95,595
			Bad maintenance;		
	22-4-1963	11	Lower spindle articulated head pin shear.	21,652	3,53,361
	22-10-1963	64	Slab shear went out of order .	No loss as alternative devices for shearing slabs as gas-cutting were employed.	

Units	Date of occurrence of breakdowns	Duration in terms of days	Nature & Causes of Breakdown	Estimated losses	
				Production	Value
				Tonnes	Rs.
COLD ROLLING MILL					
			Defective design;		
	1-2-1963 to 21-3-1963	49	Reversing Mill II (1200 mm) was down due to the displacement of armature over the shaft which caused severe mechanical and electrical strain.	2,283	9,40,359
	11-4-1963 to 18-4-1963	8		420	36,338
	1-6-1963 to 14-6-1963	14	Mechanical Breakdown in Pickling Lines	6,250	5,40,705
	9-7-1963 to 20-7-1963	12	Shear shaft had been broken in Sheet Shearing Line I.	1,953	1,68,974
	22-7-1963 to 31-7-1963	10	Mechanical Breakdown in Sheet Shearing Line II.	2,511	2,17,252

APPENDIX III

(*Vide* para 80)

Statement showing incumbents to the post of Managing Directors/General Managers and the period for which position held etc.

Sl. No.	Name	Industrial Experience	Period for which position held
1	2	3	4
	MG. DIRECTORS/GENERAL MANAGERS		
1	S. N. Mazumdar, I.C.S. . .	Formerly Chairman, D.V.C. . . .	4-3-1954 to 12-9-1956
2	P. G. Bhagat		13-9-1956 to 1-6-1958
3	M. Ganapati I.R.S.E. . . .	General Manager, Central Railway . .	2-6-1958 to 12-11-1960
4	S. Sambasivan	On deputation from TISCO . .	15-10-1960 to 17-8-1961
5	K. N. Suba Raman I.R.S.E. . .	Director (Constn)., HSL (Worked in Addition to his Director's duties)	18-8-1961 to 3-1-1962
6	S. T. Raja, I.M.P. . . .	Mg. Director, Hindustan Antibiotics Ltd., (1958—61)	3-1-1962 to 17-1-1964
7	A. N. Banerjee, I.A.S. . . .	Dy. G.M. (D.S.P.), Secretary, H.S.L. Iron & Steel Controller	17-1-1964 todate

APPENDIX IV

(*Vide* para 104)

Note giving the details of the various strikes and lock-outs at Rourkela Plant, the man-hours lost and the estimated loss of production in each case.

1960:

There was a strike by a group of casual workers of constructions department demanding their immediate absorption in the regular set up. This did not affect production. No records as to the man days lost etc. were kept since it was by the casual workers.

1961:

There was an abrupt strike by the vehicle drivers in the month of March demanding double overtime wages and several other demands. The strike continued for four days when an agreement was signed between the Management and the Hindustan Steel Workers Association (I.N.T.U.C.) representing the vehicle drivers. In this strike approximately 766 man-days were lost.

1962:

As a result of an abrupt strike by the workers of Blast Furnace Department demanding immediate promotions to higher positions and grades, the management were compelled to declare lock-out in the same department on 3rd April, 1962 which continued till 9th April, 1962. This was led by the A.I.T.U.C. affiliated Rourkela Steel Mazdoor Union.

Man days lost due to the strike 2640 (approx.).

Value of loss of production Rs. 78·24 lakhs (approx.).

1963:

There was no strike or lock-out during the year 1963. However, there have been sporadic slowing down of work in some cases and a few isolated cases of workmen staying away from work. But such go-slow or staying away, has never been on a all plant basis or even on an all shop basis. The instances are given below seriatim:

(a) Slow down in Refractory Deptt. from 20th July, 1963 to 25th August, 1963 by Hindustan Steel Workers' Association.

(b) Slow down and refusal to work by certain workers in Pig-Casting Machine, Steel Melting Shop and Blooming and Slabbing Mill from 21st September, 1963 which continued during the month of October 1963. Most of the workers of these departments belong to Rourkela Mazdoor Sabha.

(c) A deliberate slow-down in the running of buses by the drivers (members of Rourkela Mazdoor Sabha of Transport Deptt.) in early November, 1963 was done. The reasons for these stoppages of work have been essentially inter-union rivalries. With 5 registered trade unions operating in Rourkela, and the major ones wanting to get recognition (the HSWA and the Rourkela Mazdoor Sabha) the Unions indulged in militant rivalry leading to slowing down of work, threats of strike, and a long list of demand, some of them even fantastic. The intention was apparently that if some of the demands were conceded, the respective union will get more following and would automatically emerge more strong and ultimately get recognition. The multi-union rivalry has to a very great extent been checked by the recognition of the representative trade union (Hindustan Steel Workers' Association, affiliated to INTUC) for the Rourkela Steel Plant with effect from 30th March, 1964. Since this recognition, the climate of labour management relations has improved gradually and consistently and it is hoped that by mutual consultation on all issues leading to industrial strike, recurrences of strikes/ lockouts could be prevented.

APPENDIX V

Summary of Conclusions/Recommendations

Sl. N.o	Reference to para no in the Report	Summary of Conclusions Recommendations
1	2	3
1	9	. The Committee regret to note the inordinate delay in the erection/commisioning of the various units at the Rourkela Steel Plant. Even granting that some delays were unavoidable in a complex project like a steel plant, there can hardly be any justification for the delay of 40 months in commissioning some of the units. Viewed against the impression given to the Estimates Committee in 1959, that there would only be a delay of about six months in the completion of the Rourkela Project and the plant as a whole would be commissioned by September, 1960, these enormous delays are a matter of concern. What is worse is that the third coke Oven Battery and the third Blast Furnace could not be commissioned for 37 months and 19 months respectively even after their erection due to delay in commissioning of Rolling Mills. The loss of production due to delay in commissioning of the units has been substantial. The Committee recommend that the reasons for the delay in the commissioning of various mills particularly Rolling Mills need to be investigated and responsibility fixed.
2	10	The Committee regret to observe that the results of the study if any, made in regard to the reasons for the delay in the completion and commissioning of the various units of the three steel plants as recommended by the Estimates Committee in 1962 have not been communicated to them so far. The Committee cannot but observe that the management has not treated the recommendation of the Estimates Committee with the attention it deserves.
3	13	Considering that the first Blast Furnace at Rourkela was commissioned in February, 1959, the Committee cannot help obsreving that the time taken for reaching the rated capacity has

1	2	3
		been too long. The Committee hope that the tempo of production achieved since September, 1964 would be maintained.
4	15	The Committee are unable to appreciate as to why Hindustan Steel Limited did not consider it necessary to secure the services of suitable German technicians for running the steel melting shops in the initial stages when they were aware that the L.D. process was a new technique adopted in India and the Indian trainees did not acquire any experience of actually handling such machines. It is not as though there were no foreign technicians in Rourkela because even in 1960 there were 72 German and Austrian Engineers employed at the/Plant on other jobs. While the Committee appreciate the endeavour to entrust the running of L.D. convertors to Indian Engineers, they regret to observe that it should have taken Hindustan Steel Limited about 1½ years to realise that the Indian technicians were not fully capable of running these shops and to arrange for the services of German technicians. Evidently the failure of the management to take timely action in this regard resulted in avoidable loss of production.
5	20	The unsatisfactory working of the Pipe Plant is inexcusable and merits serious attention of the H.S.L. and the Government. As long as there is indigenous capacity for the production of any item its import should not normally be permitted. The Committee see no reasons as to why with proper planning it should not be possible for the Government Departments/Undertakings to assess their requirements of pipes well in time and to intimate them to the Rourkela Steel Plant in advance to enable the latter to plan their production programme accordingly. The Committee recommend that suitable instructions should be issued by Government to all concerned.
6	25	The Committee regret to observe that a proper assessment of the quantity and quality of gas available from the coke ovens was not made before deciding the size of the various by-product plants based on this gas. After the first coke oven battery had been commissioned in September, 1958 and the quantity and quality of gas available became known ,the capacities of the by-pro-

1	2	3
		duct plants, should have been reviewed. The Committee are concerned to note that no such action was taken. It is only in 1964, after more than 5 years, that the Ministry decided to set up an Expert Committee to look into this matter. It is evident that there has been no proper planning in the matter of the designing of the by-product plants. The result has been that (a) the sulphuric acid plant (cost Rs. 17 lakhs) remains idle, (b) the production at the Benzol Plant is only 56% of the rated capacity and (c) the Fertiliser Plant (cost Rs. 25 crores) is working only up to 50% of the rated capacity. Even after expansion of the Steel Plant to 1·8 million tonnes, the Fertiliser Plant will not reach the rated capacity unless additional equipment costing Rs. 169 lakhs is put up. This is a remarkably bad record of planning and the Committee recommend an investigation to fix responsibility. The Committee also recommend that expeditious action be taken to see that the Fertiliser and other by-products plants work to their rated capacity.
7	27	It is surprising that the management of the Fertilizer Plant was transferred to the Fertilizer Corporation without settling the terms and conditions thereof which resulted in differences and disputes subsequently. Since both the Hindustan Steel Limited and the Fertilizer Corporation were under the same administrative ministry at that time it should have been possible for the Minisry to settle the dispute. If there were genuine difficulties in the supply of gas, power, etc. in adequate quantities and at economical rates, the proper course was to remove these difficulties, as transfer of the plant back to Hindustan Steel Limited was no solution of the real problem of the economical working of the plant. The Committee therefore, desire that the reasons for the actual rates of feed stock and utilities being much higher than the Project Report estimates should be analysed and steps taken to improve the working of the plant.
8	31	It needs no emphasis that the products manufactured by the Plant should suit the requirements of the consumers. The Committee would therefore, urge that there should be rigid quality control at every stage of production to ensure proper quality of the products manufactured.

1	2	3
9	35	Considering that in the L. D. process of steel making adopted at Rourkela the operating cost and overheads are lower than in open hearth process at other steel plants, it is a matter of concern that the cost of production of steel should be higher at Rourkela. This calls for strict control over cost especially in respect of raw materials. The higher cost of production not only affects the financial working of the plant but has adverse repercussions on the production costs of the steel based industries whose products are unable to compete in the international market. The Committee therefore feel that there is need for concerted efforts on the part of plant management to reduce the cost of production.
10	36	The Committee also recommend that early steps be taken to work out the standard cost of production for various items and the actuals compared with the standard cost regularly with a view to taking remedial measures in cases of variations. The standard cost should also be reviewed periodically in view of technological developments and the expansion of the plant.
11	38	The Committee note that increasing use is being made of sinter in various countries to reduce the consumption of coke. Besides reduction in the coke consumption, this results in increased production, utilisation of fines and consequently overall reduction in the cost of production. The Committee find that in India also sinter has been used with advantage in TISCO, and at Bhilai Steel Plant since 1961. However, there had been delay in putting up such a plant at Rourkela which has only recently been commissioned. Considering that there has also been delay in setting up beneficiation plant at Barsua Mines the Committee feel that management has been slow in adopting new techniques of cost reduction. It is vital that the plant should economise on the use of fuel not only to conserve limited coking coal resources in the country but also to reduce its own cost of production. The Committee therefore desire that more attention should be paid to the raw materials preparation and application of new techniques.

1	2	3
12	41	The Committee realise that while comparing labour productivity with plants in different countries, the size of the plant, the extent of mechanisation, the quality of raw materials, etc. have to be taken into account. Nevertheless they feel that there is considerable scope for improvement in labour productivity in a modern plant like the Rourkela Steel Plant. The Committee, therefore, desire that the various factors affecting the labour productivity should be analysed and remedial measures taken.
13	44	The Committee desire that the reasons for the unsatisfactory working of the Barsua Mines should be investigated and efforts made to increase its production and reduce the cost of raising ore.
14	46	The Committee observe that in USSR most of the iron ore reserves have only 37% iron content on the average. But in order to increase blast furnace output and to decrease coke consumption, great attention is paid to the beneficiation and preparation of all ores. It has been estimated that the net decrease in cost of iron production is three to five times more than the additional cost involved in beneficiation. Inspite of experience of other countries and experiments conducted by National Metallurgical Laboratory on Barsua ore itself, there was protracted discussion about the suitability of such a plant. Now that it has been decided to go in for this plant, the Committee trust that steps would be taken to set up the plant without any further delay.
15	49	The Committee regret to note that it has taken the suppliers more than two years to rectify the defects in the Purnapani Crushing and Screening Plant. In the meantime limestone had to be raised manually resulting in lower output and higher cost of production. Besides, limestone had to be procured from other sources involving additional expenditure. The Committee trust that the plant would now be commissioned without any further delay and compensation realised from the contractors.
16	54	The procedure and arrangements for the procurement and stocking of spares leaves much to be desired. It has resulted in the accumulation of heavy inventories and blocking of capital there-

1	2	3
		on apart from unnecessary expenditure on their care and maintenance. On the other hand there has been shortage of certain items of spares which have hampered repair work and affected production. Avoidable expenditure had to be incurred on airlifting of spares in some cases. All this happened on account of failure to build up a purchase organisation and to lay down clear cut procedure for the procurement and stocking of spares. A cell is stated to have now been formed under Chief Superintendent (Engineering Services) to prepare catalogues, nomenclature and vocabulary of spare parts. They have also taken over the function of scrutinising the indents for spares originating from the various maintenance units. The Committee trust that with the setting up of this cell there would be better control over the procurement and stocking of spares.
17	57	Heavy expenditure incurred on airlifting of spares indicates lack of vigilance and proper planning on the part of management. The Committee recommend that the reasons therefor may be investigated and responsibility fixed.
18	58	The question of allowing Public Undertakings to incur expenditure out of sanctioned foreign exchange budget without further reference to Government in individual cases is stated to be under consideration. The Committee desire that the decision in this regard should be expedited. In any event, procedure should be simplified so that there is no delay in the release of foreign exchange.
19	61	The Committee are concerned to note that despite the recommendations of the Committee on Plan Projects, the position about the stock of stores is not satisfactory. Excessive inventories not only tie up capital but also cost a great deal to carry them by way of storage, staff, deterioration, interest charges. The Committee recommend that effective steps should be taken for the reduction of inventories.
20	62	The Committee note that the plant has not yet prepared any stores manual. Steps should be taken to prepare such a manual at an early date. The Committee feel that it would be desirable to have a standard stores manual for the Public Sector steel plants.

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21	65	The Committee fail to understand as to how inspite of the fact that the Railway Board had expressed their inability to supply self discharging wagons for the movement of coal in the initial stages of construction of Rourkela Steel Plant, the Hindustan Steel Ltd., did not consider it necessary to provide tipplers for unloading the wagons. The failure to do so resulted in delays in the clearance of wagons which not only affected adversely the production programme but also resulted in payment of heavy demurrage charges. The Committee were assured that provision for tipplers has been made in the expansion programme of Rourkela Steel Plant. They trust that this would be kept in mind to avoid similar situations in the new steel plants.
22	69	While the Committee note the reduction in demurrage charges, they cannot help observing that they are still very high. They trust the matter would receive earnest attention of the plant management and steps taken to reduce the demurrage charges.
23	72	The Committee are unable to appreciate as to how the consultants accepted defective construction of refractory lining of the blast furnace and permitted installation of machines with defective design in the slabbing and the Cold Rolling Mills. It is unfortunate that no responsibility could be fixed on the Consultants for these defects although they were responsible for the proper commissioning of the plant. In view of this, the Committee suggest that Government should make suitable provisions in future agreements with the Consultants so as to fix their liability for defective designs and bad workmanship.
24	77	The availability of equipment for continuous production depends to a large extent on the attention given to its maintenance. It is therefore essential that repairs and maintenance facilities should be adequate, properly planned and carried out according to schedule. It is regrettable that the importance of proper maintenance of plant and machinery was not fully rea-

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		lised by the management in the past. The Committee trust that with the reorganisation of maintenance facilities, independent of production units, greater attention will be paid to maintenance.
25	79	The Committee observe that in some cases the drawings of the parts of Plant and Machinery which were furnished by the suppliers were not kept in proper custody with the result that when they were wanted it was difficult to trace them. This resulted in delay in the procurement of spares and the execution of repairs. The Committee trust that the collection and preparation of such drawings by the Central Spare Parts Cell will be expedited and there would be proper custody over such drawings in future. As the preparation of such drawings takes a long time, Government may also examine the possibility of obtaining all necessary drawings including constructional designs, if possible from the manufacturers at the time of entering into agreement for the supply of plant and machinery.
26	82	The Committee feel that many of the shortcomings in the working of the Rourkela Plant were due to frequent changes in the top management. In a complex project like a steel plant it takes time to understand its problems, formulate plans and programme to improve its working and to execute them. It is unfortunate that during the crucial formative years, the Rourkela Steel Plant did not have the continued and effective guidance of one General Manager. The Committee would urge that utmost care should be taken to select the right type of man for this post and a minimum tenure of four to five years fixed for it.
27	84	The Committee feel that for a large organisation like Hindustan Steel Ltd., which has been in existence for over a decade now, it should be possible to find suitable personnel from within the industry for manning the top posts. They, therefore, recommended that a systematic plan should be prepared to train and develop managerial talent for manning these posts in the existing and future Steel Plants.

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28	88	Inspite of the fact that even in 1961 the actual staff strength at Rourkela was 16,261 as against the Project estimate of 6,800, no efforts appear to have been made to review the staff strength and restrict the actual employment according to requirements. The result has been that the staff continued to increase and the present strength is about 24,000.
	90	The Committee note that in their 33rd Report, which was presented to Lok Sabha in March, 1959, the Estimates Committee suggested that a job analysis might be carried out and staff strength determined on a scientific basis. They regret to observe that no systematic study has been made so far. Rough assessment for certain categories of staff which is stated to have been made by the management can hardly serve the purpose. Th Committee consider that to solve the problem of overstaffing a scientific assessment of staff is essential. They, therefore, recommend that immediate steps should be taken to carry out such a study to determine the extent of surplus staff. Such staff could then be absorbed in the expansion programme of the plant or employed in other Steel Plants.
29	94	The Committee note that the system of providing helpers is generally followed by all the Public Undertakings. They understand that such a system does not exist in industrialised countries. It leads to overmanning and consequently higher cost of production. The Committee are glad to be assured that helpers would not be provided in future steel plants. They recommend that in the existing plants efforts should be made to reduce their number and the existing unskilled helpers should be trained for holding skilled jobs.
30	96	There is high percentage of absenteeism at Rourkela. Since experienced men are so short, it would pay to bring down absenteeism by all means. It would be desirable to provide inducements and rewards for high attendance. The Committee trust that effective steps would be taken to reduce the incidence of absenteeism.
31	99	High overtime allowance had to be paid at Rourkela Steel Plant which was stated to be due to shortage of skilled workers. The Com-

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		mittee are surprised to note that inspite of the fact that the actual strength in all the categories was much in excess of that provided in the Project Report the plant was still short of skilled workers. It shows that the method of recruitment and training of workers had not been satisfactory. Needless to say that the payment of large amount of overtime on a regular basis not only increases the cost of the end product but also lowers the efficiency and morale of the staff. The Committee, therefore, desire that effective measures should be taken immediately to minimise the incidence of such payments.
32	101	It is surprising that even in such matters as working hours for office staff there is no uniformity in the three steel plants of the same undertaking *i.e.* Hindustan Steel Ltd. Such disparities lead to discontentment among the workers. The Committee consider it desirable to have uniformity in such matters in the three steel plants.
33	103	The Committee note that 62 of the trained engineers were posted on jobs other than those for which they were trained. For example persons trained for operation of coke ovens and steel melting shops were posted to purchase and sales departments. Whatever the operational necessity, the posting of a trained person on a job other than that for which he has been trained, is a waste of the training given at some cost. This would also appear to indicate that training of personnel is not co-ordinated with the actual needs. The Committee trust that in future proper assessment of requirements of trained personnel for various jobs would be made before arranging for their training.
34	108	Considering that delays in the recognition of workers' unions lead to labour troubles, the Committee desire that Government should examine the existing procedure for according recognition to the unions with a view to expediting it.
35	109	Labour Laws should be complied with by all Industrial Undertakings whether in the public or private sector. This is all the more necessary in the case of Public Undertakings which are expected to be model employers. It is necessary for the efficient and economic working of an

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		undertaking that there should be complete understanding and cooperation between labour and management. While the management should comply with all Statutory obligations and provide to the workers amenities and good working conditions, it is also the duty of the workers and their unions to cooperate with the management in the maximisation of production and the maintenance of industrial peace. To ensure continuously good industrial relations the Committee would suggest that the management and the workers should enter into long term agreements for settling all their disputes by reference to arbitration rather than by resort to strikes, lockouts or Courts of Law.
36	112	It is evident that the decision to provide State transport to the workers instead of departmental buses has not only resulted in payment of subsidy to the workers but also in heavy loss of man hours on account of 15 minutes' grace period given to all the workers and consequent loss of production. *Prima facie* it would be better to provide departmental transport to the workers. The Committee desire that the matter should be examined urgently.
37	116	The Committee do not approve of the practice of obtaining the approval of the Cabinet and Parliament to piecemeal and incomplete estimates of a project as they do not give a true picture of the total financial outlay thereon. They consider that projects, particularly those involving heavy capital outlay should be undertaken on the basis of complete esimates which should not only indicate the cost of plant and machinery but also cost of other items like townships, ore mines, quarries, ancillaries, etc. The Committee hope that this will be ensured in future and there would not be wide variations between the original estimates and final expenditure.
	117	In this connection the Committee find that normally the original estimates of the projects are only approved by the Cabinet and the subsequent revisions are sanctioned by the administrative Ministry concerned. In the opinion of the Committee it is desirable that every substantial revision in the estimates should be specifically approved by Cabinet.

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38	121	The Committee realise that heavy industries like steel plants with high capital investment have long gestation periods. Nevertheless, the fact that even after 5 years of the commencement of production (the first blast furnace having been commissioned in February, 1959) there was accumulated loss of Rs. 38.94 crores at Rourkela shows that the working of the plant has not been satisfactory. The Committee urge that the Plant organisation should be geared to continuously work the Plant to its rated capacity and effect economy in expenditure.
39	123	The Committee regret the manner in which the assessment of the surpluses from the Public Undertakings had been made for the Third Five Year Plan. *Ad hoc* assessment of surpluses is unfortunate as it raises hopes which cannot be fulfilled and exposes the Undertakings to public, criticism. The Committee trust that while making provision in the Fourth and subsequent Plans the estimates of surpluses from Public Undertakings would be made on a realistic basis and in consultation with them.
40	128	It is surprising that a Commercial Undertaking like Hindustan Steel Ltd., did not consider it necessary to investigate the reasons as to how a private firm was able to secure an order from another public undertaking for the pipes manufactured by them and for which they had also tendered. It is only after giving evidence before the Committee that the Ministry of Steel & Mines have decided to refer the matter to the Central Bureau of Investigation. As the case is now under investigation the Committee do not wish to comment on its merits. The Committee, however, feel that Public Undertakings should purchase their requirements directly from the manufacturing Public Undertakings rather than through private agencies. In this connection they would invite a reference to para 111 of their 5th report on ONGC.

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41	132	The Committee feel that in view of the fact that the dealings between the firm and a Public Undertaking had not been satisfactory, the propriety of granting further licences to the firm needs to be examined.
42	139	The Committee are not happy with the manner in which the case of export of ingots slabs by certain private firms has been dealt with. Having committed themselves to allow the import of finished steel without pre export of ingots and slabs, it was expected of Government to watch the performance of the firms for some time and to stop further imports by them, if their performance about the export of ingots and slabs was not satisfactory. It is regrettable that even after the issue of orders by the Ministry in October, 1960 not to allow pre-imports these firms were allowed to import steel to the extent of Rs. 1·49 crores without fulfilling their export commitments. It is also surprising that no enquiry was earlier conducted into the reasons for the parties not being able to export steel as required under the agreements. It is only now that the Ministry have asked the Iron & Steel Controller to hold such an enquiry. The Committee, however, feel that a thorough enquiry should be held in this case at the highest level.
43	142	Since the investment on township and the cost of maintaining it add considerably to the overheads of a project, the Committee feel that there is need for utmost economy in the construction of houses and utilisation of land. Ceiling or norms should also be laid down about expenditure that could be incurred by a Public Undertaking on the township. In this connection they should also invite a reference to paras 13 and 56 of their 8th Report on Townships and Factory Building of Public Undertakings.
44	143	The Committee find that about 1000 houses built by Rourkela Steel Plant have been allotted to staff of other Departments of Central and State Governments. They feel that the Rourkela Steel Plant could not legitimately be asked to bear the additional expenditure incurred on these houses and it should be borne by the respective offices.

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45	146	As on 1st August, 1964, 664 houses were lying vacant of which 145 had been vacant for 6 months and more. The existence of vacant houses results in loss of revenue and their non-allotment causes hardship to the employees. A Committee is stated to have been appointed to look into the question of allotment and occupation of houses. It is hoped that with the implementation of the recommendations of that Committee the position would improve.
46	149	The Committee suggest that proper soil investigations should be carried out before taking up their construction to avoid losses in future. due to cracks in the houses.
47	153	From the facts placed before the Committee it is evident that the Hindustan Steel Ltd. failed to safeguard their interests by not providing even the basic condition in the agreement with the Contractor for the variation in the payment according to the quantity of steel actually used. The Committee expect the H.S.L. to avoid the recurrence of such cases.
48	158	The Committee are concerned to note that inspite of the fact that the facilities for weighing the wagons were available with the plant, petrol wagons in which Creosote oil, a by-product of Rourkela Plant was supplied to the Railways were not weighed before their despatch resulting in a loss of Rs. 1,17,600 to the plant. The fact that even after the detection of mistake on the 23rd January, 1961 the Plant did not start weighing the wagons till the actual orders were received eight days later clearly shows that there was laxity of control on the despatches. The Committee feel that business prudence required that every wagon should have been weighed before despatch.
49	163	The Committee are not happy over the manner in which the project authorities acted in providing dust catches for steam boilers. They find that although the steam boiler failed in May, 1960 due to the absence of dust catchers, the matter was not taken up with the technical

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		consultants even up to March, 1962 when the agreement with the consultants had expired. The Committee find no justification for the lapse in this regard. Even granting that initially the project authorities acted on the advice of their technical consultants, there was a delay of four years in placing the order for the dust catchers after the failure of steam boiler. The result was that the project suffered a loss of Rs. 35 lakhs up to May, 1964 due to use of coal instead of coke-breeze. The Committee deprecate these inordinate delays which have resulted in heavy losses.
50	165	The Committee regret to note that the case of extra payment of Rs. 3,58,398 to a Contracter for the Construction of a ring road in Rourkela township is another instance where the Plant authorities failed to safeguard their financial interests and made avoidable extra payment. It is surprising that even after the matter had been pointed out by Audit, no proper enquiry was made in this case with a view to fixing the responsibility for the extra payment. They desire that the matter should be investigated and action taken.
51	167	The action of the project authorities to proceed with the scheme for cattle colonisation and Dairy farm which had to be abandoned after incurring an expenditure of about Rs. 70,000 and to appoint some staff before the scheme was approved by Government was pre-mature. The Committee trust that the plant authorities will be more careful in future to avid such infructuous expenditure.
52	8	The Committee find that a tyre retreading plant ordered in 1961 has not yet been installed. They desire that steps should be taken by the authorities to ensure that in future, plant and machinery involving large capital investment are put to use without delay.
53	171	The Committee welcome the proposal to set up a Central Research Institute for Steel technology as a step in the right direction. They would suggest that the desirability of associating

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		TISCO and IISCO with this Research Institute may also be considered. The Committee also trust that with the establishment of Central Research Institute more attention would be paid to steel technology.
54	172	The Committee noticed several disquieting features and shortcomings in the planning execution and working of the Rourkela Steel Plant. All these have resulted in the over-capitalisation of the Plant, lower production, higher costs and heavy losses. The Committee have suggested measures to improve the position at appropriate places.
	173	The Committee are, however, aware that Rourkela was the first steel plant, taken up for execution in the Public Sector. It had also adopted the latest method of steel making—L.D. process—which was new to the country. The production of flat products by this plant also required a high degree of skill and experience which was not available in the country. The management had to face many unforeseen difficulties in organising the human, material and financial resources required for the execution and running of such a major project. The task was rendered more difficult by frequent changes in the top management.
	174	The Committee are glad to note that Rourkela Steel Plant has now turned the corner and is working upto the rated capacity since September, 1964. The industrial relations have also since improved. The Committee trust that the management will now direct all its energies to maintain the tempo of production and to improve the financial position of the Plant. With the achievement of full rated capacity and the expansion which is in hand, this Plant is bound to make a significant contribution to the country's industrial development and will occupy a place of pride in the nation's economy.

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