

**COMMITTEE ON PUBLIC  
UNDERTAKINGS  
(1973-74)**

**(FIFTH LOK SABHA)**

**FORTY-FIRST REPORT**

**Action Taken by Government on the recommendations  
contained in the First Report of the Committee  
on Public Undertakings (Fifth Lok Sabha)**

**HINDUSTAN STEEL LTD.**

**(Ministry of Steel and Mines)**



**LOK SABHA SECRETARIAT  
NEW DELHI**

*November, 1973/Agrahayana 1895 (S)*

*Price: Rs. 2.00*

CORRIGENDA

FORTY-FIRST REPORT OF C.P.U.

<u>Sra</u>	<u>Line</u>	<u>For</u>	<u>Read</u>
Intro-	Para 5, line 5	45.22	70.2
action	line 7	42.25	5.4
"	" line 8	Final replies	Replies
"	" line 9	12.33	24.3
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	34	confirms	confirms
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		reply was not susceptible of	
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14	37	reply	reply*
14		add as foot-note *not	
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17	18	in	to
17		delete existing foot-note	
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19		28 and 28.	
20		add Ministry of S & M.	
20	4	(Dept. of Steel) Q.M.No.	
27		HI1018/16/71-Parl.at.28.6.72]	

<u>Para</u>	<u>Line</u>	<u>For</u>	<u>Read</u>
50	30	bein	being
51	20	*per tonne of* of Rs.1176	of Rs.1176 per tonne of
51		<u>delete</u> existing	Foot-note
57	4 from bottom	fixed	noted
58		<u>Add</u> as foot-note	*Not vetted by Audit.
59	23	twice Linking	twice linking
59	3 from bottom	REPLY	REPLY OF GOVERNMENT
60	In the Table	After Sl.No.2	add 'A'
		After Sl.No.5	add 'B'
61	10	now	no
62	1	cases	case
62	23	in	to
66	17	taking	making
66	22	reply	reply*
66		<u>add as foot-note</u>	
		*Not vetted by Audit'	
74	Table line 7 below 1969-70	0.83	0.88
74	12 from bottom	effecting	affecting
<del>74</del>		<u>Add</u> as foot-note	
		*'Not vetted by Audit'	
76	5	compressors	Compressors"
80	27	add after 1972	and letter No. RKL-5(4)172 dated 9.11.1973
81	11	confirms	conforms
88	2-3	per-cantage	per-centage

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COMMITTEE ON PUBLIC UNDERTAKINGS  
(1973-74)

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COMMITTEE ON PUBLIC UNDERTAKINGS  
COMPOSITION OF THE STUDY GROUP ON ACTION  
TAKEN REPORTS AND GENERAL MATTERS

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  3. Smt. Purabi Mukhopadhyay
  4. Dr. Mahipatray Mehta
  5. Shri Lal K. Advani
  6. Shri U.N. Mahida

## INTRODUCTION

I, the Chairman, Committee on Public Undertakings having been authorised by the Committee to submit the Report on their behalf, present this Forty-first Report on Action Taken by Government on the recommendations contained in the First Report of the Committee on Public Undertakings (Fifth Lok Sabha) on Hindustan Steel Ltd.

2. The First Report of the Committee on Public Undertakings (5th Lok Sabha) on Hindustan Steel Limited was presented to Lok Sabha on the 30th November, 1972. The replies of Government to all the 37 recommendations contained in the Report were received in batches and the last batch was received on the 4th December, 1972. Further information sought in respect of certain points arising out of the replies furnished by Government were received by the 10th September, 1973.

3. The replies of Government to the recommendations contained in the aforesaid Report were considered by the Committee on Public Undertakings on the 26th July, 1973 and the Chairman was authorised to finalise the Report on the basis of the decisions of the Committee. The Committee considered the comments arising out of factual verification of the Report at their sitting held on 20th November 1973 and adopted the Report after certain amendments.

4. The Report has been divided into the following Chapters:-

- (i) Report.
- (ii) Recommendations that have been accepted by Govt.
- (iii) Recommendations which the Committee do not desire to pursue in view of Government's replies.
- (iv) Recommendations in respect of which replies of Govt. have not been accepted by the Committee.

5. An analysis of the Action Taken by Government on the recommendations contained in the First Report of the Committee is given in Appendix IV. It would be observed therefrom that out of the total number of recommendations made in the Report 45.22 per cent have been accepted by Government. The Committee do not desire to pursue 42.25 per cent of the recommendations in view of Government's replies. Final replies of Government in respect of 12.33 per cent recommendations have not been received by the Committee.

SUBHADRA JOSHI,

NEW DELHI;

November 23, 1973  
Agrahayana 2, 1895(S)

*Chairman,*  
*Committee on Public Undertakings.*

## CHAPTER I

### REPORT

#### A - Agreement with Consultants for Alloy Steels Plant Recommendation (Serial No. 1)

In para 2.14 of their First Report on H.S.L. the Committee on Public Undertaking had observed as follows:-

"The Committee regret to note that in the agreement entered into with the Consultant for Alloy Steels Plant (M/s. Dasturco) in December, 1959, the payment of fee was linked to a certain period of time instead of providing fee for completion of specified works within stipulated period with suitable penalty clauses for non-completion of work within the time limit. In spite of the experience of the original agreement the same defective provision was allowed to continue in the agreement for extension of consultancy services in 1965 due to non-completion of the work within the original schedule. As mentioned in paragraph 2.8 the Committee on Public Undertakings (Third Lok Sabha) recommended in April, 1966 that Government should ensure that they did not in future enter into consultancy agreements on these terms. The Committee are distressed to note that although the Government accepted this recommendation in January, 1967, the agreement with the consultants was extended twice linking the additional fees with a period of time instead of completion of the remaining work. The Committee desire that this matter should be looked into by Government with a view to fixing the responsibility for entering into defective agreements in the course of extending the services of the consultants, ignoring their own experience of the original agreement and the recommendation of the Committee on Public Undertakings."

2. In their reply the Ministry have stated *inter alia* that while negotiating the terms of the second extension, efforts were made by H.S.L. to delink the payment of fees from period of time. However, the Consultants did not agree to this and they insisted that the terms of payment of fees should be on the same lines as under the first extension. In the circumstances and

as induction of new consultant at that stage for completing the residuary services was just not practicable, H.S.L. had no other alternative but to grant the second and third extensions to Dasturco linking the fees to a certain specified period as in the case of their original agreement and the first extension.

Despite the extensions being of minor nature and meant to cover residuary work efforts were made to de-link payment from period of time keeping in view the recommendation of the Committee but this did not prove practicable. According to the Ministry in the circumstances, a further examination with a view to fixing responsibility would not appear to be necessary.

3. The Committee are not satisfied with the reply furnished by the Ministry. In their opinion the Ministry/HSL should have made more serious efforts to persuade the Consultants (M/s. Dasturco) to agree to the linking of the fees with the completion of the specified works. The Committee urge that the Government should ensure that such lapses do not recur and payment of fees in such agreements is necessarily linked with the completion of specified works within a specified period and suitable penalty clauses are included in the agreements for non-completion of works within the specified time limit.

*B - Rated Capacity vis-a-vis actual production  
Recommendation (S.No.3)*

4. In para 3.8 of their report the Committee on Public Undertakings observed as follows:-

"The Committee regret to note that the production (in steel plants) was not only substantially lower than the rated capacity but even lower than the attainable capacity which according to the management had been arrived at after taking into consideration the normal gestation period and other constraints like imbalances arising out of lack of matching facilities with the chain of production.

The lower production of steel as compared to capacity means higher cost of production and financial loss to H.S.L. and produces a heavy impact on the whole economy. There has been considerable scarcity of steel in the market resulting in high open market prices. The import of steel to meet the demand also results in loss of valuable foreign exchange. Had the three steel plants worked to their rated capacity, an additional 18.99 lakh tonnes of ingot steel would have been available to the country. It is, therefore, imperative that

urgent and effective steps are taken to improve production performance of the steel plants."

5. In their reply, the Government stated as follows:-

"Government as well as the management of HSL are equally conscious of the urgent need to step up production from the steel plants and to reach capacity level production as rapidly as possible within the limitations imposed by the special problems faced by the plants such as trouble in the coke ovens, the unfortunate roof collapse at Rourkela and a disturbed industrial relations situation at Durgapur, the management of the Company is making all possible efforts in this direction. These include specialised repairs to coke ovens, use of alternative fuels to supplement gas availability, oil firing in certain furnaces to augment fuel resources, improved maintenance aimed at the better equipment availability, speeding up of capital programmes required to correct existing imbalances in production facilities and planned procurement of spares, refractories and other essential materials. In the area of industrial relations, efforts continue to be made to ensure that industrial disputes are settled by negotiations and the cooperation and participation of workers in the production efforts is not hampered. With the cooperation and assistance of the State Government, an agreement has been recently signed between the Unions and the managements of the Durgapur Steel Plant and the Alloy Steels Plant for the establishment of Joint bodies in the Plant and a State-level Consultative Council for the speedy settlement of industrial disputes. Hindustan Steel Limited has also evolved new production incentive schemes designed to motivate labour productivity, discourage absenteeism and reduce overtime payments.

The Government also keep constant watch on and review the performance of the units and the company through periodical Task Force meetings and render all the assistances that is required."

6. From the further information received from the Ministry and the annual report of the Ministry for 1972-73 the Committee, however, find that the production of steel ingots in all the three steel plants was still considerably lower than the rated capacity. Further in the case of Durgapur Steel Plant, the percentage of

rated capacity achieved during the last three years was even lower than that in 1969-70 as indicated below:-

	<u>1969-70</u>	<u>1970-71</u>	<u>1971-72</u>	<u>1972-73</u>
	(percentage of rated capacity achieved)			
Bhilai Steel Plant	74	78	78	84
Durgapur Steel Plant	51	40	44	45
Rourkela Steel Plant	61	58	46	65
Average	64	61	59	68

7. The Ministry have added in the further reply that "by the very nature of the operations involved in an integrated steel plant, the full impact of the various measures taken to improve production would be felt gradually and over a period of time. Some improvement is already noticeable in the case of Bhilai and Rourkela steel plants where the ingot steel production during the period April-December, 1972, represented 81.3% and 63.0% of installed capacity respectively."

8. The Committee find from the Annual Report of the Ministry of Steel & Mines (Department of Steel) for the year 1972-73 that the Action Committee of the Planning Commission under the chairmanship of Shri M.S. Pathak, examined the working of Bhilai Steel Plant and has recommended that with the setting up of certain additional manufacturing facilities as well as the use of improved refractories, the rated capacity of 2.5 million tonnes can be achieved by the end of 1975. Similarly, in the case of Rourkela Steel Plant, the Action Committee of the Planning Commission has recommended the removal of serious imbalances in the plant in order to reach full rated capacity. On the implementation of the recommendations it should be possible for the plant to achieve its rated capacity in 1974-75.

9. As regards Durgapur Steel Plant, it has been stated that production in Durgapur has been affected by a number of reasons of which unsatisfactory industrial relations are the most important. This plant has also been affected by power shortage. The recommendations of the Action Committee on Durgapur Steel Plant have not yet been finalised.

10. The Committee regret to note that the overall production of steel ingots in 1972-73 in the three steel Plants of HSL was still only 68% of the rated capacity despite the various measures stated to have been taken by the Management to improve production. They are concerned to note that in Durgapur Steel Plant the percentage of rated capacity achieved had gone down and was only 45% in 1972-73 as compared to 51% in 1969-70. The Committee therefore urge that effective steps should be taken to improve production performance especially in Durgapur Steel Plant. The Committee need hardly stress that there is imperative need to step up production and to achieve soon the rated capacity in all the three steel plants.

*Supply of refractories - Recommendation (Seial No. 4)*

11. In paras 3.40 and 3.41 of their First Report, the Committee on Public Undertakings had observed as follows:-

"The Committee view with concern the shortage of refractories required by the Steel Plants which according to Hindustan Steel Limited was a serious impediment to raising production. In spite of long established refractory industry in India HSL had to import substantial quantities of refractories at considerable cost. The orders for imports during 1970-71 were likely to be of the order of Rs. 10 crores. The Committee, however, feel that with proper planning and foresight it should have been possible to place orders for the import of refractories well in time to avoid shortfall in production due to the shortage of refractories.

The Committee have also been informed that for the production of high quality refractories, the Government have decided to set up a refractory plant in the public sector at Bhilai with a capacity of 1,00,000 tonnes after due consideration of the installed capacity of the refractory units in the private sector and the economy of this project. It is unfortunate that the earlier proposal to set up a refractory plant of sufficient capacity to meet the requirements of the steel plants, was dropped by Government in December, 1965 after incurring an expenditure of Rs. 17.04 lakhs on the preparation of Preliminary and detailed Project Reports.

According to the Ministry, the assessment of the situation made at that time indicated that except for carbon and/or graphite refractories there was sufficient capacity in the country to meet the demand for refractories by the Iron and Steel Industry during the Fourth Plan period. On the other hand, the Committee were informed by HSL that they were firmly convinced that without the proposed refractories plant, the steel plants will run into serious difficulty due to the inability of private sector refractories industry to meet the growing demands of the steel industry for the refractories of required quantity. The view of HSL has been justified by the present serious situation caused by the non-availability of refractories of the requisite quality and quantity for the steel plants. The Committee have not been informed of the reasons which led the Government to a conclusion contrary to their own earlier decision and the views of the H.S.L. The Committee have been informed that the decision for not setting up the refractories plant had been taken by the Government on the basis of its own assessment although the Indian Refractory Makers Association had also represented to the Government that the creation of additional capacity would not be justified. The Committee, however, have the apprehension that the decision of Government was largely influenced by the representation of Indian Refractory Makers Association rather than by their own realistic assessment of the respective demand and supply for the refractories after taking into consideration the views of H.S.L. The result has been that there was loss of production of steel due to the shortage of refractories and avoidable expenditure on import of refractories. The Committee note that the Government have taken a decision to set up a Refractory Plant in the Public Sector and are of the opinion that there is need for taking realistic demand surveys before deciding to set up a project or otherwise in future so that the projects are set up in accordance with the realistic demands."

12. In their reply the Ministry stated as follows:-

"The decision not to set up a refractory plant taken in December, 1965, was based on an assessment made, in consultation with the concerned Government agencies, of the existing or approved capacity for the manufacture of refractories. The conclusion reached was that there was sufficient capacity in the country to meet the demand for refractories from the iron and steel industry



during the Fourth Plan period except for carbon/graphite refractories, the demand for which was too small to justify the setting up of a refractories plant at the cost indicated by the USSR Government. The decision was based on an assessment of the position made by Government itself and was not "largely influenced by the representation of Indian Refractory Makers Association", though the Association also did represent to Government that the creation of additional capacity would not be justified. Unfortunately, however, the indigenous refractory makers failed to meet the full requirements of the iron and steel industry at a later date for a variety of reasons, leading to shortage of refractories and their import.

In January, 1971, Government appointed a Committee under the Chairmanship of the Senior Industrial Adviser, Department of Steel, to make a quantitative estimate of the requirements of different categories of refractories, to assess the existing installed capacity and to examine and recommend the extent of additional capacity which should be set up to meet the operational and maintenance requirements of the Steel Plants and to ensure that the production of refractories kept pace with the steel development programmes. Part I of the report of the Committee containing a long-term assessment of demand and availability has been received. The various recommendations made by the Committee are presently under consideration and implementation by Government and would result in increased production and improvement in the quality of refractories from indigenous sources.

As already known to the Committee, Government have sanctioned the setting up of refractory plant at Bhilai with an annual capacity of 1,00,000 tonnes of refractories, of which 60,000 tonnes will be fire-bricks, 30,000 tonnes basic bricks and 10,000 tonnes silica bricks. Capacity for silica bricks is proposed to be doubled to 20,000 tonnes as recommended by the Committee referred to in the previous paragraph. This would increase the overall capacity of the plant to 110,000 tonnes. The project is likely to be commissioned in 1975.

The Government have acquired M/s. Asian Refractories Limited. It will cater to the requirements of fire-clay bricks of Bokaro Steel Plant.

In order to ensure proper planning and timely availability of stores and spares, refractories, rolls etc. Hindustan Steel Limited has drawn up

a 3 year Rolling Plan so that the required items, whether imported or indigenous, are not only planned for and secured in time but are also available when required. This should considerably reduce procedural delays in providing foreign exchange. Further, bulking of demands could not only save money in procurement but also help in import substitution."

13. The Committee feel that the action taken by Government in January, 1971 could have been taken much earlier and a realistic assessment of the demand and the existing capacity for refractories should have been made to avoid shortfall in production of steel due to shortage of refractories of required quality.

*The Committee also regret to note that there has been delay in setting up the refractory plant at Bhilai. Although earlier it was expected that the Detailed Project Report for the proposed project would be approved by the Government by the end of 1972, the committee find that it has not even been considered by the Steel Authority of India, whereafter it will be sent to Government for sanction. It has been stated that it would take three years to complete the project after the sanction of D.P.R. by the Government. It is now expected that this will be by the end of 1976 although originally it was expected to be commissioned in 1975. The Committee would urge that steps should be taken to ensure expeditious sanction of the D.P.R. and the execution of the Project.*

*Working of Wheel & Axle Plant - Recommendation (Serial No. 6).*

14. Commenting upon the low production in Wheel & Axle Plant of Durgapur Steel Plant, the Committee on Public Undertakings had observed:-

The Committee are not satisfied with the reasons advanced for abnormal low production in wheel and axle plant. They agree that in an integrated steel plant the overall conditions have an important bearing on the performance of a particular unit. The Committee, however, find that the production in 1969-70 in the wheel and axle plant has only been about 15 per cent of the rated capacity whereas the production of steel ingots was about 60 per cent of the rated capacity. The overall low production of steel in Durgapur Steel Plant could therefore hardly explain the unsatisfactory produc-

tion performance of the Wheel and Axle Plant. The low production in this plant not only resulted in loss to HSL but also affected the production of rail coaches and wagons. There was also drain of foreign exchange on the import of wheelsets which became necessary due to low production in this plant. One of the reasons for low production as pointed out by Audit was that "There was lack of control over the production of ingots of required sizes." The result was that these ingots did not give the required number of wheel blocks and consequently there was lower yield and lower output of finished wheels. This matter has been analysed in detail in the following paragraphs. The Committee recommend that the Ministry should make a detailed enquiry into the working of this unit to find out the real reasons for abnormal low production and remedial measures should be taken to improve production performance.

15. In their reply dated the 1st October, 1972, the Ministry stated *inter alia* that it had been decided that H.S.L. should set up an internal enquiry with the help of some technical persons to examine the problem once again with a view to recommend steps that can be taken within the constraint of labour trouble to improve production performance. Subsequently in their reply, dated 15th March, 1973 the Ministry stated that H.S.L. are yet to set up the proposed internal inquiry.

16. Asked about the present position in regard to the setting up of the internal inquiry the Ministry informed on 16th July, 1973 that the Internal Inquiry Committee which was set up to investigate various problems of wheel & Axle Plant had completed its examination and the report of the Committee was expected shortly.

17. *The Committee regret to note that although they had recommended as early as November, 1971 that the Ministry should make a detailed enquiry into the working of the Wheel and Axle Plant to find out the real reasons for abnormal low production, the enquiry committee had not been set up even till March, 1973 and the Report of the Enquiry Committee is not yet available. The Committee are surprised at the inordinate delay on the part of the Ministry/HSL first in taking decision about the appointment of the Enquiry Committee and then in seeing to it that the enquiry is completed expeditiously. The Committee recommend that the Report of the Enquiry Committee be finalised at the earliest and laid before Parliament.*

## MANGANESE ORE MINES

*Recommendation (Serial No. 16)*

18. In para. 5.58 of their Report, the Committee on Public Undertakings observed as follows :-

"The Committee regret to note that as in the case of other mines, the working of the Manganese ore mines presented a dismal picture of very low production and abnormally high cost of production. The Committee are surprised to find that the H.S.L. accepted for exploitation those areas which are not economically mineable. The average output from the mines during 1965-66 to 1969-70 has been about 1.5 per cent (approx.) of the total quantity required by the Plant and the cost of raising has also ranged between 10 times to about 2 times (approximately) the cost of ore purchased from open market. These mines are hardly serving any purpose except adding to the avoidable expenditure year by year due to abnormally high cost of raising ore. The Committee therefore recommend that the desirability of continuing the mining of manganese ore from these captive mines should be examined in the background of its existing performance without any further loss of time."

19. In their reply the Government have *inter alia* stated as follows:-

"From the situation as at present, there is practically no possibility of having large scale manganese ore exploitation through captive mines. In future, when Bhilai locate an economical deposit, a proper captive mine can be developed for exploitation. In the meantime, for the reserves that have been proved, BSP is taking up the exploitation programme of 30,000 tonnes for the year 1972-73. After processing the tender papers, if it is found that it will be economical to exploit this quantity, Bhilai will undertake the mining operations, otherwise, Bhilai may have to close down Manganese mining unit. The available personnel in the mining side can be absorbed against vacancies in other mines.

The mining work done was really incidental to prospecting, which has to be carried out fully even if to disprove a property before surrendering. As stated above these properties, granted to Bhilai Steel Plant were unprospected and until complete prospecting work was done, with full staff to man

the units, the merits or the demerits of the property would not be known. The raising of ore was incidental to this process and the cost has to be viewed in this context."

20. *The Committee are not satisfied with the reply furnished by Government. They feel that the HSL was not justified in taking up for prospecting unprospected areas and to incur heavy expenditure on their prospecting which has largely become infructuous. The HSL should have taken up the areas for exploitation only after a proper survey and certificate issued by the Geological Survey of India that the economically exploitable deposits of Manganese ore were available in these areas especially when other alternative sources of supply were available.*

#### WORKING OF BY-PRODUCT PLANTS

##### *Recommendation (Serial No. 26)*

21. In para 8.8 of their Report the Committee on Public Undertakings observed as follows:-

"From a statement furnished to the Committee showing the yield of various by-products in three steel plants the Committee find that the recovery of various by-products had been lower than norms laid down by the Norms Committee. The recovery of both crude Benzol and the Ammonium Sulphate during the years 1968-69 and 1969-70 has been the lowest in Rourkela Steel Plant as compared to the other two Steel Plants.

The Committee hope that the implementation of various recommendations of the two Expert Committees appointed by HSL to examine the working of these by-product plants will be expedited to improve the working of these plants. They would like to emphasise the need to maximise production from these plants since substantial investment has been made by HSL and their performance affects the cost of production of steel and also the working results of HSL."

22. In their reply the Government have stated as follows:-

"The yields of by-products in the last 3 years were as follows:-

Norms as  
per the  
Norms  
Committee

	69-70	70-71	71-72
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*Bhilai Steel Plant*

Crude tar %	3.0	2.90	2.85	2.78
Benzol %	0.8	0.52	0.45	0.49
Ammonium Sulphate %	1.1	0.95	0.95	0.84
Gas (NM3)	300	303	306	285

*Durgapur Steel Plant*

Crude tar %	3.0	2.78	2.73	2.54
Benzol %	0.8	0.47	0.44	0.40
Ammonium Sulphate %	1.1	0.88	0.83	0.81
Gas (NM3)	275	271.8	272	274

*Rourkela Steel Plant*

Crude tar %	3.0	2.85	2.75	2.67
Benzol %	0.5 (MTP)	0.34	0.024	0.14
Ammonium Sulphate %	1.1	0.68	0.45	0.43
Gas (NM3)	275	270	261	257

While full implementation of the recommendation of the two by-product Committees are nearing completion, the even conditions of old batteries under the 1 million tonne stage have deteriorated affecting the yields of the by-products. A Committee has been recently constituted to make a special review of the progress of implementation of the Raju Committee's report and to suggest further action to be taken in order to step up the production of by-products in all the Plants at the earliest.

In case of Rourkela Steel Plant, the limited compressed Coke Oven gas availability has been the main reason for low production of crude, Benzol. Restricted availability of steam has limited the production of Ammonium Sulphate.

Crash programmes have been made for the repair of all the steam leakages and for the repair of Coke Oven Batteries and Coke Oven equipments so as to improve the oven pushing as well as gas yield."

23. *The Committee view with concern that the recovery of the various by-products is deteriorating year after year. They would reiterate their earlier recommendation that there is need to maximise production from these by-product plants since substantial investment has been made by HSL and their performance affects the cost of production of steel and also the working results of HSL.*

*Working of Screw Compressors - Rourkela by-products Plants.*

*Recommendation (Serial No. 27)*

24. In para 8.12 of their Report, the Committee on Public Undertakings had observed as follows:-

"The Committee regret to note the unsatisfactory working of the by-product plants at Rourkela Steel Plant due to poor performance of the screw compressors. It is unfortunate that the design deficiencies in the by-product plant resulted in avoidable loss to HSL. As pointed out by the Kane Committee the "introduction of untried equipment for compression of a corrosive gas without provision for adequate purification introduced an element of risk into the design of the plant that ought to have been avoided." The Committee further note that the Kane Committee recommended that "the Consultants should have provided a purification system to remove Benzol, Naphthalene and Hydrogen Sulphide from the coke oven gas prior to its entry into the screw compressors." It appears that the entire working of the by-product plant was handicapped since the date of installation of the plant resulting in continuous loss in production. The Committee are amazed to find that in spite of having their technical experts, neither the Consultants nor the HSL noticed such a major defect in the plant till the Kane Committee detected the defects in 1968. The Committee are disappointed to note that the substantial loss and avoidable expenditure had to be incurred on account of the defective working of the compressors. Apart from the low production of by-products resulting from the defective compressors, remedial measures had to be taken by the HSL to instal a new compressor as "replacement" to the "damaged" one. For all these losses and avoidable expenditure, the Committee feel, the consultants and HSL cannot escape responsibility."

25. In their reply the Ministry have stated *inter alia* as follows:

"The Compressors were installed at Rourkela on the advice of the Consultants (M/s. I.G.K.D.) in accordance with the design approved by them. Obviously, the Consultants did not consider purification of gas for benzol, naphthalene and hydrogen sulphide before feeding to the screw compressors, necessary. From the date of the installation of the screw compressors in September, 1960, HSL encountered a number of difficulties in the operation of these screw compressors. The difficulties were attributed to severe voltage fluctuations, quality of the cooling water, maintenance of clearance between screw compressors rotors and casings, improper working of the by-product plant units before the compressors and presence of gum forming compounds in the coke oven gas fed to the compressors (for which no removal facilities were envisaged). Thus, no single cause could then be identified as the only reason for these difficulties. In fact even now, it may not be possible for find one single cause for all those difficulties."

"HSL were aware of the difficulties being experienced and had taken steps to deal with the problems of the screw compressors even before the recommendations of the Kane Committee were available. Besides, Hindustan Steel Limited had taken action to provide a replacement compressor. At present, the screw compressors are performing satisfactorily though at reduced load even with Benzol, Hydrogen Sulphide and a part of Naphthalene in the gas."

"The equipment for purification of the gas from Benzol, Naphthalene, Hydrogen Sulphide as suggested by the Kane Committee, has been installed and the performance of the screw compressors will be watched to see whether this would solve the problem."

26. *The Committee express their dissatisfaction with the Government's reply. They are surprised that despite the Committee's view that the consultants as well as the HSL were responsible for the failure to realise that non-provision of purification plant was a major defect which led to avoidable losses, no effort has been made to fix responsibility for this failure. The Committee, therefore, reiterate their earlier recommendation.*



*Naphtha Reforming Unit of Fertilizer Plant, Rourkela**Recommendation (Serial No. 28)*

27. In para 8.20 of their Report the Committee on Public Undertakings had *inter alia* observed as follows:-

"The Committee also find that the contract for the by-product plant including sulphuric acid plant under the Expansion Scheme was placed on the 4th July, 1963 with elemental Sulphur burning equipment with a future provision for Pyrites burning. It is paradoxical that while the orders for the Sulphuric Acid Plant under the expansion scheme were placed in July, 1963 itself pending examination of availability of Pyrites, the Management waited till November, 1965 for a reply from the Pyrites and Chemicals Development Corporation regarding the supply of Pyrites before placing orders for the Sulphur burning unit in respect of the sulphuric Acid Plant already installed under the original scheme."

28. In their reply the Government have stated *inter alia* as follows:-

"If the sulphuric acid plant in the expansion scheme was not installed, the increased requirement of sulphuric acid for the expanded plant would have had to be met by purchase from outside sources. There was, therefore, no anomaly in the finalisation of the contract for the expansion unit though the original unit itself was not yet ready."

29. The Committee are not satisfied with the reply furnished by the Government. The Committee on Public Undertakings (1971-72) had not objected to the commissioning of sulphuric acid plant under the expansion scheme but to the fact that the HSL failed to take a similar decision at the appropriate time in respect of the sulphuric acid plant for the original plant and waited unduly long for a reply from the Pyrites and Chemicals Development Corporation. The Committee, therefore, reiterates that there was avoidable delay in placing orders for Sulphur burning unit for the original plant. The Committee see no justification about the action of HSL in delaying the decision on the ground of non-receipt of reply from the Pyrites and Chemicals Development Corporation till November, 1965.

*Project Estimates - Recommendation (Serial No. 32)*

30. In para 11.17 of their First Report the Committee had observed that the heavy capital expenditure on the plants of Hindustan Steel Limited is a major factor responsible for raising the cost of steel as interest and depreciation charges account for about 25 per cent of the total cost of production of steel. The Committee regret to note that there have been frequent revisions and considerable increase in the capital cost estimates as compared to the original estimates for each of the three plants of Hindustan Steel Limited not only for the original million tonne plants but also for their expansions. In order to have a proper economic appraisal of a project it is essential to prepare realistic estimates taking into account all foreseeable items of expenditure to obviate the need for frequent revision of estimate. If substantial increases in capital outlay are placed before Government for approval after the project has been launched, Government are left with no alternative but to approve the increase.

31. In their reply on 28th June, 1972, the Ministry of Steel & Mines had stated that 'Government agree that it is essential to prepare realistic cost estimates of projects taking into account all foreseeable items of expenditure so that the need for frequent revision of estimates is obviated.'

The Board of Directors of Hindustan Steel Limited have set up a Group for analysing the causes for excesses in project estimates and to recommend the steps which should be taken to ensure that estimates are prepared on a more realistic basis so that, as far as possible, final cost confirms to the original estimates. The report of the Group should be of considerable assistance to the Company in the formulation of project estimates in future.

32. However, when the Committee enquired about the date on which this Group was set up and whether the Group had submitted any report, the Ministry informed on 3rd September, 1973 that a decision to set up the Group had been taken by the Board, of H.S.L. in October, 1971. On further inquiries it now transpires that this Group was in fact not formally appointed. Moreover, since the reply was sent the steel Authority of India limited has been incorporated and a new procedure has been laid down for the examination of Feasibility and Detail Project Reports in respect of H.S.L. and its other subsidiaries.

33. The Committee take a serious view of the fact that although the Ministry of Steel and Mines informed them on 28th June, 1972 that the Board of Directors of H.S.L. had set up a group for analysing the causes for excess in project estimates and to recommend the steps which should be taken to ensure that estimates are prepared on a more realistic basis no such group was actually appointed. The reply now received (September, 1973) bears this out. The Ministry have now stated that since the incorporation of Steel Authority of India Ltd., a new procedure has been laid down for examination of the detailed project report and feasibility reports in respect of H.S.L. and its other subsidiaries.' The committee would strongly urge that as decided by the H.S.L. earlier, a study Group should be set up for analysing the causes for excesses in various project estimates of the steel plants set up by H.S.L. and to recommend steps which should be taken to ensure that the estimates are prepared in future on a more realistic basis so that barring unforeseeable circumstances, final cost conforms to the original estimates. As admitted by the Ministry such a study would be of considerable assistance to the Company in the formulation of project estimates in future.

## CHAPTER II

## RECOMMENDATIONS THAT HAVE BEEN ACCEPTED BY GOVERNMENT

*Recommendation (Serial No. 2)*

The Committee regret to note that the agreement with the Consortium (M/S.ISCON) for construction of Durgapur Steel Plant did not contain suitable provisions for the supply of detailed drawings simultaneously with the completion of the erection of a unit. The result was that the essential spares for operation of the plant had to be procured from the consortium, who had no manufacturing activity of their own, resulting in avoidable payments in the nature of middle man's profit. The Committee note the statement made by the Secretary of the Ministry of Steel & Heavy Engineering that the lacuna in the agreement was due to inadequate experience at the time of such collaboration agreements. As pointed out in para 2.22 above there were several deficiencies in agreements entered into with other consultants/collaborators also. The Committee, therefore, recommend that Government/Bureau of Public Enterprises should undertake a review of all important agreements entered into with consultants/collaborators by the Government/Public Undertakings and evolve guidelines in the light of the experience gained thereby, for entering into such agreements in future.

(Para No. 2.23)

## REPLY OF GOVERNMENT\*

Noted for guidance. Since then, Hindustan Steel Ltd. have made supplies of drawings obligatory in such agreements. However this is not possible in case of proprietary items.

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It vetted by Audit.

The Bureau of Public Enterprises were requested on the 5th January, 1972 to consider the general question of evolving guidelines in the light of the experience gained on the earlier important agreements. The Bureau have prepared draft guidelines for foreign collaboration agreements for Public Enterprises and these are being scrutinised by the Finance Division of the Bureau. After this scrutiny, the Administrative Ministries concerned with Public Enterprises will be consulted on these draft guidelines and thereafter these will be finalised for issue to all concerned.

Ministry of Steel & Mines (Deptt. of Steel)  
O.M. No. DUR-18(1)/72 dated 27.9.73.

*Recommendations (Serial No. 5)*

The Committee are unhappy to note that even after it became apparent that the sub-standard performance of these locomotives was creating bottleneck in internal transport, no timely measures were taken to improve the position. Although about four years have elapsed since the Committee examined the working of the plant earlier, the same reason namely inadequacy of locomotives for internal transport is being advanced as one of the reasons for low production. The Committee are distressed to find that it was only in the first half of 1970 that two of these locomotives were repowered with CATD-379 diesel engines to improve their performance on the basis of detailed studies carried out by Shri Suri, ex-Director of Central Mechanical Engineering Research Institute. The Research Design and Standard Organisation of Indian Railways have suggested the replacement of existing locomotives engines by MAN diesel engines. The Committee are unable to understand why the Central Mechanical Engineering Research Institute/the Research Design and Standards Organisation of Indian Railways could not be consulted earlier to obviate the Transport difficulties which have for several years been adversely affecting the working of Bhilai Steel Plant. The Committee would urge that the remedial action in the form of repowering the locomotives may be taken expeditiously if justified by the result of performance of the locomotives which have been repowered in

early 1970. They would also like to be informed of the action taken and the improvement effected in the performance of the locomotives as a result thereof.

*Government Reply*<sup>4</sup> (Para No. 3.47)

The observations of the Committee are noted.

It was through detailed analysis that the problem areas in regard to the locomotives were identified and various modifications on the mechanical transmissions were carried out, and thus break down of transmission could be reduced. However, after these modifications were carried out, it became obvious that the existing engines would not meet the requirements.

2. The Russian Engine is powered by 750 HP Diesel Engines which is of extremely compact nature. Alternative Diesel engines with requisite specifications were not available despite the Plant's enquiries to various manufacturers all over the world, to recommend suitable replacement of these engines. While this was on, it was considered desirable to have a fresh assessment of the performance of these Diesel engines through an independent agency and accordingly Central Mechanical Engineering & Research Institute was requested for advise. However, in spite of the fact that they also supported the views held by the Plant, it was difficult to locate suitable engines. It was only during 1969 that a suitable Caterpillar Engine could be located and supplies made to repower two locomotives on trial.

3. It is a matter for regret that this took this length of time. However, in 1969 the plant obtained two Caterpillar Engines No. D379-TA from Larsen & Toubro Ltd., Bombay for repowering Russian Locomotives. Proposals for import of 20 more engines for repowering of as many Russian locomotives have also been cleared. Some of these power packs would be received very shortly. The rest are expected to be received progressively in the next few months.

4. Government have permitted import of 19 locomotives from Czechslovakia. 7 of these locos are expected to be shipped in December 1972 and another 6 in January, 1973. Government have also arranged with the Indian Railways for hire/sale of some of their locomotives to Bhilai steel plant. As many as 20 locomotives from the Indian Railways are now in service in the plant.

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\*Not vetted by Audit

5. With these steps, which have been taken by Government, it is hoped that there would be no more bottlenecks in internal transport in the Plant.

6. Detailed specifications for diesel locomotive specially intended to cater to the difficult conditions of operation in the Steel Plants have been worked out and it has been decided that the manufacture of locomotives to these specifications would be undertaken in the Railways' Production units in the country.

[Ministry of Steel & Mines (Deptt. of Steel) O.M. No. H-11018/16/71 Dated 19.1.73]

*Recommendation (Serial No. -7)*

The Committee regret to note that even after nine years of the commissioning of the wheel and axle plant, the Management had not been able to produce the steel ingots of required sizes for wheel making resulting in loss of production of wheel sets. There is also avoidable expenditure as the wheel blocks of short length had to be treated as scrap and remelted or sold. It was admitted that the difficulty of short length ingots was not of a perennial nature. That being so it is imperative that urgent and effective measures are taken to avoid the production of ingots of short length to get the required yield of wheels.

The Committee view with great concern the continuous loss of production on account of short length ingots and would like to be informed of the remedial steps taken and the results achieved.

(Para No. 3.64)

*REPLY\**

Hindustan Steel have reported that the following steps have since been taken to reduce/eliminate the loss due to short length ingots:-

- (1) Increasing the mould height to 96 inches.
- (2) Proper matching of refractories of the desired dimension to eliminate trumpet leakages.
- (3) Preheating of bottom poured refractories.
- (4) Proper levelling of bottom plates.
- (5) Adequate preheating of moulds.
- (6) Aluminium addition in trumpet for getting more uniform ingots.

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† \* Not vetted by Audit.

Thus the problem regarding short height wheel ingots has since been sorted out.

[Ministry of Steel and Mines (Department of Steel)  
Office Memorandum No. H-11018/16/71-PARL. dt. 31.10.72.]

*RECOMMENDATION (SERIAL NO. 8)*

It is extremely disappointing to note from the above table that out of the total increase in works cost of ingot steel during the last five years, the increase due to productive materials alone has been to the extent of 87 per cent, 81 per cent and 50 per cent in Rourkela, Bhilai and Durgapur Steel Plants respectively. The Committee have pointed out in Chapter V of this Report that the cost of production of raw materials in the captive mines of Rourkela and Durgapur Steel Plants has been very high and in some cases it was even higher than the cost of materials purchased from outside sources. The rate of consumption of the raw materials has been higher than the norms fixed. Thus strict control on the cost and usage of raw materials, refractories, etc. can go a long way in controlling the cost of production.

Another major factor leading to higher cost of production is the increase in operating cost. While in Rourkela and Bhilai Steel Plants, 14 per cent increase in cost of production was due to this factor in case of Durgapur, this was as much as 38 per cent. The Committee have discussed in detail the question of overstaffing and lower productivity in the Steel Plants in Chapter VI of this Report. The highest incidence of operating cost in Durgapur Steel Plant is due to lowest productivity in this plant as compared to the other two plants. There is urgent need to raise the labour productivity in the Steel Plants to reduce the incidence of operating cost.

(Para No. 4.6)

*Government Reply\**

The observations/recommendations of the Committee have been noted. The position in regard to the cost of production of raw materials in the captive mines, rate of consumption of raw materials, overstaffing and labour productivity has been indicated in Govt. reply against the relevant recommendations.



It, however, needs to be pointed out that, apart from the general rise in cost there are a number of escalatory factors adding to the production of steel which are beyond the control of the steel plants e.g., the delivered price of raw materials like coal, ferro-manganese, ferro-silicon, refractories, etc. Prices of stores and spares; wages; increases in rates of Railway freight and electricity duty etc.

A conservative estimate of cost escalations on these counts relating to the period 1.1.70 to 31.3.72 is as under:-

**Increase per tonne of saleable Steel**

(a) Wages at 90% capacity utilisation.	Rs. 47
(b) Railway freight	Rs. 13
(c) Electricity duty	Rs. 6
(d) Raw materials and stores including refractories.	Rs. 35.

Lower volume of production as compared to rated capacity has been another important factor, particularly at Durgapur and Rourkela Steel Plants, leading to higher cost of production.

[Ministry of Steel & Mines (Deptt. of Steel)  
O.M. No.H-11018/16/71-Parl.]

*Recommendations (Serial No. 10)*

The need to reduce the cost of production of steel cannot be over emphasised. Apart from effecting the financial working of the plant, the high cost of steel produces adverse repercussions on the manufacturing cost of the products based on steel. The Committee hope that the proposed measures mentioned above would help to bring down the cost of production. It is essential to keep a constant watch on the cost of production. The variations between the standard cost and the actual cost should be analysed periodically and remedial measures taken in cases where the cost of production is found to be higher than the standard cost. (Para No. 4.18)

*Reply of Government*

While Government agree that it is essential to keep constant watch on the cost of production of steel and that it should be kept as lower as possible, it is necessary, in considering this matter, to give due

regard to the incidence of escalations in costs over which the company has little or no control as mentioned in Government reply to recommendation No. 8,

Cost variances are analysed regularly by the Company and are also reported to the Board of Directors. The analysis distinguishes "usage variances" which are connected with the quality and quantity of inputs and are controllable to some extent, as distinct from "prices variances" which is due to escalation of prices and outside the control of management. The procedure for the analysis of cost variances was introduced by the Company from April, 1970.

[Ministry of Steel & Mines (Deptt. of Steel)  
O.M. No. H-11018/22/72-Parl. dt. 20-2-73]

#### *Recommendation No. 11*

The Committee trust that the linking of price with quality coupled with sampling and analysis of coal both at the receiving and despatching points would help in exercising stricter check on consumption of coal and improving the production performance of the Steel Plants. The question of coke consumption has been discussed in detail in paras 5.59 to 5.71 of this Report and the Committees detailed recommendations are contained therein.

(Para 5.13)

#### *GOVERNMENT REPLY\**

Hindustan Steel Limited have reported that it has been possible for them to obtain some improvement in the yields from their Washeries during 1970-71 and 1971-72 by the elimination of inferior quality of coal having ash exceeding 28% through sampling and analysis of coal and by reducing the number of sources of supply. It may be added, however, that with the taking over by Government of the Coking Coal mines and the formation of the Bharat Coking Coal Limited, a public sector Company, the system of joint sampling through public analysts has been dispensed with. Hindustan Steel Limited are presently carrying out sampling and analysis in their own laboratories.

[Ministry of Steel & Mines (Deptt. of Steel) O.M.  
No. H-11018/16/71-Parl. dated 28th June, 1972]

*Recommendation (Serial No. 12)*

The working of the Barsua Mines was examined by the Committee on Public Undertakings (11th Report Third Lok Sabha) in 1965. The Committee desired 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. It is unfortunate that instead of any improvement, there has been further deterioration in the working of the mines, inspite of the fact that action was stated to have been taken on the lines suggested by the U.N. Mining Expert. The production has gone down from 55 per cent in 1966-67 to 38 per cent in 1969-70 and the cost of raising has increased by 42% during this period. The increase in cost of production has made the mines uneconomic and the cost of iron ore F.O.R. Rourkela Steel Plant from this captive mine was even higher than the cost of ore purchased from outside sources during the last three years. The quality of ore raised from Barsua mines was also stated to be inferior to that of purchased ore.

The Committee hope that the implementation of the recommendations made by the German Consultants in August, 1968 would improve the working of the mines by 1971. It is imperative that urgent and effective steps are taken to improve the working of the mines to bring down the cost of raising ore at least equal to the price of ore of similar quality available from outside sources. In the event of failure to achieve the desired objective, the Committee feel that running of these captive mines and thereby increasing the cost of production of steel cannot be justified.

(Para No. 5.27)

*REPLY OF GOVERNMENT\**

The programme of drilling, recommended by the team of German Consultants, for delineating the nature and structure of the deposits at Barsua, Kalta and Purnapani, is proceeding more or less according to Schedule drawn up in consultation with the German Team. The evaluation of the data thus collected is going on simultaneously. Based on these data, plans for working different areas will be drawn up.

The following table indicates the production from Barsua Iron Ore Mines in the last three years. The serious mishap in SMS at Rourkela Steel Plant completely upset the production activities at Barsua

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\*Not vetted by Audit.

Mines in II and III quarters in 1971-72. So in order to put the production figures for this year in proper perspective, a break up of lumps and fines tonnage for Ist and IVth quarters, which is indicative of the trend, has also been given.

	Lump Tonnes.	Fines Tonnes.	Total Tonnes,	% to rated capacity.
1969-70	457,314	395,152	852,466	42.4
1970-71	536,764	415,367	952,131	47.6
1971-72:-				
- Total	480,840	452,837	933,677	46.7
- Ist Qr.	151,165	132,108	283,273	56.7
- 4th Qr.	153,289	166,312	319,601	63.9

Considering its prevailing limitations, the German Team had rated Barsua's capacity at about 1.4 million tonnes of ores in 1968. During the first quarter of 1971-72, the average monthly rate of production at Barsua reached the level of about 94,000 tonnes, equivalent to our annual rate of 1.13 million tonnes. The operating conditions thereafter became unusual for Barsua due to restrictions on despatches and high stocks at pitheads, following collapse of the SMS roof at Rourkela. In the last quarter of the year 1971-72, however, Barsua again produced on the average about 107,000 tonnes per month, the annual rate being 1.3 million tonnes. Thus the performance of mines has gradually improved. The delivered cost of Barsua Ore, as compared with purchased Ore shows the following trends:-

(Rs. per tonne)

<u>Year</u>	From Purchased Sources.	From Barsua
1969-70	33.78	34.63
1970-71	33.34	38.70
1971-72 :-		
- Ist Qr.	35.29	31.04
- IVth Qr.	35.29	32.69

Thus, with increased production and regular off-take of both lumps and fines by the Plant, the cost of raising at Barsua has shown a downward trend in 1971-72 and compare favourably with purchased ore prices.

[Ministry of Steel and Mines (Department of Steel) O.M. No. H-11018/16/71-Parl. dated 31.7.72]

*Recommendations (Serial No. 13)*

The Committee view with concern the unsatisfactory working of the Rajhara Iron Ore Mines. The cost of raising iron ore has been much higher than the estimates during the last five years and it had gone up by 128.5 per cent within a period of four years. The most disquieting feature is that the cost of production from the mechanised mines, mechanised at a total cost of 5.49 crores, was even more than the cost of raising iron ore by manual operations.

The two main reasons advanced for high cost of production are lower volume of production and higher percentage of fines. As against 37.5 per cent fines envisaged in the Project Report and even as against the designers revised estimate of 45 per cent fines, the actual fines in 1967-68 and 1968-69 were of the order of 50 per cent of the total production. The Committee could get no satisfactory explanation for low production and such a heavy percentage of fines. They desire that a detailed technical study should be made regarding the production performance and high cost of production in these mines with specific reference to the imperative necessity of reducing the percentage of fines and to investigate into the reasons for higher cost of raising ores by mechanised methods compared to the manual ones. In case it is found that it will be more economical if these mines are operated manually, the HSL should consider the possibility of utilising the machinery somewhere else.

(Para No. 5.36)

*Government Reply<sup>a</sup>*

The points made above fall under the two categories.

- (a) There has been an increase in the cost of production of mechanised mines in 1969-70 as compared to 1965-66 to the extent of 128.5%.
- (b) The cost of mechanised production is much higher than the manual and that the percentage of mechanised mines cost had been 160.4% in 1969-70.

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<sup>a</sup>Not vetted by Audit.

As regards (a) the factors responsible for this increase in the cost had been -

- (i) Change in the method of treatment of fines for the purpose of working out the costs
- (ii) escalations in the labour and fixed charges like depreciation.

The Bhilai Steel Plant had been assigning equal value to both lumps and fines while working out the cost of production of mechanised ore till 1966-67. This method was subsequently changed by assigning a lower value to fines for all arisings in the first stage (1967-68 and 68-69) and in the second stage (from 1969-70 onwards) by assigning this lower value to only 50% of the despatches. This change was done to discount in the books the value of stocks of fines already built-up. Once the value of stocks built-up is wiped out, the credit would be given to the full despatches. This system is expected to start from 1972-73 onwards. The Plant was not assigning any value to the accretion of stock of fines at mines from 1.4.1969. These physical stocks of fines, however, remain at the mines for possible utilisation in future, although at nil value.

Hence for the purpose of comparison with the previous years it would be more relevant to assign equal value for both lumps and fines for the subsequent years as well. If it is done accordingly, the cost of production from 1965-66 onwards and the percentage increase as compared to 1965-66 would be as follows:-

Year	Cost Rs./t	% increase as compared to 1965-66	% increase as given in the Report
1965-66	9.47		
1966-67	9.54	0.7	0.7
1967-68	11.17	17	3*
1968-69	12.63	33	91.3
1969-70	13.18	39	128.5
1970-71	17.47	84	202 (now given)
1971-72	18.01	90	211 (now given)
(Provisional)			

\*should have been 63

The increase in the cost of production indicated above is mainly due to -

- (i) increase in the labour cost. It had gone up by 71% in 1969-70 and 124% in 1970-71.
- (ii) fixed charges viz. depreciation. It had gone up by 55% in 1969-70 and 1970-71 due to the commissioning of new units.
- (iii) stores and spares gone up by 4 and 38% in 1969-70 and 1970-71.
- (iv) inclusion of interest on Govt. loan in 1970-71. It was not included earlier in the cost. They were being absorbed overall at the Plant. The escalation due to this is 8%.

The above increases alone account for 35/68% increase in the cost of 1969-70 and 1970-71 over 1965-66 against total of 39/84

As regards (b), comparing the cost of production of mechanised with the manual mines, the above changes in the methods of working out the costs of lumps had, to a great extent resulted in notional increase in cost when expressed as a percentage of the manual mines. As already indicated in the Plants' reply to question 36(c) of the COPU Questionnaire the comparison should be with reference to the overall cost of both lumps and fines. The table below gives the cost of production of manually raised ore and the cost of mechanised ore under the method of assigning equal values:-

	Cost of production per tonne of manually raised ore	<u>Mechanically raised ore</u>	
		Equal Division of cost between lumps and fines	National cost of fines added to lumps
1965-66	11.55	9.47	11.25
1966-67	11.72	9.54	11.73
1967-68	12.26	11.17	15.44
1968-69	13.46	12.63	18.12
1969-70	13.49	13.18	21.64
1970-71	13.92	17.47	28.61
1971-72	17.32	18.01	32.08
(Provisional)			

The higher cost of mechanised raisings as compared to manual raisings in 1970-71 is due to payment of higher wages resulting from implementation of the recommendations of the Joint Wage Negotiations Committee for steel in case of employees for mechanised raisings and of the Iron Ore Wage Board in case of manual mines. The payments as per the former are higher than the latter. It may also be mentioned that with the implementation of the scheme of departmentalisation of manual raisings (already under implementation), the employees will be entitled for the same privileges as those in mechanised mines. This is likely to result in an increase of upto Rs. 9 per tonne of manually raised ore which would make it costlier than the mechanised ore.

A Technical Committee with representatives from HSL (HO, Bhilai and Rourkela), the Uranium Corporation and NMDC has been constituted to review the working of all HSL captive mines (iron ore, manganese ore, limestone and dolomite) in terms of quality, quantity and cost so that the Mines may reach their optimum potential and are able to meet The Steel Plants' requirements both in the short and long term.

A note explaining the position regarding higher percentage of fines is enclosed - Appendix I

[M/o Steel & Mines (D/o Steel). O.M.No.H-11018/16/71-Parl. dt. 4.12.1972.]

*Further information asked for by the Committee*

The Ministry have informed that a Technical Committee with representatives from HSL (HO, Bhilai and Rourkela) the Uranium Corporation and NMDC has been constituted to review the work of all HSL captive mines (iron ore, manganese ore, limestone and dolomite) in terms of quality, quantity and cost, so that the mines may reach their optimum potential and are able to meet the steel plants requirement both in short and long term. When was this Committee constituted and when was it likely to submit its report?

[Lok Sabha Sect. OM No:18PU/71 dt: 27.1.73]

*Government Reply*

The Technical Committee for review of performance of HSL mines was appointed in February, 1972. The interim report of the committee has since been finalised. Statement showing the recommendations of the Technical Committee and action taken by HSL thereon is enclosed. (Appendix II).



*Recommendation (Serial No. 14)*

The Committee regret to note that as in the case of Barsua Iron Ore Mines, the working of the captive limestone quarry of Rourkela Steel Plant at Purnapani was also unsatisfactory. The production was much lower than the rated capacity and the cost of raising was more than double the estimated cost. As pointed out by the F.A. & C.A.O. due to shortfall in production, the Rourkela Steel Plant was facing a critical situation in regard to availability of lime stone and additional expenditure had to be incurred to procure limestone from other sources resulting in higher cost of production of steel.

One of the reasons for low production was stated to be that the nature of deposits did not permit large scale mechanised mining because of the necessity to adhere to a particular quality specifications. This gives the impression that the management did not make requisite investigation about the nature of deposits before taking up the scheme for the development and mechanisation of the limestone quarry. The Committee are of the view that with advance planning some of the factors hampering production, e.g., large scale wear and tear of rubber tyres, shovel track chains on account of rough roads and non-availability of spare parts etc. could have been foreseen and timely remedial action could be taken. They desire that immediate steps should be taken to improve the working of the quarry.

(Para No. 5.44)

*Reply of Government*

Production at Purnapani Limestone quarries during the year 1969-70 was 3,01,981 tonnes of Lumps and 1,04,172 tonnes of fines. During the year 1970-71 the production was 4,16,399 tonnes of Lumps and 1,09,791 tonnes of fines. The production of the year 1971-72 was 2,61,040 tonnes of Lumps and 91,714 tonnes of fines. Thus, the production of about 4,06,000 tonnes in 1969-70 improved to 5,26,000 tonnes in 1970-71 and this trend persisted in the first quarter of 1971-72. This shows a significant improvement in the performance of

Purnapani Limestone quarries. Subsequently, the production suffered because of restricted despatches and resultant high sticks, following collapse of the SMS roof of the Rourkela Steel Plant. In the last quarter of 1971-72, the production achieved was 115% of the target for the quarter.

With the increase in production, the cost of production will go down as can be seen from the following figures:-

	Total production of Lumps and fines Annual rate.	Lump Rs. per tonne	Fines Rs. per tonne
1970-71	527,000	18.59	20.01
1971-72 April 71	660,000	17.39	20.70
May 71	571,000	20.05	23.55
June 71	493,000	21.61	24.33
December 71	620,000	14.21	18.12
January 72	401,000	21.00	24.52
February 72	494,000	19.13	21.52
March 72	292,000	29.54	30.50

In the month of December, 1971, when the production at the Quarry was very near the rated capacity of 650,000 tonnes, the cost was quite low.

As far as the requirement of Blast Furnace grade lime-stone lump of the Steel Plant is concerned, Purnapani is now in a position to meet the entire requirement of limestone lump for our Blast Furnaces. About 50% of the limestone fines requirement for the Sintering Plant is also now being supplied by the mine. The balance is being met from the purchase sources.

Regarding quality of limestone, a deposit like Purnapani which has got clay pockets in the upper benches, has given slightly inferior quality in the past but now as we have gone deeper in lower benches clay pockets are disappearing and the quality is well within the prescribed specifications.

Action has already been taken for improving the mine haul roads, repair of shovels and making the spare parts available by placing timely orders and following up with the suppliers.

Further proving of deposit under the guidance of Gorkhshchaft Exploration is already under way.

[(Ministry of Steel and Mines (Department of Steel)  
D.M. No. H-11018/16/71-Part dated 31.7.72)]

*Recommendations (Serial No. 15)*

The Committee are unhappy to note that the working of the Nandini Limestone quarry also has not been satisfactory. The production from mechanised mines was lower than the budget estimates and the cost of production was higher than the estimates therefor. What is worse is that the cost of pro-

duction from the mechanised mines was even higher than the cost of limestone raised by manual operation. The Committee could get no satisfactory explanation in this regard. They desire that the reasons for high cost of production should be analysed and remedial measures taken to bring it down.

(Para No. 5.52)

One of the reasons advanced for low production during all the years has been that the mines operated with imported locos only. Those locomotives were due for capital repairs, facilities for which were not available either in the Plant or mines. As pointed out in paras 3.42 - 3.47 of this Report, the Steel Plant had also suffered loss of production due to unsatisfactory working of these imported locomotives. The Committee regret to note that in spite of continuing handicaps for last 4 years both for the mines and the Steel Plant, prompt measures were not taken to provide requisite facilities for repairs and maintenance of these locomotives. The Committee would like to be informed of the measures taken or proposed to be taken for repairs and maintenance of these locomotives.

(Para No. 5.53)

*Government Reply*

(Para 5.52): The actual cost of production excluding depreciation and interest on Government Loan, of limestone during the year 1970-71 was Rs. 24.67 per tonne against the budgetted cost of Rs. 22.26 per tonne. This works out to 106.1% of the budgetted cost. In 1969-70 the actuals were 106.8% of the budget.

The average cost of limestone lumps (provisional) during 1971-72 was Rs. 26.68 per tonne against the budgetted cost of Rs. 24.67 per tonne. This works out to 108.1% of the budgetted cost.

There had been certain higher provisions in the budget towards development expenditure and stores

and spares. The lower volume of production as compared to the budget had more than off set the savings in actuals in expenditure mentioned above.

The cost of production of mechanised mines in 1970-71 bears a %age of 179.7% to the manual mines cost. The corresponding figure during 1969-70 was 123.8%.

This increase in the cost was due to

- (i) increase in the labour cost as compared to the previous year.
- (ii) higher development expenditure.
- (iii) higher consumption of stores and spares.
- (iv) lower volume of production.

Unlike other mines in India, including captive mines in other steel plants, all direct employees of HSL mines are governed by Iron & Steel Wage Board recommendations. But ;in HSL's manual mines the contractual employees are governed by Iron-Ore and limestone and Dolomite wage Board recommendations, the difference in wage being Rs. 10/- per day in one case plus fringe benefits and about Rs. 6/- in the latter case.

In case of manual mines the shifting of overburden is confined to the area to be mined whereas in case of mechanised mining there are always large opened-up reserves. Drilling also in manual mines is related to the daily quantity required whereas in mechanised mine the drilled reserve range for half a million to million tonnes. Given the same wages and allowing for these reserves the cost of manual mining will be higher than mechanised mine particularly at the present rate of Nandini's output.

The production of lumps from mechanised and manual mines in the last three years is given below:

(1000 Tonnes)

	Mechanised	Manual
1969-70	738	202
1970-71	633	409
1971-72		
(Annual rates)		
1st Quarter	533	471
2nd Quarter	597	791
3rd Quarter	832	497
4th Quarter	813	230

It would be seen that with the provision of additional facilities at mechanised mines in the 3rd quarter of 1971-72, the production went up with a corresponding decrease in production at the manual mines. Consequently, the cost of production at the mechanised mines (excluding depreciation and interest on Government loan) during the 3rd quarter of 1971-72 came to Rs. 22.52 per tonne and that in the manual mines to Rs. 15.61 per tonne. The % of mechanised mining cost of manual mining is thus 144.3% which is an improvement over 179.7% during 1970-71.

The reduction of cost can be achieved effectively only by increasing the production from the mines. The main limitation for increase of production in the mines is weakness in the transport system.

The mines are equipped exclusively with Russian Locomotives and these Locomotives are old.

However, the following measures were/have been taken to improve the transport capacity of the mines:

- (i) Two Russian Locomotives were re-powered by CAT/D-379 Diesel engines in the 1st half of 1970.
- (ii) Import licence for 2 MAN engines for re-powering of additional 2 Russian Locomotives, was issued on 15.12.1971.
- (iii) 8 Diesel Engines have also been ordered on USSR and a contract signed by Bhilai Steel Plant on 3rd March, 1972. The delivery schedule for these engines is within 18 months from the date of agreement i.e., 3.3.1972. It is expected that 5 engines would arrive by the end of this year and the remaining 3 engines in 1973.
- (iv) It has been planned to re-power 10 Nos. Russian Locomotives with Caterpillar Engines. So far as the mines are concerned, 3 Russian Locomotives would be re-powered during 1973-74 initially.
- (v) The replacement programme for old Russian Locomotives has already been drawn up and this has been worked out at the rate of 5 locos per year which includes mines also.
- (vi) Facilities are being created by expanding the existing loco-shed and erecting a new

dump-car shed for better repairs of locomotives and dump-cars. This will come into operation within this year.

The above measures would enable the mechanised mines to increase production with the consequent reduction in costs.

#### *General Measures*

- (i) In order to control the cost of production, techno-economists have been posted at the mines and variances in the actual utilisation of equipment and productivity from the standards are evaluated and brought to the notice of Mines Executives daily.

This will make the Mines Executives more cost conscious and eventually, it will enable them to reduce the cost.

- (ii) In order to reduce the inventory, vocabing for all spares has been completed for better inventory control on spares and stores which would also lead to the reduction of cost.
- (iii) A Technical Committee appointed by the Hindustan Steel Limited has been examining inter-alia, the question of reduction in cost of mining. The report of the Committee is expected shortly.

*(Para 5.53)*

As far back as in 1963, the problem of Capital overhaul of Russian Locomotives engaged the attention of Rail Transport Department of Bhilai Steel Plant. As per the 1 million ton project report, the major overhauls of these locomotives were to be carried out at the Workshops of the Indian Railways. Accordingly a reference was made to the Indian Railways. In response to this the Railways sent their Engineer to Bhilai Steel Plant to examine the question in detail. He visited the loco and wagon department of Bhilai Steel Plant during July, 1963 and after getting a first hand knowledge of the facilities available here and the facilities which would be required for carrying out major overhauls, he submitted a report emphatically indicating that with some additions to the existing locos and wagon department at the Steel Plant, the major overhauls can be carried out successfully at Bhilai Plant itself, better than by the Railways, in view of the high level of detailed technical skill and know how

already developed here by the staff in respect of the Russian locomotives which have their own design characteristics.

Immediately thereafter, the Soviet side was informed to prepare the detailed Project Report for the expansion of the Loco Depot. The Detailed Project Report was received in July, 1964 which was discussed with the Soviet Experts during August and September of the same year. This was again scrutinized by an Engineer from the Indian Railways by May 1965. After going through all the formalities and obtaining Government's approval for the Project, orders for the equipment were placed and the Construction was started in 1967. The entire construction of the Depot facilities for the Capital Repairs has been completed except for some equipments. When ready, this depot, supported by the Chief Power Engineer's Department and the Chief Mechanical Engineer's Department (Auxiliary Shops), is to take care of the Capital Repairs to Czech Locos of the Mines and the Plant as well. Arrangements are being made also to obtain the technical details and training on overhaul of these locos from the Skoda Works suppliers of these locos.

In the meantime the locomotives have been kept running by carrying out various repairs and maintenance with the existing Depot facilities. Some of the key units which were a source of constant trouble have been studied and modified with a view to give better service thereby minimising the down time of these locos. Nandini has also been provided with an extra locomotive and this has very significantly improved its performance: While Nandini fulfilled 75.3% and 82.7% respectively of its plan of 270,000 tonnes each for 1st and 2nd quarters of 1971-72, the fulfilment improved to 95% against the increased plan of 320,000 tonnes in the third quarter and to 97.1% against fourth quarter's plan of 310,000 tonnes:

[M/O Steel & Mines (Deptt. of Steel) O.M. No. 11018/16/71-Parl. Dated 4.12.1972]

*Recommendation (Serial No. 18)*

The Committee regret to note that the actual staff strength in the Works Departments of Rourkela and Bhilai Steel Plants as on 31.3.1970 was about double of that provided in the Project Reports for their expansion. They are amazed, over the statement by the Hindustan Steel Limited that "the earlier estimates

made in the Project Report were based on assumption which were neither correct nor relevant to Indian Context". With the experience of one million tonne Plants, it was expected that the estimates for manpower requirements included in the Project Reports for their expansions would be more realistic, to serve as a yardstick for actual manning of the steel plants.

(Para No. 6.9)

The Committee also note with surprise as to why the Industrial Engineering Departments of Hindustan Steel Limited had reported in 1963-64 that there was no surplus staff in Hindustan Steel Limited. Instead, the Undertaking had a shortfall against their (I.E.D.) estimates of staff requirements after expansion. On the contrary, the studies made by the Bureau of Public Enterprises and the latest studies conducted by the Administrative Staff College, Hyderabad have revealed that Hindustan Steel Limited has got surplus staff. In the face of these definite reports of independent and expert agencies, the Committee feel that it would not be safe to rely on the report of the Industrial Engineering Department of the Hindustan Steel Limited\* (Industrial Engineering Department) is based on broad studies and discussions unlike the study of the Independent Agency (i.e. Administrative Staff College, Hyderabad.) whose detailed work measurement studies are expected to be more scientific than the previous estimates. Consequently, the Committee have come to the conclusion that the estimates of Hindustan Steel Limited (IED) are on the high side.

The Committee hope that the Staff strength in the Steel plants will be adjusted in accordance with the latest studies and Government/Hindustan Steel Limited, would take the opportunity offered by the expansion scheme of the Steel Plants and Bokaro Project to gainfully employ the surplus staff as early as practicable and possible.

(Para No. 6.(Para No. 6.10)

*Government Reply \*\**

The up-to-date overall results of the studies conducted by the Plant Industrial Engineering Departments in collaboration with the Consultancy and Applied Research Division of the Administrative Staff College is given as follows:-

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\* The Committee find that the report of the Hindustan Steel Lt.

\*\* Not vetted by



Plant/date	Total Men in position	Reference manning	+Surplus -Deficit	Percentage over reference manning
Bhilai Steel Plant.* (as in September '71)	21406	20415	+991	4.86
Rourkela Steel Plant (as in March 1972)	21321	20356	+965	4.74
Durgapur Steel Plant (as in March 1972)	18357	19206	-849	4.42
Total:	61084	59977	+1107	1.85%

\*Excluding Ore, Mines and Quarries Department.

The Company has evolved new production incentive schemes which provide sufficient motivations to work with reference manning and it is to be expected that additional monetary benefits would help induce workers to agree to the shedding of surplus manpower. These schemes have already been introduced in Bhilai Steel Plant, Fertilizer Plant, Rourkela, a few departments of Durgapur Steel Plant and in the iron ore and Lime-stone mines and repair shops of the Rourkela Steel Plant. Their introduction in other units is under negotiations with the Labour unions. To the extent possible, efforts are being made to re-deploy the surpluses against the requirements of expansion units additional units and to transfer them to the Bokaro Steel plant. However in such re-deployment, full support of the labour Union would be necessary.

[Ministry of Steel & Mines (Deptt. of Steel) O.M. No. H-11018/16/71- Parl. dates 28th June, 1972]

*Recommendation (Serial No. 10)*

The Committee regret to note that the staff in the General Administration and Township; Departments of the three steel plants ranged from 27 per cent to 35 per

cent of the Staff employed in operation (Works Departments). They feel that this percentage is on the high side and there is scope for economy in personnel costs in these departments by improving systems and procedures of work. The Committee find that Hindustan Steel Limited had not conducted any study in regard to the staff employed in these departments with a view to ascertain the reasons for differences in manning pattern in the three Steel Plants and to effect economy in staff. However, according to Hindustan Steel Limited, the Organisation and Methods Sections in the Plants have now undertaken detailed studies on a continuing basis in all the plants for (a) simplifications of office procedures and (b) for determination of manpower requirements. The Committee desire that these studies should be completed expeditiously and the norm evolved for the staff in the Township and general Administration be adhered to strictly. The services of the surplus personnel revealed as a result of such study could be made available to the other steel plants proposed to be set up in the country with a view to give them experienced staff from the inception.

(Para No. 6.15)

*Government Reply \**

Noted. Detailed studies of the various sections of the General Administration and Township Departments of the Plants with a view to determining the manpower required and simplification of office procedures are continuing. The latest position in this regard as reported by the Company is as under:--

Department	Men in position	Men covered by studies	Manpower required as per O & M Studies
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**BHILAI STEEL PLANT**

(as on August 1971)

General Administration	2618	1832	1786
Township	4193	4053	4498

**ROURKELA STEEL PLANT**

(as on July 1971)

\* Not vetted by Audit.

1	2	3	4
General Administration	3779	2800	2609
Township	3243	1931	1957

**DURGAPUR STEEL PLANT***(as on May 1972)*

General Administration	2169	923	912
Township	4410	1111	1153

[Ministry of Steel & Mines, Department of Steel,  
O.M. No. H-11018/16/71-Parl. dt. 20.7.72]

*Recommendation (Serial No. 20)*

The Committee would, however, like to point out that in comparing the labour productivity of the modern steel plants of Hindustan Steel Limited with that of Tata and Indian Iron and Steel Companies, commissioned years ago, it is necessary to take into account the higher degree of sophistication of the plants of Hindustan Steel Limited which should result in higher production.

*(Para No. 6.21)**Government reply\**

Noted. One of the basic reasons for lower productivity is under-utilisation of capacity; labour productivity is expected to improve considerably as soon as production reaches near capacity levels.

[Ministry of Steel & Mines (Deptt. of Steel)  
O.M. No. H-11018/16/71-Parl. dated 28th June 1972]

*Recommendation (Serial No. 21)*

The Committee regret to note that low productivity in the three steel plants of Hindustan Steel Limited ranging between 45-79 ingot tonnes per man year. The most disturbing feature is that while it was expected that with the expansion of the Steel Plants, there would be improvement in labour productivity, the position has worsened and the labour productivity in Rourkela and Durgapur Steel Plants

\*Not vetted by Audit.

was even lower than in 1965-66. The productivity in 1969-70 being only 54 and 45 in Rourkela and Durgapur Steel Plants respectively against the corresponding figures of 70 and 68 in 1965-66. As mentioned in para 6.23 of this Report the labour productivity in some of the advanced countries ranged from 156 to 247 ingot tonnes per man year. Even the Mehtab Committee appointed by Government to look into the cost of production of steel and which included representatives of the Hindustan Steel Limited and Tata Iron and Steel Company considered it possible to raise the productivity to about 125 ingot tonnes per man year and above in each of the plants. Viewed in this background, the present low level of productivity in the Steel Plants of Hindustan Steel Limited cannot but be a matter of urgent concern. The Committee are informed that if the three steel Plants operate at rated capacity and the present manning can be reduced adjusted in accordance with their industrial engineering studies it should be possible to reach a productivity level of 125.100 and 100 ingot tonnes per man year in Bhilai, Rourkela and Durgapur Steel Plants respectively. The Committee hope that Hindustan Steel Limited would strive to attain at least this minimum level of productivity.

(Para 6.27)

*Government reply\**

As stated in reply to recommendation No. 20, labour productivity is expected to go up with higher production. The new production incentive schemes are also designed to motivate labour productivity. Additional manning is sanctioned only after proper work-studies and for new requirements only. Every effort will be made to reach the higher productivity levels indicated by the Committee.

[Ministry of Steel & Mines (Deptt. of Steel)  
O.M. No. H-11018/16/71-Parl. dated 28th June 1972]

*Recommendation (Serial No. 22)*

The Committee also recommend that the Research and Development Divisions of the Steel Plants and the Central Engineering and Design Bureau of Hindustan Steel Limited should make a detailed study of the reasons for high productivity in other advanced countries (like Japan, USA and West Germany), with a view to ascertain the technological innovations and manning pattern etc. that account for the high productivity in their respective countries and suggest their adoption

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\* Not vetted by Audit.

in Hindustan Steel Limited Steel Plants to attain comparable productivity level per workers.

(Para No. 6.28).

*Government Reply\**

Although the present level of labour productivity in the iron and steel industry in India is admittedly much lower than that in most of the advanced steel producing countries, a comparison between steel plants in India and abroad in terms of labour productivity will not be easy to make because of various differences in respect of equipment and technology, product-mix, capacity utilisation of the production units, state of maintenance of the equipment, extent of work done through outside agencies, hours of work, leave entitlement, absenteeism, etc. The broad reasons for higher labour productivity in the advanced countries are, however, generally known. The main factors which account for higher productivity in such countries are reported to be as under:-

- (a) Use of increasingly higher capacity/equipment and higher out-put/productivity from the same equipment by progressive application of technological improvements.
- (b) A high degree of automation and application of on-line computers.
- (c) Non-provision of facilities like large repair and spare parts workshops etc.. which are easily available outside the steel plants - unlike in our country.
- (d) Higher levels of skill backed by longer experience and industrial tradition.
- (e) Attitude to work.

The Research and Control Laboratories in the Steel Plants are concerned with day-to-day activities in the nature of inspection and routine operational control and development of new products. These laboratories will not, therefore, be in a position to undertake the type of study suggested by the Committee,

The Central Engineering and Design Bureau, has however, been asked to study the problem as suggested by the Committee.

[Ministry of Steel & Mines (Deptt. of Steel) O.M. No. H-11018/16/71-Parl. dated 28th June, 1972.]

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According to Audit the reply was not susceptible of verification in Audit.

Recommendation (Serial No. 25)

The Committee view with concern the unsatisfactory industrial relations in the steel plants of Hindustan Steel Limited especially in Durgapur and Rourkela Steel Plants. From the figures furnished to the Committee they find that the mandays lost due to strikes etc. in Durgapur Steel Plant during the first seven months of the year 1970-71 were as high as 1,763,660 resulting in loss of production of the value of Rs. 11.16 crores. In Rourkela Steel Plant although the mandays lost 392,42 during the corresponding period were lower as compared to Durgapur Steel Plant, the value of loss of production was stated to be much higher i.e. Rs. 12.04 crores. It needs no emphasis that for the efficient and economic working of any undertaking it is necessary that there should be understanding and cooperation between the labour and Management. In the Steel Plants, especially, due to inter-relationship of manufacturing processes involved and the sensitiveness of the equipment to sudden and unplanned stoppages and interruptions, the strikes, etc. causes considerable harm. There is need for a constant endeavour both on the part of the management and the labour unions to resolve differences through mutual discussion, and voluntary arbitration rather than by resort to strikes, lock outs etc.

(Para 6.33).

The Committee note the various causes mentioned by the Hindustan Steel Limited for the labour unrest in Hindustan Steel Limited and the remedial measures suggested for it. The Committee have taken up for examination this year the horizontal study of personal Policies and Labour Management in the public undertaking. They would, therefore, make their detailed recommendations in this regard in that Report.

(Para 6.34)

*Government Reply*

Government agree that there is need for a constant endeavour on the part of both the management and the labour unions to resolve differences through mutual discussions and voluntary arbitration rather than by resort to strikes, lock outs, etc.

In the Bhilai and the Rourkela Steel Plants, the labour situation was generally satisfactory during 1971-72 and continues to be so.

In pursuance of a tripartite agreement signed with the recognised union, Joint Production Committees have been set up in the Rourkela Steel Plant to deal with problems relating to production, maintenance, cost, safety and increase in productivity.

In the Durgapur and Alloy Steel Plant, with the assistance of the State Government, an agreement has been recently signed between the Unions and the managements which provide for the establishment of Floor-level Joint Committees, a Plant-level Joint Committee and a State-level Consultative Council for the speedy settlement of industrial disputes. The issues which remain unresolved at the Plant-level Joint Committee may be referred to an Arbitrator or a Board of Arbitrators if mutually agreed upon by the parties. In the alternative, such issues may also be referred to the State-level Consultative Council. The decision of the Arbitrator or the Board of Arbitrators will be final and binding upon both the parties. The agreement is effective from 19th May, 1972 and is valid for a period of one year. It is hoped that these arrangements will help improve the industrial relations situation in these plants.

The Joint Wage Negotiation Committee for the Steel Industry has also been requested to consider and suggest how best to solve the problem of the stoppages of work.

The recommendations made by the Committee in its 17th Report on Personnel Policies and Labour-Management Relations in Public Undertakings will be given the most careful consideration by the Government.

[Ministry of Steel & Mines (Deptt. of Steel)  
O.M. No.H-11018/16/71/Parl. dated 28th June, 1972.]

*Recommendation (Serial No. 24)*

The Committee regret to note that sustained attention had not been paid towards repairs and maintenance of the Plants and Machinery especially in Durgapur Steel Plant resulting in a large number of breakdowns. Proper maintenance of plant and machinery is a must to ensure trouble-free operation of the plants at maximum efficiency free from breakdowns and non-planned shut-downs. The Committee, therefore, desire that the maintenance departments in the plants should be geared to clear the backlog of repairs and maintenance and to ensure that the preventive maintenance of all the units is carried out in accordance with the schedules laid

down. Advance planning for spares should also be done to facilitate timely replacements of worn out parts.

(Para No. 7.4).

*Government Reply \**

Noted. HSL have informed that they are already seized of these problems and are taking necessary action accordingly.

[Ministry of Steel & Mines (Deptt. of Steel)  
O.M. NO.H-11/18/16/71-Parl. dated 17th August, 1972.]

*Recommendations (Serial No. 25)*

The Committee also regret to note that the Capital repair programme of locomotives in Bhilai Steel Plant suffered due to lack of heavy maintenance facilities. They feel that this handicap could have been overcome by the Plant with more careful Planning and coordination in so far as repairs of locomotives is concerned. The H.S.L. should have had arrangements with Railways for overhauling and repairs etc. of locomotives - a task not difficult to perform.

(Para No. 7.5)

*Government Reply*

Reply to Sl. Nos. 5 and 15 may be referred to.

[Ministry of Steel & Mines (Deptt. of Steel)  
O.M. No.H-11018/16/71 dated 4.12.1972.]

*Recommendations (Serial No. 29)*

The Committee regret to note the loss of about Rs. 40 lakhs duffeged by the Rourkela Steel Plant due to explosion in the Naphtha Reforming Unit of the Fertilizer Plant. They would like to be informed of the action taken by the Hindustan Steel Limited for the various acts of omission and commission on the part of the Contractors, etc. pointed out by the Kasturi Kangan Committee.

(Para No. 8.29)

*Reply of Government \**

The Committee constituted by the Hindustan Steel Limited to go into the reasons for the explosion in the Plant had enumerated a number of acts of omission and commission on the part of the Contractors, which led to

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\* Not vetted by Audit.



the sequence of events resulting in the explosion. They held the Contractors liable for damages resulting from the accident. They also pointed out certain deficiencies and draw-backs on the part of Hindustan Steel Limited personnel posted with the Contractors.

As regards the damage to the Plant, an expenditure of approximately Rs. 40 lakhs has been incurred by the contractors in putting the Furnace back into operation, of which Rs. 20 lakhs had been advanced to them by Hindustan Steel Limited without any prejudice to the claims of Hindustan Steel Limited. The Plant has served a notice on the contractors asking for a refund of the entire cost incurred, as it was held that they were wholly responsible for the damage to the Furnace. During discussions, this position was not accepted by the Contractors and they had proposed that the matter should be referred to arbitration. It has now been finally decided to refer the matter to arbitration as per the terms of the contract. The matter is still under arbitration.

Departmental action would be taken by Hindustan Steel Limited against their personnel, after the dispute with the Contractors is settled.

[Ministry of Steel and Mines (Department of Steel)  
O.M. No. RKL-5(4)/72 dated 27.7.73.]

*Recommendation (Serial No. 30)*

The Committee note that the inventories in the Steel Plants of Hindustan Steel Limited have shown a declining trend during the last three years and the total inventories as percentage of value of production was 43 per cent in 1969-70. However, in the case of stores and spares, the value of stock was still equivalent to 26 months on the basis of annual consumption. The Committee hope that the various measures undertaken by Hindustan Steel Limited in this regard will help in bringing down the stock of stores and spares.

(Para 9.11)

The Committee also find that Alloy Steels Plant was still having a heavy inventories. These were 121 per cent of the total value of production in 1969-70 as compared to 43 per cent for the Hindustan Steel Limited as a whole. Heavy Inventories not only result in blocking of capital but also mean avoidable expenditure by way of inventory carrying out cost. The Committee recommend that a special drive be made to reduce inventories in this plant without any further loss to

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time. The Committee also suggest that the possibility of using computerised service for inventory control may be examined.

(Para 9.12)

*Government Reply \**

The observations made by the Committee have been noted. Actually, total inventories expressed in terms of value of production went up slightly by 0.3 months from 5.4 in 1969-70 to 5.7 in 1970-71. This was mainly due to channelising imports of steel through Hindustan Steel Limited which started arriving in 1970-71, increase in stocks of refractories to tide over the prevailing shortage, increase in stocks of rolls due to development of new sections and increased raw materials stocks, particularly of imported origin. Concerted efforts, however, continue to be made to contain and reduce the level of inventories. One of the main reasons for higher level of stocks or spares is, however, the continued dependence on foreign manufacturers for a large range of "type spares" or proprietary items of manufacture and the long lead-time which renders it necessary to build up buffer stocks of critical spares in larger quantities than in strictly necessary for operation and maintenance of efficiency.

As regards, the use of computerised services for inventory control, Bhilai and Rourkela Steel Plants have made the needed arrangements for implementing a computerised system of inventory control and the Durgapur Steel Plant has made arrangements in respect of selective high-value items on a trial basis. Particular emphasis is being given to 'A' Class item constituting over 70% of the total value of spares held by the Plants.

[Ministry of Steel & Mines (Deptt. of Steel)  
O.M. No.H-11618/16/71-Parl. dated 28.6.72,]

*Recommendation (Serial No. 31)*

The Committee hope that the present system of the functional Board would be given a fair trial and frequent changes either in the character of the Board or its personnel as has happened in the past, would be avoided. Now that the Hindustan Steel Limited has four functional Directors, the Committee expect the top management to have effective central control on important matters of policy and to provide suitable guide lines to the plant with a view to improve their working. It should however be ensured that the plant management

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\*Not vetted by Audit.

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initiative and self-confidence is maintained by allowing them to function independently within their respective spheres of delegated authority.

(Para No. 10.7)

*Government Reply \**

Noted. It may, however, be pointed out that the scheme of reorganisation of the management, structure of HSL as announced by the Minister of Steel in his statement made in Parliament on the 20th March, 1968, envisaged only 3 full-time functional directors dealing with these specific areas namely, personnel including industrial relations, Finance and Commercial activities. A post of Director (Production) which had been created temporarily and which fell vacant in December, 1971 is not proposed to be filled. Hindustan Steel Limited has now created a post of Advisor (Technical) in the Head Office to provide the necessary technical assistance to the Board.

It may also be added that Government have since decided to set up a Holding Company for Steel and associated input industries like coking coal, iron ore, Manganese Ore etc., The Holding Company will own all the shares in the Public sector corporations dealing with these industries and guide their work.

[Ministry of Steel & Mines (Deptt. of Steel)  
C.M. No.H-1101S/16/71 Parl. dated 28th June, 1972.]

It will also own all Government shares in the relevant joint sector companies and will also act as the nominee of the public sector financial institutions which possess shares in private sector steel companies mining companies mining iron ore and manganese ore, refractory units and smaller steel producing organisations. The Holding Company will formulate long-term programmes of development, arrange for effective channelling of surpluses into further expansion of the industries, finance necessary technological changes and in operations coordinate and supervise the operations of these companies in the connected sectors. This decision has been taken basically for the achievement of the following two objectives:-

- (a) Rapid growth of the industrial sector of the economy with the State as the Leading Agent of the growth Process.
- (b) Acquisition of ability by Government to direct investment into areas which are strategic from the point of view of future development.

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\* Not vetted by Audit.

The Holding Company is expected to achieve economies of vertical integration and ensures coordinated growth at least cost the details of the scheme are being worked out at present.

*Recommendation (Serial No. 33)*

The Committee find that one of the reasons for increase in capital cost has been the delay in construction and commissioning of the plants. There have been inordinate delays (2-3 years) in the commissioning of some of the units of three steel plants both in the case of original one million tonne plants and their expansions. These delays result in higher capital costs on account of increased interest charges and administrative expenses during construction besides escalations in prices. The Committee recommend that steps should therefore be taken to control the time taken for the construction and commissioning of the plants by making effective use of modern network analysis techniques like Programme Evaluation and Review Technique and Critical Path Method.

The Committee further suggest that strict control should also be maintained over expenditure to ensure that there was no wastages or avoidable expenditure on the setting up of the plants.

(Para 11.18)

*Government reply\**

The Committee's recommendations have been noted. It may, however, be added that management techniques like Programme Evaluation and Review Technique (PERT) and Critical Path Method (CPM) have been and are being used in the construction and commissioning of major projects/expansions like 6th Blast Furnace Complex, development of Dalli Iron Ore mechanised mines and the second sintering plant at Bhilai. The Board of Hindustan Steel Limited has also decided that a quarterly review of progress of all major projects, both in physical and financial term, should be presented to the Board so that suitable steps to control expenditure and arrest delays could be taken in time. Further, the Board has decided that the consultants should also present an independent review of the variations in cost from time to time.

(Ministry of Steel & Mines (Deptt. of Steel) O.M. No. H-11018/16/71-Parl dated 28th June, 1972).

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\*Not vetted by Audit.

*Recommendation (Serial No. 34)*

The Committee regret to note that the Hindustan Steel Ltd. has suffered a cumulative loss of Rs.172.83 crores by the end of March, 1970. Even after 16 years of its establishment in 1954 it has been incurring heavy losses even now the loss being Rs. 10.47 crores in 1969-70. Instead of providing any return on large capital investment (Rs.557 crores on March 31, 1970) for all these 16 years, the losses incurred by Hindustan Steel Limited have wiped out 31% of the equity capital. Of the three main steel plants, the loss suffered by Durgapur steel plant has been the highest, i.e., Rs. 83.54 crores as against Rs. 32.19 crores incurred by the Rourkela (excluding fertilizer plant) and Rs. 26.03 crores by the Bhilai steel plant.

(Para 11.26)

One of the reasons advanced for the losses is the unremunerative sales prices which have been fixed on a gross block\* per tonne of \*of Rs. 1176 finished steel (largely based on the than block of TISCO) as against Hindustan Steel Ltd. is actual gross block of Rs.2,400 per tonne after expansions of the plants. The Committee would, however, like to point out that while considering the impact of higher capital cost on the working results of the company, it is necessary to take into account the relatively higher degree of sophistication of the modern plants which are expected to yield higher production at lower cost as compared to the old plants.

The Committee also find that there have been increases in selling prices of steel. As pointed out in page 11.23, the average ex-works net selling price per tonne of saleable steel has increased from Rs. 525 in 1965-66 to Rs. 638 in 1969-70, i.e., an increase of 21.5 per cent. But the cost of production has increased at a faster rate. The weighed average cost (excluding interest and depreciation) per tonne has gone up to the extent of 33.6 per cent during the corresponding period. The increase in selling price of steel has wide economic repercussions. The Committee, therefore, emphasise the need to reduce the cost of production instead of having a vicious race between the cost of production and the selling price. The committee have discussed in detail in the previous chapters of this Report the various cost raising factors, e.g., low production as compared to rated capacity, high cost of raising raw materials in the captive mines and higher consumption rate of raw

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\*Not vetted by Audit. |

material in the captive mines and higher consumption rate of raw materials, over staffing, lower productivity of labour, etc. They feel that there is considerable scope for reduction in the cost of production of steel with the consequent advantage of improving the working results of Hindustan Steel Ltd.

(Para 11.27)

*Government Reply\**

The various steps taken and/or proposed to be taken for keeping the cost of production of steel as low as possible have been mentioned under the relevant recommendations made by the Committee in regard to the various factors that lead to increase in cost. However, in considering this question, it would be necessary to take into account the impact of the various escalations which have taken place or are taking place in the prices of such of the raw materials as are purchased from outside and stores and spares and escalation in wages, railway freight electricity duty, etc.

(Ministry of Steel & Mines (Deptt. of Steel) O.M. No. H-11018/16/71-Parl. dated 28th June, 1972)

*Recommendation (Serial No. 35)*

The Hindustan Steel Limited being the largest producer of steel, has made significant contribution to the industrial and economic growth of the country. Apart from providing employment opportunities to a large number of persons, the undertaking has also, contributed to the growth of dissemination of technical know-how in addition to the production of steel. The export of steel by the HSL to various countries in the world has been on the increase amounting to over Rs. 45 crores in 1969-70 which represents more than half the share of export of Indian steel. It has helped thereby in earning valuable foreign exchange and raising the image of Indian Steel.

(Para No. 12.1)

*Government's Reply*

This is only an observation.

No comments.

[Ministry of Steel & Mines (Deptt. of Steel)  
O.M. No. H-11018/16/71/Parl. dated 30th June, 1972.]

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\*Not vetted by Audit.

*Recommendation (Serial No. 36)*

The examination of Hindustan Steel Limited has, however, revealed serious deficiencies in the working of this undertaking which are summarised as follows:-

- (i) Low production in all the plants.
- (ii) High cost of production.
- (iii) Higher rate of consumption of raw materials.
- (iv) Overstaffing and low productivity.
- (v) Heavy capital expenditure (Gross block) resulting in higher depreciation and interest charges.
- (vi) Heavy recurring losses.

The above deficiencies have been dealt within detail in the concerned chapters of the Report.

(Para 12.2)

*Government Reply*

Noted. Government replies to the relevant recommendations in regard to these deficiencies have been given at the appropriate places.

[Ministry of Steel & Mines (Deptt. of Steel)  
O.M. No. H-11018/16/71-Parl. dated 28th June, 1972]

*Recommendation (Serial No. 37)*

To sumup, the Committee have come to the conclusion that to earn success the Hindustan Steel Ltd. should (i) maximise production (ii) Improve industrial relations (iii) Effect economy through cost control measures and (iv) strive for fair return on investment made and obviate losses.

(Para 12.3)

The Committee are of the opinion that for the realisation of the objectives highlighted above, much will depend on the joint initiative of Hindustan Steel Limited and the Government. The Undertakings Government should study in depth the deep rooted factors that stand in the way of production, cost control and profitability and should make a determined effort to eliminate them. The Committee have every reason to

believe that this undertaking will grow into a successful enterprises and make even greater contribution to national economy provided remedial steps are taken forthwith by the undertaking/Government with imagination and firmness.

(Para 12.4)

*Government Reply*

Both the Government and the Management of Hindustan Steel Limited are fully conscious of the need for stepping up production from the steel plants to capacity levels, to improve the financial working of the Company and to ensure that it runs on sound business and commercial lines. The various measures taken in the areas of production, cost control, industrial relations etc. have been mentioned at appropriate places in response to the recommendations of the Committee. As already stated, the working of the Company and its various units is periodically reviewed by Government through Task Force Meetings and Quarterly Reviews and all possible assistance is given wherever required.

[Ministry of Steel & Mines (Deptt. of Steel)  
O.M. No. H-11018/16/71-Parl. dated 28th June, 1972]



## CHAPTER III

### RECOMMENDATIONS WHICH THE COMMITTEE DO NOT DESIRE TO PURSUE IN VIEW OF GOVERNMENT'S REPLIES

#### *Recommendations (Serial No. 9)*

The Committee are unable to agree with the view of the Secretary of the Ministry that since the domestic selling prices in some other countries are higher than the ex-works price of Steel in India, the cost of production in these countries could be considered as high. It will be incorrect to draw any conclusion about the comparative cost of production in India and other countries by comparing the ex-works prices in India with the domestic prices in other countries for a particular month. For any meaningful conclusion, the ex-works prices should be compared with the ex-works prices in other countries.

(Para No. 4.11)

The Committee would also like to point out that while comparing the cost of production in H.S.L. with that of other producers of Steel in India in the Private Sector, it is imperative to take into account the relatively higher degree of sophistication of the modern plants of H.S.L. which are expected to yield higher production at a lower cost as compared to the old plants belonging to the Private Sector.

(Para No. 4.12)

#### *Reply of Government \**

While it is agreed that for a comparison on a like to like basis, *ex-works* prices of steel in India should be compared with *ex-works* prices of steel in foreign countries, such a comparison has not been possible as *ex-works* prices in foreign countries are not available. It was in this context that it was suggested that some idea of the comparative costs of production can be had by comparing *ex-works* prices in India and domestic prices in foreign countries, particularly as most of the foreign countries do not have freight equalisation policy and excise duty.

The figures of works cost of production in public and private sector steel plants in India given in the Report relate to steel ingots. For purposes of inter-plant comparison, the degree of sophistication of HSL Plants upto the steel making stage (particularly Bhilai and Durgapur) is not markedly different as compared to private sector steel plants.

- \* The office of the Comptroller & Auditor General of India, New Delhi have vetted vide their letter No. 1297-CA.III/4.72, dated 19.8.72 which is reproduced:

"Who have no remarks on the Ministry's proposed reply except that the statement in the last sentence of the reply is not, susceptible of verification in Audit".

[Ministry of Steel and Mines (Deptt. of Steel)  
O.M. No. H-11018/16/71-Parl. Dt. 25.8.72.]

*Recommendation (Serial No. 17)*

The Committee find that the Mehtab Committee had suggested the coke rate of 750 Kg. per tonne after taking into account the quality of raw materials available in the country. Considering the very low coke rate in other countries which was between 500 and 650 kilo per tonne, the coke rate of 750 Kg. suggested by the Mehtab Committee cannot be considered unattainable. On the contrary, the Committee regret to find that the actual consumption of coke has been much higher. (Bhilai 813, Durgapur 922, Rourkela 939). It has surprised the Committee more to discover that the norm has also been fixed much higher than the target fixed by Mehtab Committee. The Committee, therefore, recommend that efforts should be made to achieve the target of coke rate of 750 Kg. per tonne through efficient operation and by adoption of improved techniques. (Para 5.70)

The Committee also find that the rate of consumption of some of the other raw materials had also been higher than the norms laid down by the Norms Committee. Thus, the 'Fe' consumption through iron ore, sinter and scrap per tonne of hot metal in the Bhilai Steel Plant was higher than in the norms laid down. The rate of consumption of pig, iron ore and Ferromanganese in the steel melting shops of all the three steel plants has also been higher. It is also noted that the Norms Committee has fixed these norms on the basis of past per-

formance and these were considered 'achievable' under the existing operating conditions. The Committee, therefore, recommend that the reasons for variations between the actual consumption and the norms fixed should be periodically analysed in detail with a view to eliminating excess consumption and/or wastage.

(Para No. 5.71)

*Reply of Government \**

According to the Report of the Norms Committee the Committee had formulated the norms of consumption of raw materials under the existing conditions and taking into account statistical data already available in respect of the average past performance, the best performance achieved in the past and the designed capacity at maximum efficiency so as to arrive at the "best attainable" target achievable under the existing operating conditions. The Committee, had also indicated in the Report that since the plants were not working to their full rated capacity and in view of the progressive fluctuations in the quality of raw materials, it would neither be feasible nor realistic to prescribe norms which would hold good for all times to come and that the norms recommended should be reviewed periodically.

The Management of Hindustan Steel Limited is quite conscious of the importance of reduced coke rate for increase in blast furnace productivity and for bringing down the cost of production. They however, feel that with the existing conditions of raw materials, particularly, coke, iron ore and Limestone, and in the existing circumstances it may be difficult to achieve coke consumption rate of 750 Kg/Tonne of hot metal. For example, if the running of the blast furnaces is unsteady due to labour troubles, consumption of more coke becomes inescapable. Similarly, coke rate is directly linked with the ash content of the coke. Efforts, however, continue to be made for bringing down the coke rate and it is expected that with the higher usage of sinker and through better and more efficient operation, etc, a gradual reduction would be achieved.

2. The recommendation of the Committee that the reasons for variation between actual consumption and the norms fixed for other raw materials should be analysed periodically has been fixed. In fact, a periodical review of major cost variances both in respect of usage and price of raw materials in relation to the out-puts is already being carried out by the Company.

[Ministry of Steel & Mines (Deptt. of Steel)  
O.M. No. H-11018/16/71-Parl. Date: 3rd Oct., 1972.]

*Further information asked for by the Committee*

What was the actual coke rate in each plant during 1970-71 and 1971-72. Did it show any improvement over that in 1969-70? If not, what were the reasons?

(Lok Sabha Sect. OM No. 18PU/71 dt: 16.2.71)

*{ Government Reply }*

The actual coke rate in each plant during 1970-71 and 1971-72 as compared to that for the year 1969-70 is given below:

Coke rate (kg./tonne)	1969-70 1970-71 1971-72		
Bhilai steel plant	813	810	810
Durgapur steel plant	922	930	949
Rourkela steel plant	939	901	928

The coke rate at Bhilai steel plant showed an improvement during 1970-71 and 1971-72 as compared to 1969-70.

There was substantial improvement in the coke rate achieved at Rourkela steel plant in 1970-71 as compared to the rate in 1969-70. The rate, however, went up in 1971-72 but this was due to the breakdown in the steel melting shop when its roof collapsed in July, 1971. This adversely affected the operation of the blast furnaces.

The main reason for the higher coke rate in the Durgapur steel plant has been the erratic operation of the blast furnaces, mainly due to labour troubles.

[Ministry of Steel and Mines O.M. No. Coy(I)-3(37)  
/71-II dated 1.2.73.]

## CHAPTER IV

RECOMMENDATIONS IN RESPECT OF WHICH REPLIES OF GOVERNMENT HAVE NOT BEEN ACCEPTED BY THE COMMITTEE.

*Recommendations (Serial No. 1)*

The Committee regret to note that in the agreement entered into with the Consultant for Alloy Steels Plant (M/s. Dastur Co.) in December, 1959, the payment of fee was linked to a certain period of time instead of providing fee for completion of specified works within stipulated period with suitable penalty clauses for non-completion of work within the time limit. In spite of the experience of the original agreement the same defective provision was allowed to continue in the agreement for extension of consultancy services in 1965 due to non-completion of the work within the original schedule. As mentioned in paragraph 2.8 the Committee on Public Undertakings (Third Lok Sabha) recommended in April, 1966 that Government should ensure that they did not in future enter into consultancy agreements on these terms. The Committee are distressed to note that although the Government accepted this recommendation in January, 1967, the agreement with the Consultants was extended twice. Linking the additional fees with a period of time instead of completion of the remaining work. The Committee desire that this matter should be looked into by Government with a view to fixing the responsibility for entering into defective agreements in the course of extending the services of the Consultants, ignoring their own experience of the original agreement and the recommendation of the Committee on Public Undertakings.

(Para No. 2.14)

*REPLY*

The Consultancy Agreement with Messrs. Dastur & Co. was extended as under from time to time:-

	<u>Period</u>	<u>Duration</u>	<u>Fees paid Rs.</u>
1. Original Agreement	22.12.1959 to 21.12.1964	5 yrs.	88 Lakhs
2. First Extension	22.12.1964 to 21.6.1968	3 1/2 yrs	55 lakhs
		<u>8 1/2 yrs.</u>	<u>143 lakhs</u>
3. Second Extension	22.6.1968 to 21.6.1969	1 yr.	6 lakhs
4. Third Extension	22.6.1969 to 21.9.1969	3 months	1.5 lakhs
5. Non-residential	22.9.1969 to 21.12.1969	3 months	Free
		<u>1 1/2 yrs.</u>	<u>7.5 lakhs</u>
<b>Total (A + B)</b>		<b>10 years</b>	<b>150.5 lakhs</b>

It will be seen from the table given above that the Second and third extensions together work out to 15% in terms of tenure and 5% in respect of fees as compared to those under the original agreement and the first extension together.

2. The reason why in these two extension cases, the fees were not linked to completion of specified works within stipulated periods with suitable penalty clause for non-completion of work within the time limit, as per earlier recommendation of COPU accepted by the Government in 1967, are given in the succeeding paragraphs.

3. By the time the first extension expired, all Works were physically completed and all shops had gone into production. All that remained at that stage was a few Final Acceptance Tests and final determination of the different contracts. Progress on these items depended largely on the contractors and the Alloy Steels Plant rather than on the Consultants.

4. However, despite the above position, while negotiating the terms of the second extension, efforts were made by Hindustan Steel to delink the payment of fees from period of time. The consultants did not agree to this and they insisted that the terms of payment of fees should be on the same lines as under the first extension. In the circumstances and as induction of new Consultants at that stage for completing these residuary services was just not practicable, Hindustan Steel had now other alternative but to grant the second and third extensions to Dastur Co. linking the fees to a certain specified period as in the case of their original agreement and the first extension thereto.

5. This apart, the recommendation of COPU accepted by the Government, was that "Government should ensure that they did not in future enter into Consultancy Agreements on these terms (linking payments of fees to a certain period of time).<sup>N</sup> It is submitted that this can be taken to apply to major extensions, if any, to be given to the then existing contracts for Consultancy Services or to a fresh contract for expansion of Alloy Steels Plant or for contracts for any new Plants to be set up and not to extensions, as in this case, which were very minor in nature and which were meant to cover residuary works *after physical completion of the Works.*

6. It will be seen from the foregoing that despite the extensions being of minor nature and meant to cover residuary work, efforts were made to delink payment from period of time keeping in view the recommendation of COPU but this did not prove practicable.

7. In the circumstances, a further examination with a view to fixing responsibility would not appear to be necessary.

(Ministry of Steel and Mines (Department of Steel)  
Office Memorandum No. H-11018/16/71-Parl. dt. 8.9.72]

*Comments of the Committee*

Please see paras 1 to 3 of Chapter I of the Report.

*Recommendation (Serial No. 3)*

It is seen from the above table that the total production of steel ingots in the three steel plants of Hindustan Steel Limited had come down from 70% of the rated capacity in 1967-68 to 67% in 1969-70. In the

cases of Rourkela and Durgapur Steel Plants, the production in 1969-70 had gone down as low as 61.3% and 59.3% of the rated capacity respectively. In Durgapur Steel Plant, the production was even less than that achieved before the expansion of the plant. The production in 1969-70 was only 8.18 lakh tonnes as against 10.06 lakh tonnes in 1964-65.

(Para 3.7)

The Committee regret to note that the production was not only substantially lower than the rated capacity but even lower than the attainable capacity which according to the management had been arrived at after taking into consideration the normal gestation period and other constraints like imbalances arising out of lack of machines facilities with the chain of production. The Lower production of Steel as compared to capacity means higher cost of production and financial loss to HSL and produces a heavy impact on the whole economy. There has been considerable scarcity of steel in the market resulting in high open market prices. The import of steel to meet the demand also results in loss of valuable foreign exchange. Had the three steel plants worked in their rated capacity, an additional 18.99 lakh tonnes of ingot steel would have been available to the country. It is, therefore, imperative that urgent and effective steps are taken to improve production performance of the steel plants.

(Para 3.8)

#### *GOVERNMENT REPLY\**

Government as well as the management of HSL are equally conscious of the urgent need to step up production from the steel plants and to reach capacity level production as rapidly as possible within the limitations imposed by the special problems faced by the plants such as trouble in the coke ovens, the unfortunate roof collapse at Rourkela and a disturbed industrial relations situation at Durgapur, the management of the Company is making all possible efforts in this direction. These include specialised repairs to coke ovens, use of alternative fuels to supplement gas availability, oil firing in certain furnaces to augment fuel resources, improved maintenance aimed at the better equipment availability, speeding up of capital programmes required to correct existing imbalances in production facilities and planned procurement of spares, refractories and other essential materials. In the area of industrial relations, efforts continue to be made to ensure that industrial disputes are settled by negotiations and the cooperation and

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\*Not vetted by Audit.



participation of workers in the production effort is not hampered. With the cooperation and assistance of the State Government, an agreement has been recently signed between the Unions and the managements of the Durgapur Steel Plant and the Alloy Steels Plant for the establishment of Joint bodies in the Plant and a State-level Consultative Council for the speedy settlement of Industrial disputes. Hindustan Steel Limited has also evolved new production incentive schemes designed to motivate labour productivity, discourage absenteeism and reduce overtime payments.

The Government also keep constant watch on and review the performance of the units and the company through periodical Task Force meetings and render all the assistance that is required.

[Ministry of Steel & Mines (Deptt. of Steel)  
O.M. No. H-11018/16/71-Parl. dated 28th June 1972]

*Further information asked for by the Committee.*

- (a) What was the percentage of rated capacity achieved in each plant in 1970-71 and 1971-72 and how did it compare with that achieved in 1969-70?
- (b) What were the reasons for low production despite the various measures stated to have been taken to reach the capacity level production?

[Lok Sabha Sect. OM No: 18PU/71 dt: 6.12.72]

*Government Reply\**

(a) The percentage of rated capacity achieved in each of the plants during the years 1970-71 and 1971-72 as compared to that in 1969-70 in terms of ingot steel is indicated below:

	1969-70	1970-71	1971-72
Bhilai steel plant	74	78	78
Durgapur steel plant	51	40	44
Rourkela steel plant	61	58	46

(b) Although the production of ingot steel in the Bhilai steel plant in 1970-71 and 1971-72 was higher than that in 1969-70, it was still considerably lower than the installed capacity. The major technical constraints affecting production in 1970-71 rose mainly from the unsatisfactory supply position of

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\*Not vetted by Audit.

refractories, both in terms of quantity and quality, some unexpected difficulties in blast furnace No:4 and in the blooming mill and the relatively longer time taken in the completion of certain repairs. In 1971-72 a major break-down in some of the coke oven batteries in May, 1971, resulted in shortage of coke for the blast furnaces and inadequate availability of gas for the steel melting shop and the mills.

In the Durgapur steel plant, production was affected principally on account of continued disturbed industrial relations situation. The number of manhours lost on account of labour troubles and the value of production lost were as under:

	<u>1970-71</u>	<u>1971-72</u>
Man-hours lost	1,763,660	812,667
Value of production lost	Rs.11.16	Rs.6.24
	crores	crores

Equipment troubles and the poor condition of the coke ovens and oven equipments resulting in shortage of coke and gas were the other constraints to higher production.

The production in the Rourkela steel plant was adversely affected in 1970-71 mainly on account of disturbed industrial relations in the first half of the year, strike in South-Eastern Railway in July-August, 1970, power-cuts from Hirakud grid, certain technical break-downs and some serious problems in the coke ovens in February 1971. During 1971-72, the shortfall in production was mainly due to the collapse of the roof of the steel melting shop in July, 1971, which seriously affected the operation of the entire plant for several months. An additional constraint was the poor-performance of the coke oven batteries in general which resulted in a reduction in the supply of coke and gas.

It may be added here that by the very nature of the operations involved in an integrated steel plant, the full impact of the various measures taken to improve production would be felt gradually and over a period of time. Some improvement is already noticeable in the case of Bhilai and Rourkela steel plants where the ingot steel production during the period April-December, 1972, represented 81.3% and 63% of installed capacity respectively.

[Ministry of Steel & Mines (Department of Steel) O.M. No: Coy-I-3(37)/71-II dated 1.2.73.]

## Comments of the Committee

Please see paras 4 to 10 of Chapter I of the Report.

*Recommendation (Serial No. 4)*

The Committee view with concern the shortage of refractories required by the Steel Plants which according to Hindustan Steel Limited was a serious impediment to raising production. In spite of long established refractory industry in India HSL to import substantial quantities of refractories at considerable cost. The orders for imports during 1970-71 were likely to be of the order of Rs. 10 crores. The Committee, however, feel that with proper planning and foresight it should have been possible to place orders for the import of refractories well in time to avoid shortfall in production due to the shortage of refractories.

The Committee have also been informed that for the production of high quality refractories, the Government have decided to set up a refractory plant in the public sector at Bhilai with a capacity of 1,00,000 tonnes after due consideration of the installed capacity of the refractory units in the private sector and the economy of this project. It is unfortunate that an earlier proposal to set up a refractory plant of sufficient capacity to meet the requirements of the steel plants, was dropped by Government in December, 1965 after incurring an expenditure of Rs. 17.04 Lakhs on the preparation of Preliminary and detailed Project Reports.

According to the Ministry, the assessment of the situation made at that time indicated that except for carbon and/or graphite refractories there was sufficient capacity in the country to meet the demand for refractories by the Iron and Steel Industry during the Fourth Plan period. On the other hand, the Committee were informed by HSL that they were firmly convinced that without the proposed refractories plant, the steel plants will run into serious difficulty due to the inability of private sector refractories industry to meet the growing demands of the steel industry for the refractories of required quality. The view of HSL has been justified by the present serious situation caused by the non-availability of refractories of the requisite quality and quantity for the steel plants. The Committee have not been informed of the reasons which led the Government to a conclusion contrary to their own earlier decision and the views of the H.S.L. The Committee have been informed that the decision for

not setting up the refractories plant had been taken by the Government on the basis of its own assessment although the Indian Refractory Makers Association had also represented to the Government that the creation of additional capacity would not be justified. The Committee, however, have the apprehension that the decision of Government was largely influenced by the representation of Indian Refractory Makers Association rather than by their own realistic assessment of the prospective demand and supply for the refractories after taking into consideration the views of H.S.L. The result has been that there was loss of production of steel due to the shortage of refractories and avoidable expenditure on import of refractories. The Committee note that the Government have taken a decision to set up a Refractory Plant in the Public Sector and are of the opinion that there is need for taking realistic demand surveys before deciding to set up a project or otherwise in future so that the projects are set up in accordance with the realistic demands.

(Paras 3.40 and 3.41)

#### *Government Reply*

As regards the earlier proposal to set up a Refractories Plant in the public sector at Bhilai, the position has already been explained to the Committee vide Govt. reply (duly vetted by Audit) sent under cover of this Ministry's O.M. No.H-11018/21/70-Parl. dated the 1st May, 1971. As pointed out therein, the decision not to set up a refractory plant taken in December, 1965, was based on an assessment made, in consultation with the concerned Government agencies, of the existing or approved capacity for the manufacture of refractories. The conclusion reached was that there was sufficient capacity in the country to meet the demand for refractories from the iron and steel industry during the Fourth Plan period except for carbon/graphite refractories, the demand for which was too small to justify the setting up of a refractories plant at the cost indicated by the USSR Government. The decision was based on an assessment of the position made by Government itself and was not "largely influenced by the representation of Indian Refractory Makers Association", though the Association also did represent to Government that the creation of additional capacity would not be justified. Unfortunately, however, the indigenous refractory makers failed to meet the full requirements of the iron and steel industry at a later date for a variety of reasons, leading to shortage of refractories and their import. These reasons have been mentioned in the Government reply referred to above.

2. In January, 1971, Government appointed a Committee under the Chairmanship of the Senior Industrial Adviser, Department of Steel, to make a quantitative estimate of the requirements of different categories of refractories, to assess the existing installed capacity and to examine and recommend the extent of additional capacity which should be set up to meet the operational and maintenance requirements of the Steel Plants and to ensure that the production of refractories kept pace with the steel development programme. Part I of the report of the Committee containing a long-term assessment of demand and availability and recommendations for bridging the gap between the demand and availability has been received. The various recommendations made by the Committee are presently under consideration and implementation by Govt. and would result in increased production and improvement in the quality of refractories from indigenous sources.

3. As already known to the Committee, Government have sanctioned the setting up of refractory plant at Bhilai with an annual capacity of 1,00,000 tonnes of refractories, of which 60,000 tonnes will be fire-bricks, 30,000 tonnes basic bricks and 10,000 tonnes silica bricks. Capacity for silica bricks is proposed to be doubled to 20,000 tonnes as recommended by the Committee referred to in the previous paragraph. This would increase the overall capacity of the plant to 1,10,000 tonnes. The project is likely to be commissioned in 1975.

4. The Government have acquired M/s Asian Refractories Limited. It will cater to the requirements of fire-clay bricks of Bokaro Steel Plant.

5. In order to ensure proper planning and timely availability of stores and spares, refractories, rolls etc. Hindustan Steel Limited has drawn up a 3 year Rolling Plan so that the required items, whether imported or indigenous, are not only planned for and secured in time but are also available when required. This should considerably reduce procedural delays in providing foreign exchange. Further, bulking of demands could not only save money in procurement but also help in import substitution.

[Ministry of Steel & Mines (Deptt. of Steel)  
C.M. No. H-11018/16/71-Parl. dated 10th August, 1972.]

*Further Reply of Government*

At the time of preparation of Government's earlier reply it was expected that the Detailed Project Report would be received, considered and approved by the end

of 1972. Reckoning about 3 years required for the execution of the Project, we had mentioned in the earlier reply that the Plant was likely to be commissioned in 1975. However, the preliminary tests of raw materials conducted did not come up to expectations and further tests on raw materials drawn from different sources had to be conducted. Consequently, the consideration of the DPR by the HSL and the finalisation of the Collaboration agreement with M/s. Belpahar Refractories Ltd., was delayed. M/s. Belpahar Refractories Ltd., have now been appointed as production consultants. As a result of discussions which have since taken place among HSL, Belpahar Refractories Ltd. and the Metallurgical Engineering Consultants India Ltd., the Project report has been finalised by HSL. This would be considered by the Steel Authority of India shortly and sent with its recommendations to the Government for sanction. From the date of issue of the sanction to the DPR, it would take about three years to complete the Project. It is expected that this will be by the end of 1976.

[Ministry of Steel & Mines D.O. No. COY-3(37)/71-II dated 3rd September, 1973.]

*Comments of the Committee*

Please see paras 11 to 13 of Chapter I of the Report.

*Recommendation (Serial No. 6)*

The Committee are not satisfied with the reasons advanced for abnormal low production in wheel and axle plant. They agree that in an integrated steel plant the overall conditions have an important bearing on the performance of a particular unit. The Committee, however, find that the production in 1969-70 in the wheel and axle plant has only been about 15 per cent of the rated capacity whereas the production of steel ingots was about 60 per cent of the rated capacity. The overall low production of steel in Durgapur Steel Plant could therefore hardly explain the unsatisfactory production performance of the Wheel and Axle Plant. The low production in this plant not only resulted in loss to HSL but also affected the production of rail coaches and wagons. There was also drain of foreign exchange on the import of wheelsets which became necessary due to low production in this plant. One of the reasons for low production as pointed out by Audit was that "There was lack of control over the production of ingots of required sizes." The result was that these ingots did not give the required number of wheel blocks and consequently there was lower yield and lower output

of finished wheels. This matter has been analysed in detail in the following paragraphs. The Committee recommend that the Ministry should make a detailed enquiry into the working of this unit to find out the real reasons for abnormal low production and remedial measures should be taken to improve production performance.

(Para No. 3.56)

*Reply of Government \**

Abnormal conditions in West Bengal, manifested by the disturbed law and order situation and acute inter union rivalry with political overtones, did have a serious adverse effect on industrial relations in Durgapur Steel Plant, particularly in the Wheel and Axle Plant where the jobs are entirely dependent on individual human effort.

Since the steel production in the plant has not exceeded the 1 million tonne mark even after expansion, the machines installed in Wheel & Axle Plant in the expansion stage were not manned and operated. The production in Wheel and Axle Plant during 1969-70, 1970-71 and 1971-72 was 20.1%, 26.4% and 17.8% respectively at the capacity of 45,000 wheel-sets at the million tonne stage.

As the output rate depends primarily on the rejection at various stages of operation and the cycle time for the various operations, studies were conducted in the Plant in 1967 to set out the norms and standards on various operations and activities. Based on these figures, if no additional balancing equipments are installed in the Wheel and Axle Plant, the annual capacity has been assessed at around 58,000 sets against 75,000 wheel-sets in the expansion stage.

Action has been taken for renovation and reconditioning of machines and also to tackle the maintenance problems by carrying out capital repairs and adhering to better maintenance schedules. On receipt of needed spare parts the Press has been recently overhauled. With the help of an U.K. Expert, reconditioning of machines is also in progress.

Though a revised incentive scheme was introduced in September, 1970 as per the recommendations of Hyderabad Staff College, it has not paid any dividends so far due to the unfavourable industrial relations situation.

However, it has been decided that Hindustan Steel Limited, should set up an internal enquiry with the

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\* Not vetted by Audit. |

help of some technical persons to examine the problem once again with a view to recommending steps that can be taken within the constraint of labour trouble, to improve production.

[Ministry of Sreel and Mines (Department of Steel)  
Office Memorandum No. H-11018/16/71- par1, dt. 31.10.72.]

*Further Information required by Committee*

According to the reply, it has been decided that Hindustan Steel Limited should set up an internal inquiry with some Technical Persons to examine the problems once again with a view to recommending steps that can be taken within the constraint of labour trouble to improve production. Has such an inquiry been held and if so what were the findings of the inquiry and what action has been taken thereon? (L SS O.M. No. 18 PU/71 dated 27.1.73).

*Reply of Government*

Hindustan Steel are yet to set up the proposed internal inquiry. They will be doing so very soon and as soon as the report of the inquiry is received, further action will be taken under intimation to the Committee on Public Undertakings.

[Ministry of Steel & Mines (Deptt. of Steel)  
O.M. No. Dur-18(1)/72 dated 15.3.1973]

*Comments of the Committee*

Please see paras 14 to 17 of Chapter I of the Report.

*Recommendations (Serial No. 16)*

The Committee regret to note that as in the case of other mines, the working of the manganese ore mines presented a dismal picture of very low production and abnormally high cost of production. The Committee are surprised to find that the H.S.L. accepted for exploitation those areas which are not economically mineable. The average output from the mines during 1965-66 to 1969-70 has been about 1.5 per cent (approx.) of the total quantity required by the Plant and the cost of raising has also ranged between 10 times to about 2 times (approximately) the cost of ore purchased from open market. These mines are



hardly serving any purpose except adding to the avoidable expenditure year by year due to abnormally high cost of raising ore. The Committee therefore recommend that the desirability of continuing the mining of manganese ore from these captive mines should be examined in the background of its existing performance without any further loss of time.

(Para No. 5.58)

*Government Reply*

In the year 1955, when raw materials sources for the Bhilai Steel Plant were being prospected, although virgin areas for iron ore, Limestone, dolomite etc. were available, for manganese ore no virgin areas were available for exploitation. This was mainly because of the manganese export boom that was prevailing during the period. It was decided and agreed upon that from the available free hold areas, the State Department of Geology and Mining, M.P. would recommend to the Bhilai Steel Plant a few areas where after prospecting, areas were to be developed for mining operations. None of these deposits were prospected deposits. Only on the basis of surface indications, some mining activities took place and in most of the cases the easily mineable ore was taken out. These areas were subjected to prospecting. For those areas in which prospecting yielded no results, a general policy was adopted to surrender the properties.

Subsequently in 1970 Bhilai came to know that the areas made available to them would not yield the requisite reserves of manganese ore for economic exploitation, Bhilai further moved for obtaining Mining lease of those areas which were thrown open. None of these areas was prospected earlier. There also, easily exploitable ore had been mined out. Detailed prospecting was conducted by Bhilai in those areas and in most of the cases, it was seen that practically no reserves were available. Some exploitation was being conducted in a little reserve that could be established along with the prospecting operation.

The position of available reserves of Manganese Ore is indicated below:

Zone No.	Areas	Reserves (Tonnes)
I	Bakoda groups of Mines (Bakoda, Bachatikur, Mamthi and Pandewada)	3400 working depth 15M
III	Shankar Piparia, Hatoda and Mohgaonghat	20,000 working depth 15 M in Shankar Piparia
IV	Chikmara ...	15,000 working depth 15M
V	Kochewahi and Bosijhari	15,000 working depth 15M

Mining of manganese ore, so far, has not been taken up on a permanent footing since an economically exploitable deposit is yet to be located. Amongst those areas where prospecting has not shown encouraging results, the areas were surrendered. Finally, it was felt that in Madhya Pradesh, there would be no economically mineable areas, for which Bhilai could acquire mineral rights which can help in producing manganese ore at economical cost. Therefore, a few areas in Maharashtra have been examined last year and on the basis of surface indications Bhilai has applied for mining lease.

From the situation as at present, there is practically no possibility of having large scale manganese ore exploitation through captive mines. In future, when Bhilai locate an economical deposit, a proper captive mine can be developed for exploitation. In the meantime, for the reserves that have been proved, BSP is taking up the exploitation programme of 30,000 tonnes for the year 1972-73. After processing the tender papers, if it is found that it will be economical to exploit this quantity, Bhilai will undertake the mining operations, otherwise, Bhilai may have to close down Manganese mining unit. The available personnel in the mining side can be absorbed against vacancies in other mines.

The mining work done was really incidental to prospecting, which had to be carried out fully even if to disprove a property before surrendering. As stated above these properties, granted to Bhilai Steel Plant were unprospected and until complete prospecting work was done, with full staff to man the units, the merits or the demerit of the property would not be known. The raising of ore was incidental to this process and the cost has to be viewed in this context.

[Ministry of Steel & Mines (Deptt. of Steel)  
O.M. No. H-11018/16, 71-Parl. dt. 4.12.1972]

*Comments of the Committee*

Please see paras 18 to 20 of Chapter I of the Report.

*Recommendations (Serial No. 26)*

From a statement furnished to the Committee showing the yield of various by-products in three steel plants (Appendix IV) the Committee, however, find that the recovery of various by-products had been lower than norms laid down by the Norms Committee. The recovery of both crude Benzol and the Ammonium Sulphate during the years 1968-69 and 1969-70 has been the lowest in Rourkela Steel Plant as compared to the other two steel plants.

The Committee hope that the implementation of various recommendations of the two Expert Committees appointed by HSL to examine the working of these by-product plants will be expedited to improve the working of these plants. They would like to emphasize the need to maximise production from these plants since substantial investment has been made by HSL and their performance affects the cost of production of steel and also the working results of HSL.

(Para No. 8.8)

*\*Reply of Government*

The yields of By-Products in the last three years were as follows:-

	Norms as per the norms Committee	1969-70	1970-71	1971-72
<i>Jhilai Steel Plant</i>				
Crude tar %	3.0	2.90	2.85	2.78
Benzol %	0.8	0.52	0.45	0.49
Ammonium Sulphate%	1.1	0.95	0.95	0.84
Gas (NM3)	300	303	306	285
<i>Durgapur Steel Plant</i>				
Crude tar %	3.0	2.78	2.73	2.54
Benzol %	0.8	0.47	0.44	0.40
Ammonium Sulphate %	1.1	0.83	0.83	0.81
Gas (NM3)	275	271.8	272	274
<i>Rourkela Steel Plant</i>				
Crude tar %	3.0	2.85	2.75	2.67
Benzol %	0.5 (M.T.P.) 0.8 (EXPN)	0.34	0.024	0.14
Ammonium Sulphate %	1.1	0.68	0.45	0.43
Gas (NM3)	275	270	261	257

While full implementation of the recommendations of the two by-products Committees are nearing completion, the oven conditions of old batteries under the 1 million tonne stage have deteriorated effecting the yields of the By-products. A committee has been recently constituted to make a special review of the progress of implementation of the Raju Committee's report and to suggest further action to be taken in order to step up the production of By-products in all the Plants at the earliest.

In case of Rourkela Steel Plant, the limited compressed Coke Oven gas availability has been the main reason for low production of crude benzol. Restrictive availability of steam has limited the production of Ammonium Sulphate.

Crash programmes have been \*made for the repair of all the steam leakages and for the repair of Coke Oven Batteries and Coke Oven equipments so as to improve the oven pushing as well as gas yield.

[Ministry of Steel and Mines (Department of Steel),  
O.M. No. H-11018/16/71-Parl. dated 31.7.72]

*Comments of the Committee*

Please see paras 21 to 23 of Chapter I of this Report.

*Recommendation (Serial No. 27)*

The Committee regret to note the unsatisfactory working of the by-product plants at Rourkela Steel Plant due to poor performance of the screw compressors. It is unfortunate that the design deficiencies in the by-product plant resulted in avoidable loss to HSL. As pointed out by the Kane Committee the "introduction of untried equipment for compression of a corrosive gas without provision for adequate purification introduced an element of risk into the design of the plant that ought to have

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\* The crash programme for the repair of Coke Ovens started from March, 1971.

The expected dates of completion of the repairs of coke oven batteries as per crash programme were:-

- Battery No. 1. Already completed in October, 1972.
- Battery No. 2A. Is under repair and is expected to be completed by middle of 1974.
- Battery No. 2B. Already completed in May, 1972.
- Battery No. 3. Repair is in progress and was expected to be completed by September, 1973.

The expected dates of completion of capital repairs of the coke oven batteries are as follows:-

- Battery No. 1. March, 1974.
- Battery No. 2A. Will be taken up after the repair programme is completed in middle of 1974.
- Battery No. 2B. This was completed in July, 1973.
- Battery No. 3. Will be taken up after its repair and the capital repair is expected to be completed by March, 1975.

[Ministry of Steel & Mines, (Deptt. of Steel)  
O.M.No. RKL-5(4)/72 dated 9.11.73]

been avoided". The Committee further note that the Kane Committee recommended that "the Consultants should have provided a purification system to remove Benzol, Naphthalene and Hydrogen Sulphide from the coke oven gas prior to its entry into the screw compressors. It appears that the entire working of the by-product plant was handicapped since the date of installation of the plant resulting in continuous loss in production. The Committee are amazed to find that in spite of having their technical experts, neither the Consultants nor the HSL noticed such a major defect in the plant till the Kane Committee detected the defects in 1968. The Committee are disappointed to note that the substantial loss and avoidable expenditure had to be incurred on account of the defective working of the compressors. Apart from the low production of by-products resulting from the defective compressors, remedial measures had to be taken by the HSL to instal a new compressor as "replacement" to the "damaged" one. For all these losses and avoidable expenditure, the Committee feel, the consultants and HSL cannot escape responsibility.

(Para No. 8.12)

*Reply of Government*

The By-products Plant alongwith the screw compressors were erected at the one million tonne stage under the supervision of the Consultants - M/s. Indian Gemeinschaft Krupp-Demag GmbH in accordance with the design approved by them.

2. The poor performance of the screw compressors affects only the units installed in the stream after the screw compressors i.e. recovery of benzol products, hydrogen sulphide recovery, and gas supply to the Fertilizer Plant. By-product recovery before the compressors is not dependent upon the performance of the compressors.

3. The Compressors were installed at Rourkela on the advice of the Consultants - (M/s. I.G.K.D.). Obviously, the Consultants did not consider purification of gas for benzol, naphthalene and hydrogen sulphide before feeding to the screw compressors, necessary.

4. From the date of the installation of the screw compressors in September, 1960, HSL encountered a number of difficulties in the operation of these screw compressors. The difficulties were attributed to severe voltage fluctuations, quality of the cooling water, maintenance of clearance between screw compressors rotors and casings, improper working of the by-product plant units before the compressors and presence of gum forming com-

pounds in the coke oven gas fed to the compressors (for which no removal facilities were envisaged). Thus, no single cause could then be identified as the only reason for these difficulties. In fact even now, it may not be possible to find one single cause for all these difficulties.

5. In order to improve the efficiency of screw compressors of By-product Unit of Rourkela Steel Plant, Hindustan Steel Limited were constantly carrying out a number of investigations even prior to the submission of Kane Committee Report. As a result of these efforts it was possible to overcome some of the troubles which were experienced in the past and accordingly they were able to regulate the voltage fluctuations, control the water turbidity, give suitable clearance between the casing of the screw compressors and the rotor and also to make free the gas from gum forming compounds by incorporating venture scrubbers in the intermediate stage of the compressors. It will thus be seen that HSL were aware of the difficulties being experienced and had taken steps to deal with the problems of the screw compressors even before the recommendations of the Kane Committee were available. Besides, Hindustan Steel Limited had taken action to provide a replacement compressor. At present, the screw compressors are performing satisfactorily, though at reduced load even with benzol, hydrogen sulphide and a part of naphthalene in the gas.

6. The equipment for purification of the gas from benzol, naphthalene, hydrogen sulphide as suggested by the Kane Committee, has been installed and the performance of the screw compressors will be watched to see whether this would solve the problem.

[Ministry of Steel & Mines (Deptt. of Steel)  
O.M. No. H-11018/16/71-Parl. dated 31st July, 1972.]

*Recommendation (Serial No. 27)*

The Committee also find that even after the Report of the Kane Committee in July, 1968, it was only on 20th February, 1959 i.e. after six months that the Government conveyed to HSL their decision on the various recommendations contained in the Report. The recommendations of the Committee were stated to be under implementation. The Committee feel that Government should not delay such matters of importance where production is hampered. The Committee hope that implementation of the recommendations of the Kane Committee would help to improve the working of the by-product plants.

(Para No. 8.13)

*Reply of Government \**

The remarks of the Committee have been noted.

The Gas Line modifications as recommended by Kane Committee have been completed and are in commissioning stage. Yields for Benzol recovery plant and subsequent processes are expected to improve once the line is finally commissioned. A new compressor was expected to be commissioned by the end of November or early December 1972. The progress made on each of the recommendations of Kane Committee is given in the enclosed statement (Appendix III).

[Ministry of Steel and Mines (Department of Steel)  
O.M. No. H-11018/16/71-Parl, dated 4.12.1972.]

*Comments of the Committee*

Please see paras 24 to 26 of Chapter I of the Report.

*Recommendation (Serial No. 28)*

The Committee regret to note that the sulphuric acid plant erected in May, 1960 at a total cost of Rs. 16.67 lakhs could not be commissioned till August, 1970. There had been avoidable delay in placing orders for sulphur burning unit costing Rs. 3.81 lakhs to make good the deficiency of hydrogen sulphate content in the Coke Oven Gas. Surprisingly it took HSL a period of five years for placing orders for this unit after the suggestion was made in this regard by the suppliers. It is surprising that about 2-1/2 years were taken only in ascertaining from the Pyrites and Chemicals Development Corporation the position regarding the availability of pyrites in terms of the Government direction issued in 1963 that the existing Plants be designed/modified to use indigenous pyrites instead of imported sulphur.

(Para No. 8.19)

The Committee also find that the contract for the by-product plant including sulphuric acid plant under the Expansion Scheme was placed on the 4th July, 1963 with elemental sulphur burning equipment with a future provision for pyrites burning. It is paradoxical that while the orders for the Sulphuric Acid Plant under the expansion scheme were placed in July 1963 itself pending examination of availability of pyrites, the Management waited till November 1965 for a reply from the Pyrites and Chemicals Development Corporation regarding

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\* Not vetted by Audit



the supply of pyrites before placing orders for the Sulphur burning unit in respect of the sulphuric acid plant already installed under the original scheme.

The Committee are also not able to appreciate how a period of four years was allowed to elapse between the placing of order for the sulphur burning unit in November, 1966 and the commissioning of the Plant in August, 1970. This is indicative of a leisurely and almost casual manner of dealing with plant operation which the Committee cannot but too strongly deprecate.

(Para No. 8.20)

The Committee also fail to appreciate the decision to instal another Sulphuric acid plant with higher capacity while the plant installed earlier could not even be commissioned till August, 1970, not to speak of its working satisfactorily.

(Para No. 8.2b)

*Reply of Government \**

The Committee has commented on the delay of nearly 5 years in the placing of orders for the Sulphur Burning Unit after the suggestion to that effect was made by the supplier. The Supplier had submitted a proposal in May, 1961 for the setting up of the Sulphur Burning Unit. A final decision regarding installation of the Unit was taken in December, 1962 after the proposal was technically scrutinised and accepted in consultation with the Central Engineering & Design Bureau. Since it was possible to meet the Plant's requirement of sulphuric acid from sister steel plants and outside sources, it was considered desirable to postpone installation of the additional equipment. Further the question as to whether the plant should be designed for using pyrites or sulphur was also under consideration. After this question was sorted out the suppliers were approached in November, 1965 for financing the project from DM credit earmarked for 1.8 MT expansion scheme. After their agreement offers were obtained from supplier, approval of Government taken and orders placed in November, 1966.

The total requirements of Sulphuric Acid in the original as well as expansion scheme was estimated at 4,300 tonnes and 28,700 tonnes respectively. This was to be met by commissioning the sulphuric acid plant installed at the million tonne stage and the Sulphuric Acid Plant included as a part of the 1.8 MT expansion scheme. In the case of the latter, the Government specifically sanctioned the project with the required foreign exchange. Contracts were accordingly concluded and orders placed. If the sulphuric acid plant in the

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\* Not vetted by Audit.

expansion scheme was not installed, the increased requirement of sulphuric acid for the expanded plant would have had to be met by purchase from outside sources. There was therefore no anomaly in the finalisation of the contract for the expansion unit though the original unit itself was not yet ready.

The Committee has observed that there was a delay of nearly 4 years between the placement of orders for the Sulphur Burning Unit and its commissioning in August, 1970. The order was placed with the supplier in November, 1966 and the erection completed in April, 1968. The Unit could not however be commissioned due to delays in obtaining approval of the Waste Heat Boiler from the Inspectorate of Boilers, Government of Orissa. Duplicate documents regarding the boiler installed in 1959 under the 1 MT stage, had to be obtained from Germany with great difficulty and certificate of approval of the Inspectorate of Boilers obtained in March, 1969. Even then the plant could not be commissioned as the supplier refused to depute his commissioning personnel till his dispute with the Income Tax authorities in India was settled. After settling the dispute the suppliers deputed his commissioning personnel in April, 1970 and the unit was commissioned. The delay was, therefore, beyond the control of plant management.

[Ministry of Steel & Mines (Department of Steel)  
O.M. No. H-11018/16/71-Parl. dated 4.12.1972.]

*Comments of the Committee*

Please see paras 27 to 29 of Chapter I of the Report.

*Recommendation (Serial No. 32)*

The heavy capital expenditure on the plants of Hindustan Steel Limited is a major factor responsible for raising the cost of steel as interest and depreciation charges account for about 25 per cent of the total cost of production of steel. The Committee regret to note that there have been frequent revisions and considerable increase in the capital cost estimates as compared to the original estimates for each of the three plants of Hindustan Steel Limited not only for the original million tonne plants but also for their expansions. In order to have a proper economic appraisal of a project it is essential to prepare realistic estimates taking into account all foreseeable items of expenditure to obviate the need for frequent revision of estimate. If substantial increases in capital outlay are placed before Government for approval after the project has been launched Government are left with no alternative but to approve the increase. (Para 11.17)

*Government Reply \**

Government agree that it is essential to prepare realistic cost estimates of projects taking into account all foreseeable items of expenditure so that the need for frequent revision of estimates is obviated.

The Board of Directors of Hindustan Steel Limited have set up a Group for analysing the causes for excesses in project estimates and to recommend the steps which could be taken to ensure that estimates are prepared on a more realistic basis so that, as far as possible, final cost confirms to the original estimates. The report of the Group should be of considerable assistance to the Company in the formulation of project estimates in future. Please also see reply to recommendation No. 33.

[Ministry of Steel & Mines (Deptt. of Steel)  
O.M. No. H-11018/16/71-Parl. dated 28th June, 1972.]

*Further information called for by the Committee*

It is stated in the reply that the Board of Directors of H.S.L. have set up a Group to analyse the causes for excess in budget estimates. The date on which this Group was set up and whether this Group has submitted the Report may be indicated. A copy of the Report of the Study Group may also be furnished.

[L.S.S. D.O. No. 18-PU/72 dated 27th August, 1973]

*Further reply of Government*

In the Government reply it had been stated that the Board of Directors of Hindustan Steel Limited had set up a Group for analysing the causes for excesses in project estimates and to recommend steps which should be taken to ensure that the estimates are prepared on a more realistic basis so that, as far as possible, final cost conforms to the original estimates. A decision to this effect had been taken by the Board of HSL in October, 1971. On further enquiries it now transpires that this Group was in fact not formally appointed. Moreover, since the reply was sent, the Steel Authority of India Limited has been incorporated and a new procedure has been laid down for the examination of Feasibility and Detailed Project Reports in respect of HSL and other of its subsidiaries. The earlier Government reply, therefore, needs to be revised. Twenty-five copies of the revised Government reply are accordingly enclosed.

[Ministry of Steel & Mines D.O. No. Coy-3(37)/71-II  
dated 3rd September, 1973.]

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\*Not vetted by Audit.

*Government reply (Recommendation Serial No. 32)*

Government agree that it is essential to prepare realistic cost estimates of projects taking into account all foreseeable items of expenditure so that the need for frequent revision of estimates is obviated.

It has, however, been noticed that project estimates are often affected on account of certain factors over which the project authorities have little or no control, e.g., statutory increases in rates of custom duty, railway and ocean freight and excise duty; devaluation/revaluation of currencies; rise in the prices of construction materials like cement, steel, etc. and increase in the rates of wages and salaries. It is also difficult to anticipate the impact of such escalatory factors and to make any provision on this account in the estimates.

Hindustan Steel Limited has now become a fully-owned subsidiary of the Steel Authority of India Limited (SAIL) which was incorporated in January, 1973 (please see Government reply to recommendation No. 31). It has been decided that all proposals for capital expenditure estimated to cost Rs. 10 crores and above in respect of all its subsidiaries (and to be financed directly from Government funds) will be first examined by an ad-hoc Committee of Experts to be set up by SAIL at all important stages, viz., project formulation, consideration of Feasibility Reports, Detailed Project Reports, etc., before these are submitted to SAIL's Board for approval and are sent to Government for final approval. The Committee would be presided over by the Chairman of SAIL (or in his absence by Technical or Finance Director) and will include, among others, the nominees of Ministry of Finance and Planning Commission.

Please also see reply to recommendation No. 33.

[ Ministry of Steel & Mines (Deptt. of Steel)  
D.O. No. Coy-3(37)/71-II dated 3.9.73.]

*Comments of the Committee*

Please see paras 30 to 33 of Chapter I of the Report.

SUBHADRA JOSHI,

NEW DELHI;

*Chairman,  
Committee on Public Undertakings*

November, 23, 1973

*Agrahayana 21, 1895(S)*

## APPENDIX I

(Vide reply to recommendation at S.No. 13)

*A note explaining the position regarding higher percentage of fines in Rajhara-Iron ore mines.*

The yield of fines is a function of the nature and character of the Iron ore deposits which are of two broad types viz. Massive and Laminated. Normally the massive type of ore, being hard and compact, yields less fines than the laminated variety.

Since the commencement of mining in 1960 and upto the year 1963-64, the excavation in massive ore amounted to 0.862 MT and in laminated ore 3.426 MT. Though the ratio of massive to laminated excavation was 19 : 81 only, it was good enough to yield during this period 66% lumps and 34% fines. It was obviously better than what was visualised in the Project Report not only because massive ore was particularly hard and compact but also because laminated ore was more compact than soft.

But in the subsequent two years, 1964-65 and 1965-66, the lump ore averaged 56% and fines 44% showing a distinct trend of increase in yield of fines.

In the years between 1966-67 and 1970-71 even though excavation in massive ore averaged 41% as against 19% in the first period the average lump yield was roughly 51%.

In the year 1971-72, with development of lower horizons, where massive ore predominates, the excavation in massive ore further improved to 51% on average but the fines yield still averaged 53%.

The above indicates the changing character of the ore; both massive and laminated ore tending to be softer and more friable while going in depth. There is similarly evidence of variation in physical characteristics in horizontal extensions. There are instances of lump yield of only 35% and again 54% respectively in two consecutive months, the massive horizon in the former case merging into a blue dust zone.

But when the ore is unmistakably prone to yielding more fines in depth than anticipated, as indicated by the records of operation since commencement of mining, the obvious alternative is to find avenues to utilise them. Fortunately, the present trend is to use more and more sinter in the blast furnace burden which provides scope for utilization of fines by expanding the sintering capacity.

APPENDIX II

(Vide reply to recommendation at S. No. 13)

*Statement showing the recommendations of the Technical Committee appointed to review the performance of Hindustan Steel Mines and action taken thereon by Hindustan Steel Limited.*

S.No.	Recommendations of the Committee	Action taken by the Hindustan Steel Ltd.
1.	<p>The Committee has attributed the high cost of iron ore at Rajhara to limitation due to transport facility resulting from single track serving the quarry and the crushing plant, and due to excess manning. The development of Rajhara has reached a stage when the second track can be laid without incurring capital expenditure.</p>	<p>This is being done. The manpower at Rajhara will be reduced by 700 persons by introducing 2 shift working instead of three shift as at present. The excess manpower will be shifted to Dalli now under construction. This recommendation will be implemented as and when the mechanised mine at Dalli is commissioned.</p>
2.	<p>The Rajhara and Jharandalli mines, sharing common facilities, should be treated as a single complex, producing 3.2 million tonnes of ore in two shifts.</p>	<p>From the operational point of view these two mines already constitute a single complex.</p>
3.	<p>To achieve a production of 2.1 MT of washed ore at Barsua mine, lumps and fines will be in equal proportion. To achieve this the Committee has suggested speedy removal of accumulated waste rock and formation of Quartzite horses and realignment of benches.</p>	<p>For this purpose action for procurement of 4.8 C.U. metres shovels has been initiated.</p>

**Sl.No. Recommendations of the Committee**

**Action taken by the Hindustan Steel Ltd.**

4. Full utilisation of Barsua fines in Rourkela's Sintering Plant.  
For this purpose a limestone crushing unit has been sanctioned for Rourkela Sintering Plant. Limitation regarding crushing of limestone to requisite fineness has been the reason for under-utilisation of Sintering Plant capacity of Rourkela Steel Plant.
5. The Nandini mine should be worked in two shifts transferring surplus men to Hirri which is to be mechanised.  
This will be done as and when Hirri is mechanised.
6. Purnapani Limestone & Dolomite quarry should be able to attain its rated capacity of 0.65 MT with the arrival and commissioning or replacement equipments already ordered.  
Replacement equipments have been ordered and are being commissioned as and when received.
7. Repair and maintenance organisations should be set up at Rajhara and Barsua for BEML dumpers and dozers with the help of BEML and Cummins for improving the performance of these equipments.  
The proposal had been approved by the plants earlier and some engineers from BEML and Cummins had visited the mines. Full scale repair and maintenance by them has not been organised as yet.



## APPENDIX III

(Vide reply to recommendations at S. No. 27)

*Action taken on the recommendations of the Kane Committee*

Sl.No.	Recommendations of the Committee	Position as at the end of June, 1972
1.	A minimum of 45,500 Nm <sup>3</sup> /hr. of Coke Oven gas should be guaranteed to the Fertilizer Plant & the Steel Plant should provide for burning substitute fuels, wherever possible to ensure this supply.	The Coke Oven gas supply to F.P. continued to be poor throughout the Qr. April-June, 1972. Apart from the troubles in the Coke Oven batteries, the power restriction during April-June, 72 also adversely affected the Gokhale Oven gas supply to F.P. Oil firing has been commissioned in all 4 reheating furnaces. The figures for the monthly average Coke Oven Gas supplied to F.P. are as below :-  <div style="text-align: right; margin-left: 100px;">           April '72 : 5,300 Nm<sup>3</sup>/hr.            May '72 : 8,500 "            June '72 : 5,800         </div>
2.	All the four streams of the Fertiliser Plant should be operated continuously for sufficiently long time on the Ammonia producing as well as Ammonia processing sides so as to bring to light bottlenecks, if any.	Naphtha Plant is running to rated capacity. All the 4 streams can be fully loaded only when C.O. gas supply to F.P. at the rate of 45,000 Nm <sup>3</sup> /hr. can be ensured by the Steel Plant.

3. The arrangement of by-passing of 10,000 Nm<sup>3</sup>/hr. of gas from the 1.0 million tonne stage Coke Oven to the purification system estp. abolished under the expan. should be immediately tried on an experimental basis so that together about 12,000 Nm<sup>3</sup>/hr. of Coke Oven gas from the new ovens, a total of 22,000 Nm<sup>3</sup>/hr. of clean gas becomes available for mixing with the balance of unclean gas before entry into the screw compressors thus reducing the impurities entering the compressors. It may be discontinued if it results in deposition of Naphthalene in their inter cooler of the compressors.

4. The entire Coke Oven gas from the By-product plant of the 1 million tonne stage should be purified for the removal of benzol and hydrogen sulphide in the expansion units of the by-product plant and the existing stand by Benzol scrubber and wash oil distillation units of expan. put to regular use. An addl. Hydrogen Sulphide scrubber with capacity for handling 35,000 Nm<sup>3</sup>/hr. of Coke Oven gas and some inter-connection gas lines must be provided.

The job of modification of the pipe lines for cleaning the entire Coke Oven gas, has been completed and this is in commission.

Modified gas line has been commissioned in early May, 1972. While Naphthalene & Benzol content in the gas have almost been stabilised, H<sub>2</sub>S content is still running high. The performance of the Gas Compressors is being closely watched.

- Does not arise.
5. If the performance of the Compressors continues to be unsatisfactory in spite of the modifications mentioned at (4) above, conventional reciprocating type compressors would have to be installed.
6. Spare parts needed to restore all the existing compressors into good working conditions must be procured on top-priority basis. There is at present no need to instal additional screw compressors.
- 
7. For hydrogen sulphide scrubbing, potassium carbonate should be used in place of a solution of sodium carbonate to reduce the hydrogen sulphide content of gas sent to Fertilizer Plant and corrosion equipment.
8. Spares for Naphthalene presses should be procured immediately for optimum production of hot pressed Naphthalene.
9. Naphthalene oil Dephenolisation Plant should soon be put into regular operation.
- Action taken. One of the screw compressors which is beyond economic repairs, is being replaced by a new one.
- The experiment conducted did not indicate any apparent improvement; hence it was discontinued.
- Foreign spares have been received in the month of April & May, 1972 and the 3rd Press is under maintenance for overhauling.
- Commissioned in October, 1969 and run intermittently as and when required.

Sl. No.	Recommendations of the Committee	Position as at the end of June, 1972
10.	All efforts should be made to improve the working of the carbolic oil processing plant to capacity to ensure full recovery of phenol.	Entire quantity of Carbolic oil is being processed for full recovery. Constant efforts are being made to improve upon the performance of the Unit.
11.	The dephenolisation plant should be put into operation to ensure that the effluent from the ammonia stills is rendered free of phenols, as required by health regulations, before it is discharged into the river. Alternatively, a biological oxidation plant should be provided for purification of effluent liquors	The plant is in normal continuous operation.
12.	Cost of raw materials and services charged to the Fertilizer Plant should be determined on a rational basis. If for any reasons, this is not acceptable, then there is no alternative but to separate the Fertilizer Plant completely from the Steel Plant and provided for alternative sources of supply of synthesis gas as well as services to the Fertilizer Plant with additional investment that may be necessary.	Costing system has been rationalised.

Sl.No.	Recommendation of the Committee	Position as at the end of June, 1972
13(a).	Phenol should be recovered from all streams at Rourkela and from all other sources in different units under HSL Plants to meet the rising demand thereof.	Entire quantity of oil is being processed to recover Phenol.
13(b).	Raju Committee's proposals for greater recovery of Naphthalene should be implemented immediately.	Redistillation of Naphthalene oil is being carried out on regular basis as per Raju Committee's recommendations.
13(c).	Experimental work to ensure that the anthracene recovered is of adequate purity to meet the specification of the ultimate consumers should be undertaken.	Parties who initially showed interest in 40% anthracene have not come forward with any proposal for purchase of the same. Recently, an alternate use for crude anthracene (20%) has been found as a raw material for producing carbon black.
14.	Procedure for rigorous preventive maintenance of the Screw Compressors should be established and adhered to strictly. At least one of the compressors should be run continuously for a long period of time to establish norms for major maintenance jobs.	Norms for major maintenance jobs have been established by continuous run of compressors. Rigorous preventive maintenance according to the norms derived at is being followed strictly.

## APPENDIX IV

(Vide para 5 of the Introduction)

*Analysis of action taken by Government on the recommendations contained in the First Report of the Committee on Public Undertakings (5th Lok Sabha).*

I.	Total number of recommendations .. ..	37
II.	Recommendations that have been accepted by the Government (vide recommendations at Serial Nos. 2, 5, 7, 8, 10, 11, 12, 13, 14, 15, 18, 19, 20, 21, 22, 23, 24, 25, 29, 30, 31, 33, 34, 35, 36 and 37).	..
	Number .. ..	26
	Percentage of total:	70.2%
III.	Recommendations which the Committee do not desire to pursue in view of Government's replies (vide Recommendations at Serial Nos. 9 and 17).	
	Number .. ..	2
	Percentage of total:	5.4%
IV.	Recommendations in respect of which replies of Government have not been accepted by the Committee (vide recommendations at Serial Nos. 1, 3, 4, 6, 16, 26, 27, 28 and 32).	
	Number .. ..	9
	Percentage of total	24.3%