COMMITTEE ON PUBLIC UNDERTAKINGS

(THIRD LOK SABHA)

THIRTY-FIRST REPORT

ALLOY STEELS PROJECT AND COAL WASHERIES PROJECT OF HINDUSTAN STEEL LIMITED

(MINISTRY OF IRON AND STEEL)



April, 1966/Vaisakha, 1888 (S)

Price : Re. 1.05 *

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(THIRD LOK SABHA)

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^{*}Appointed as Chairman w.e.f. 24-1-1966 vice Shri Panampilli Govinda Menon ceased to be a member of the Committee on his appointment as Minister.

^{**}Elected w.e.f. 23-2-1966 in the vacancies caused by appointment of Shri Panampilli Govinda Menon as Minister and resignation of Shri Harish Chandra Mathur.

^{***}Ceased to be a member of the Committee on his retirement from Rajya Sabha w.e.f. 2nd April, 1966.

INTRODUCTION

I, the Chairman, Committee on Public Undertakings, having been authorised by the Committee to submit the Report on their behalf, present this Thirty first Report on Alloy Steels Project and Coal Washeries Project of Hindustan Steel Ltd.

2. This Report is based on the examination of the working of the Alloy Steels Project and Coal Washeries Project of Hindustan Steel Ltd. upto the year ending 31st March, 1965. The Committee took the evidence of the representatives of Hindustan Steel Ltd. on the 29th and 30th December, 1965 and of the representatives of the Ministry of Iron and Steel on the 23rd and 24th February, 1966. The report was adopted by the Committee on the 18th April, 1966.

3. The Committee wish to express their thanks to the officers of the Ministry of Iron and Steel and Hindustan Steel Ltd. for placing before them the material and information that they wanted in connection with their examination. They also wish to express their thanks to other non-official organisations/individuals who, on request from the Committee furnished their views on the working of Hindustan Steel Ltd.

New Delhi; April 23, 1966 Vaisakha 3, 1888 (S) D. N. TIWARY, Chairman, Committee on Public Undertakings.

ALLOY STEELS PROJECT

A. Historical

The effective utilisation of steel produced in the country requires the production of vital alloy steels, such as, stainless, high speed, constructional, tool and die steels etc. These alloy steels comprise a large variety of durable consumer goods and also constitute important components of manufactured products.

2. The proposal to set up an alloy steel plant in the public sector was mooted in 1958 in the context of a steadily rising demand for alloy steels, most of which had to be met from imports. Quotations were first invited from certain foreign countries for the preparation of a Detailed Project Report and provision of engineering services and technical know-how. Later, however, with a view to encouraging Indian talent, M/s. Dastur and Co. were selected as consultants and an agreement was signed with them by Government on the 22nd December, 1959. This agreement was assigned to the Hindustan Steel Ltd. in April, 1961. Since then the Project has been under the control of the Hindustan Steel Ltd.

3. The Alloy Steels Project is located at Durgapur. The Plant set up there will roll 100,000 tonnes of ingot steel into 60,000 tonnes of high speed alloy tool, die carbon tool, constructional and stainless steels. There is inbuilt capacity for expanding the Plant to a capacity of 300,000 tonnes of ingots per annum and 180,000 tonnes of finished products.

B. Consultants

(a) Decision to select an Indian firm

4. In October, 1958 quotations were invited from firms in U.K., France, Italy, Australia and West Germany for (i) preparing a Detailed Project Report, (ii) rendering engineering services, and (iii) technical know-how.

5. Tenders were received between the 3rd November, and the 18th December, 1958. During their examination it was decided on the 18th August, 1959, that the work of preparation of a Detailed Project Report could be done by an Indian firm. 6. The Committee enquired why the decision to engage an Indian firm could not be taken before inviting tenders from foreign firms. The Secretary of the Ministry of Iron and Steel replied that a representative of an Indian firm (M/s. Dastur & Co.) was a member of the Technical Committee constituted to examine the tenders of the foreign firms. While examining the tenders he offered to prepare the project report and Government decided to accept the offer.

(b) Appointment of M/s. Dastur & Co. as Consultants and terms of appointment.

7. An agreement appointing M/s. Dastur & Co. as consultants was signed on the 22nd December, 1959. The main responsibilities of the consultants under the Agreement were as follows:—

- (i) The submission of the project report within 7 months from the date of the signing of the Consultancy Agreement.
- (ii) The preparation of the specifications of the tender enquiries and advising Government on the merits of the offers received.
- (iii) The preparation of detailed working drawings to enable the works to be completed in all respects.
- (iv) The approval of design and supervision of the manufacture of plant and machinery ordered.
- (v) The detailed supervision of construction and erection at site.

Tenure

8. The consultants were appointed for a period of five years from the date of agreement. It was stated that the usual practice in the Hindustan Steel Ltd., was to have an agreement with the consultants on the basis of a fixed period. Since the work was not completed in December, 1964 when the agreement expired, the terms of the agreement were extended by three years. As a part of the agreement to extend the term of the contract by three yars, the consultants are stated to have agreed to take over the residual work, if any, for a further period extending upto six months *i.e.*, upto 22nd June, 1968 without any extra fees.

9. The fee payable to the consultants under the original agreement was Rs. 88 lakhs. For extending the agreement by three years, an additional fee of Rs. 55 lakhs will be paid.

10. The Committee enquired whether it would not have been more advantageous to have engaged the consultants till the date of commissioning rather than for a specified period. The Secretary of the Ministry replied that while awarding the consultancy contract, it was customary to make some calculation of the time necessary for doing the work and the fees was estimated on this basis. If the job is not done within the period specified, the responsibility is that of the consultant. If, however, the reasons for the delay like the various arrangements not being done in time or the suppliers of equipment not being able to effect deliveries in time etc. are not due to the fault of the consultants then they could not be blamed.

11. The Committee feel that Government should have stipulated the fee for completion of the work and not related it to time. In that case it would have been in the interest of the consultants also to complete their work as quickly as possible. As events have proved, the consultants have gained by the non-completion of the work within the original schedule. They will get an additional fee of Rs. 55 lakks for the extended period. As admitted by the Secretary of the Ministry of Iron and Steel during evidence, the consultants cannot be wholly free from blame for the delay in completion of the consultancy work. In view of this statement, Government should be cautious in dealing with such firms. The Committee recommend that Government should ensure that they do not in future enter into consultancy agreements on these terms.

(c) Fees payable to consultants

12. The fee payable to the consultants was determined by negotiation. The total cost of the Project was taken into consideration while determining the reasonableness of the fee. The total consultancy fee payable to the consultants (Rs. 1.43 crores works out to 2 per cent of the total estimated capital cost of the Project Rs. 70.64 crores).

13. There are several instances where Government secured consultancy services from foreign countries at a much lower proportion to the total capital cost. It appears that in their negotiations with the consultants, Government had no comparable standards, probably because no other firm in India was available to quote competitive rates. In the opinion of the Committee the total fee paid or agreed to be paid is on the high side.

(d) Payments to Consultants

14. As per Agreement, the payment of the consultants' fee was related to passage of time. Thus, when the consultants' fee of Rs. 88 lakhs was paid by 1964, substantial portion of work remained incomplete. The quantum of work completed by 1964 (in terms of percentages) is shown below:—

S1. No.	Item of work	Work completed by 1964
I	Preparation of Civil Engineering Drawings .	
2	Supervising Civil Engineering works for equip- ment foundation and other works	18 %
3	Supervising erection of structural works .	20 %
4	Inspection of equipment (JASCON) .	20 %
5	Inspection of Structural Works	37 %
6	Erection of equipment	5 %

15. During evidence, the Chairman, Hindustan Steel Limited agreed that the consultants had an idle time in the beginning because the contracts for supply of Plant and equipments were entered into much later. They were associated with the planning of equipment only in the initial stages. The payments were however made on a time basis because the Agreement provided for it.

16. The Chairman, HSL also stated that if the consultants had been given the entire responsibility for construction, including supervision and payment of the bills, it might have been right to determine the fee for the completion of the project as a whole. Since the payments to contractors etc. were made by Hindustan Steel Limited, the payments to consultants in the case of HSL units including Alloy Steel Project, had been related to passage of time.

17. The Committee are unable to appreciate the distinction sought to be made by the Chairman, HSL. The responsibilities of consultants enumerated in para 7 ante indicate that except for payments to the contractors the entine responsibility for construction is theirs. In the opinion of the Committee the difference made out is so insignificant that it did not justify the adoption of a different procedure in the matter of payment of consultancy fees. The Committee would draw.attention to their 13th Report* on Management and Administration of Public Undertakings in which they have recommended that payments to consultants should be related to the progress of work.

(e) Responsibilities of Consultants vis-a-vis Project authorities

18. Though the consultants are mainly responsible for the construction and supervision, the Chief Engineer of the Project is responsible for the overall supervision of the work. As regards payment of bills, the practice is that running account bills are passed on the authorisation of the consultants. The bills are routed through the Chief Engineer who countersigns them. The Committee were informed that this procedure had resulted in dichotomy between responsibility and power leading to slowing down of the tempo of work.

19. The Committee were given to understand that from experience of the working of the present consultants, it had been concluded that in future, supervision of construction work should be undertaken by the Project authorities themselves.

20. The Committee recommend that one agency should be made responsible for supervision of construction work and making payments. It can be either the consultants or the Plant authorities according to the nature of work. Work, for which know-how is available within the public sector should not be entrusted to outside agencies.

C. Production Adviser

21. The production of alloy steel requires very special techniques of steel making, metallurgical control, conditioning heat treat-

^{*110.} The Committee however noted that apart from the constitution of Projects the duties of the Consultants also included the preparation of Detailed Project Report, supply of working drawings, preparation of tender documents, supply of plant and machinery etc. In the absence of a provision in the agreement relating the payment of fees to the progress of work, it would be difficult to ensure that the performance of the consultants is satisfactory. In the case contract with the consultants does not stipulate payments to be made to them according to the progress of erection establishment of the project out only links them with the passage of time as is the case with the Alloy Steel Project, payments have to be made to the Consultants at the stipulated time whether the projects makes any progress or not. The presence of such a provision in the contract in respect of other projects such as Instrumentation Ltd. Khetri Copper Project of N.M.D.C. would itself prove the utility of such a condition. The Committee therefore suggest that payments should be linked to the performance of the Consultants. The representatives of the Ministries in subsequent replies have agreed to the suggestion.

ment, production planning etc. As production of these steels on a large scale was being taken up for the first time in the country, technical know-how for its production had to be obtained from a reputed producer of these steels. Under the consultancy Agreement, the consultants were required to indicate particulars about the talent and the sources available within the country and abroad in this regard.

22. The consultants made enquiries and submitted detailed statements to Government in July, 1960 giving the comparative merits of six offers received by them. They also recommended the appointment of M/s. Atlas Steel Ltd. as Production Advisers.

23. In November, 1960 Government decided that further work on the project including the appointment of the production Adviser should be done by HSL. Government also directed HSL to examine all the offers and submit suitable recommendations. On the 28th March, 1961, HSL recommended the appointments of M/s. Atlas Steel Ltd. as Production Adviser. On the 4th May, 1961, Government asked HSL to consider the second best offer of M/s. Bohler Brothers Ltd. as well. HSL again recommended the same firm. Government approved the appointment of M/s. Atlas Steel Ltd. as Production Adviser in June, 1961 and the agreement was concluded with them in September, 1961.

24. During evidence, the Secretary of the Ministry stated that there was delay in the commencement of the project due to the delay in the appointment of the Production Adviser. He added that the necessity of having a Production Adviser was forcibly brought to the notice of Government only in the Detailed Project Report.

25. It appears that Government at the time of appointment of the consultants did not realise that in addition a Production Adviser will be needed due to the incapacity of the consultants to discharge that function. When this was brought to their notice time had to be taken in selecting a suitable firm. This process was unncessarily prolonged as it took over 20 months to appoint a Production Adviser after the appointment of the consultant.

D. Detailed Project Report

Approval of D.P.R.

26. The Detailed Project Report was submitted by the consultants on the 29th August, 1960. The various stages of consideration of the Detailed Project Report and the agencies which were associated with the consideration are shown below:---

	Date
Submission of Project Report	29-8-1960
Decision of Government regarding location and that further work be done by HSL	28-11-1960
Appointment of Technical Committee to examine the Detailed Project Report	13-12-1960
Approval of the Detailed Project Report by Technical Committee	24-1-1961
Approval of the Detailed Project Report by HSL .	11-2-1961
Approval of the Detailed Project Report by Government	28-2-1961
The Detailed Project Report referred to Production Adviser for scrutiny	April, 1961
Comments of Production Adviser on DPR .	October, 1961
Comments of consultants on the comments of Production Adviser	January, 1961
Consideration and finalisation of the above comments by Technical Committee	February, 1962

27. It will be seen that it took one year and six months for approval of the Detail Project Report after its submission. In its scrutiny, four organisations/agencies were associated, viz. the Technical Committee, Head Office of HSL, Government and the Production Adviser. Effective scrutiny was made only by the Technical Committee and the Production Adviser. It has been stated that out of the ten members appointed to the Technical Committee, only one was an outsider and the remaining nine persons were officers in the Head Office and the Plants.

28. The Committee feel that the time of 11 years taken in approving the Detailed Project Report was too long. Perhaps it was not

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necessary to send it to all the parties mentioned in para 26 who necessarily took their time on scrutiny. If a sense of urgency was shown it should have been possible to reduce this time considerably.

E. Capital Cost

29. The capital cost of the Project as initially estimated in the Detailed Project Report was Rs. 38.4 crores. This estimate did not provide for the following items:—

- (i) Spares.
- (ii) Customs duty.
- (iii) Consultants' fee.
- (iv) Production Adviser's fee.
- (v) Off-site facilities.
- (vi) Township.
- (vii) Construction facilities.
- (viii) Construction administration.
 - (ix) Training and pre-manning.
 - (x) Stock suspense.
 - (xi) Unforeseen and contingencies.

30. After the revision of the Detailed Project Report on the basis of the comments of the Production Adviser, the consultants revised the capital cost in February, 1962. Apart from this revision subsequently the estimates of capital cost were revised eight times as indicated below:—

	Revision Date	Е	stimate made by		Estimate of total capital cost
S 1. No.			()	Rs. cro	res)
1. 2. 3. 4. 5. 6. 7. 8. 9.	Feb. 1962 April, 1962 May, 1962 December, 1962 February, 1963 June, 1963 January, 1964 May, 1964 August, 1964	•	Consultants Hind Steel Limited. Consultants Consultants HSL Consultants HSL HSL HSL HSL	dustan	64 · 77 82 · 14 59 · 53 63 · 52 64 · 90 59 40 69 . 82 71 · 71 73 · 21

31. It will be seen that Government took a decision regarding: the Project without having a correct picture of the capital cost involved.

32. The Committee were informed that the reasons for the Detailed Project Report not including the capital cost in respect of the eleven items referred to earlier were not quite known. In other words, it was a mistake to omit them. It was also stated that the capital cost in respect of many items was uncertain.

33. The Committee are surprised to see so many revisions of the capital cost. With the experience which Government had acquired in launching public sector projects by 1961, specially the three steel plants, there is no reason why the original estimate should have omitted such basic items.

34. The Committee find that when approval of the Cabinet for the project was taken, the capital cost was shown as R3. 45 crores. Approval of the Cabinet was not taken for the subsequent revisions. Asked about the reasons, the Ministry stated as follows:—

"No specific approval of the Cabinet as such has been taken to the subsequent revisions although before issue of invitations for tenders for supply of plant and equipment, the Ministry of Finance and Planning Commission were informed of the revision in the costs. A note was proposed to be sent to the Cabinet informing them of the revised cost, but it was later decided that the note should be resubmitted after detailed scrutiny by Planning Commission and Ministry of Finance. As the estimated cost underwent some changes meanwhile it was decided to recast the estimates before submitting the note again. However, in view of the urgency of the Project, it was decided in consultation with the Planning Commission and the Ministry of Finance to proceed with the Project."

35. The Committee were, however, informed that the revised estimates were approved at the appropriate level. All estimates beyond the powers delegated to H.S.L. were approved by Government viz. Administrative Ministry in consultation with the Ministry of Finance.

36. The Committee feel that where a preliminary estimate for a project is submitted to the Cabinet in connection with the approval of the Project, it should be incumbent to resubmit the revised esti-

mates to the Cabinet where variation exceeds a certain prescribed limit. The reasons for the increase and how the economics of the project would be affected by the increase in the cost of the Project should also be placed before the Cabinet. The adoption of such a procedure should result in framing of more realistic estimates.

F. Plant and Equipment

37. The Detailed Project Report was approved in February, 1962 and Government approved the issue of invitation to tenders for plant and equipment in May, 1962. Tenders were invited in June, 1962 and were received in December. 1962. After negotiations, letters of intent were issued to a Japanese Consortium (JASCON) for the bulk of the Plant in April, 1963. Letters of intent were also issued in May, 1963 to AMCO (Canada) for Soaking Pits and Heat Treatment Furnaces and to M/s. Wellman Incandescent on 10th January, 1964 for Reheating Furnaces.

38. The Agreement with JASCON for Rs. 19.23 crores was covered by a Yen Credit and was executed on the 16th September, 1963. The Agreement with AMCO (Canada) for Rs. 1:54 crores was signed in March, 1964.

39. As referred to in para 45 supra, there was an initial delay in issuing the invitations for tenders. The Committee further note although JASCON supplied the equipment in time, they failed to supply the detailed working drawings for the equipment foundations. The foundation drawings were expected by the end of 1963 but were delayed by 9 to 12 months. This consequently delayed the laying of the foundation and erection of the machinery.

40. The Committee enquired whether action was taken to fix the responsibility for the delay and claim damages. It was stated in reply that no action had been taken against the suppliers but according to the terms of payment included in the contract, the second instalment of 10 per cent payment and all payments thereafter would not be made unless load data and other details are supplied by them.

41. Thus, the delay caused by the suppliers would at the most result in holding up the payment for some time. The Committee recommend that provision should be included in the future agreements to ensure that the project is not put to any loss on account of the delay on the part of suppliers. Such delay should also attract penalty provision.

G. Construction and Commissioning

42. The Detailed Project Report envisaged commissioning of the entire plant and facilities within 60 months from the date of receipt of Government's approval to the Project. The same schedule also provided for the completion of the Project in 45 to 48 months from the date of placement of orders for the main plant and equipment.

43. The steps which had to be taken before placement of orders for the plant and equipment and the time taken at each stage were as follows:—

	When finalised	Time taken from the time DPR was submitted
(i) Appointment of Production Ad- viser	Sep., 1961*	13 mons.
(ii) Approval of DPR in consultation with the Production Adviser .	Feb., 1962	18 mons.
(iii) Government's approval to invite tenders	May, 1962	21 mons.
(iv) Invitation of tenders for supply of plant and equipment	June, 1962	22 mons.
(v) Receipt of tenders and their examination	Dec., 1962	26 mons.
(vi) Selection of suppliers .	April, 1963	30 mons.

44. It will be seen that the Detailed Project Report envisaged completion of all the above stages within 12 to 15 months.

45. The time actually taken for their completion was 30 months. The delay in the appointment of Production Adviser has been referred to in para 25 ante. The Committee find that even after the approval of Detailed Project, Report, Government had taken three months to give approval for the issue of invitations to tenders. After inviting tenders, it took nearly an year for the ultimate selection of the suppliers.

[•]At the time of factual verification, it was stated that although the formal agreement with M/s Atlas was executed in September, 1961, they were informed of their appointment as Production Adviser in July, 1961. 260 (Aii) LS-2.

46. The Committee cannot escape the conclusion that the entirework has proceeded in a leisurely manner. In none of the stages referred to above, could it be said that delay was inevitable. If a purposeful effort had been made at any stage it should have been possible to reduce the delay considerably.

47. The table given below shows (unit-wise) the month of completion according to the Project Report, according to the latest revision on the 23rd November, 1964 and the extent of delay:

Unit		ect As per latest Extent revision <u>xi</u> in mo	
I	2	3	4
Steel Melting Shop II .	June, 1965.	Jan. 1965.	
Forge Shop.	Sept. 1965	Feb. 1966 (Harmer) Sept. 1966 (Press)	5/12
Bar Mill .	Sept. 1965	Sept. 1966	12
Conditioning Shop	Sept. 1965	March, 1966	6
Heat Treatment and Bar- storage	Nov. 1965	April, 1966	5
Soaking Pits,		Feb., 1967	17
Blooming & Oct. Billet	•		
Mills	• •	Aug., 1967	22
Steel Melting Shop I .	Sept. 1965	May, 1967	20
Sheet Mill	Dec. 1965	March, 1967	15

48. It will be seen that except in 3 units, in all other units there has been or likely to be delay ranging between 15 and 22 months. It is unfortunate that it should be so inspite of the fact that the then Minister for Steel and Heavy Engineering had himself desired in November, 1962 that a "crash programme" should be drawn upfor expenditing the construction of the plants.

49. The main reasons for the delay in construction are given below:---

(i) Delay in getting matching structural steel.

- (ii) Delay in getting equipment foundation drawings from JASCON and other suppliers.
- (iii) Delay in supply of complete working drawings to the site by the consultants for any individual unit in the beginning of the work.
- (iv) Poor progress of work by the contractors.

Structural Steel.

50. The difficulty in getting structural steel was due to the overall shortage of such steel in the country. Another difficulty was that steel sections were rolled once in a quarter and the requirements of the Project being very little compared to the total rolling, supplies were made in random lengths which forced the project to redesign or allow abnormal wastages during construction.

51. During evidence, the Chairman, HSL, stated that the Alloy Steel Project was not permitted to place direct orders with the producers. The orders had to be routed through the Joint Plant Committee. The rolling programme was made on the basis of the number of orders that were received. The requirements of the Alloy Steels Project, played an insignificant part in the rooling programme.

52. The Committee are not satisfied with the reasons given above. From the post-evidence information they note that the Alloy Steels Project had agreed to accept joists in standard lengths of 5.5 to 13.5 metres offered by the Bhilai Steel Plant against the former's requirements of 15 metre lengths. Similarly the Alloy Steels Project had accepted the channels lying with Durgapur Steel Plant in stock against some other order. The decision to accept joists of inappropriate lengths was also motivated with a view to avoid transportation difficulties which 15 metre lengths would have had to face. In the case of channels, in is also noted that the Alloy Steels Project did approach the Durgapur Steel Plant direct. It is not, therefore, correct to blame the steel producing Plants, solely. The Alloy Steels Project should have planned its requirements early and intimated the same to the steel producing plants. Apparently this was not done. In fact in the case of channels, the requirements were not intimated at all; it was just a chance that the materail was lying in stock with the Durgapur Steel Plant. So far as the suppliers are concerned, the Committee are unable to appreciate that the Hindustan Steel Limited Plants (e.g. Bhilai in this case) should be unable to produce what is required by another sister unit, merely because it was a small order. If this is the case with the Alloy Steels Project the Committee apprehend that other consumers must be experiencing much greater hardships. The Committee recommend that Government should enquire into this matter to determine the reasons for such failures and suggest remedies for future guidance. Steel is a precious commodity and losses resulting due to wastages on account of supplies in random sizes, as occured in the case of Alloy Steels Project should be treated with concern. Delay in construction due to consultants:

53. The Consultants were supposed to issue all the specifications from May, 1962 to January, 1963. 24 major specifications which were received later than January, 1963 are shown below. The dates on which they were actually received is shown against each:—

Ι.	Internal plant telephone system	19 -3-6 3
2.	33 KV outdoor switch gear .	19-3-53
3.	Water supply system	23-3-63
4.	Conditioning department furnaces & SMS auxiliary furnaces.	22-4-63
5 .	Supplementary spec to coke, oven gas etc.	17- 5-63
6.	Spec. for guages, instruments, portable machines etc.	27-5-63
7.	230 V. DC distribution boards	12-10-63
8.	440 V AC distribution boards	18-1-64
9.	Cutting & Conditioning tools .	3-2-64
10.	Roll requirements in blooming, tillet & mill	17-2-64
11.	Plug & plug bricks	25-2-64
12.	C & hot tops	22-2-64
13.	Power refractories	22-2-64
14.	Handling faciliites for SMS-I & II	24-2-64
15.	Supplementary Spec. for electric Conduits and accessories	23-3-64
16.	Rubber mats for electrical purpose	20-4-64
17.	Carbon injectors	20-4-64
18.	Insulated joints and insulated cover for crance power rails	28-4-64
19.	Insulation of electrical equipment in repair & mainte- nance shop	4-5-64

20.	Laboratory furniture		14-5-64
21.	First aid Station furniture .	•	14-5-64
2 2.	Change room furniture		14-5-64
23.	LT power and lighting installation for SMS-II	•	19-5-64
24.	Lighting isulation in plant building and years		25-4- 64

54. It has been stated that the delay in the supply of the above mentioned specifications did not have any direct bearing on the construction schedule. Some of them were dependent on the supply of information by the equipment suppliers.

55. The Committee, however, notice that the Quarterly Review (for the quarter ending 30-6-1964) by the Financial Adviser of the Project, lists the following cases of delay by consultants in supplying the specifications in regard to matters which were not dependent upon the finalisation of main plant tenders:—

Name of work				_		Extent of delay	
Road macadam						18 months.	
Rail track			•	•		12 months.	
Sewerage						12 months.	
Power			•	•		12 months.	
Water			•	•	•	12 months.	
Fuel oil			•	•	•	12 months.	
Steam	•			•	•	5 months.	
Compressed air	•					5 months.	
Coke oven gas	•	•	•		•	5 months.	
Oxygen -acerylen	c		•		•	4 months.	

56. The Committee feel that a very lenient view has been taken of the slow progress of work by the consultants. There has been delay from the very beginning. Soil investigation, which was to have been completed by July, 1961 was completed in January, 1962. Soil preparation which was to have been done between February, 1961 and February, 1962 was not completed even by the 30th June, 1964. The progress achieved by 30-6-1964 was site levelling, 84 per cent and embankment, 50 per cent. 57. The Committee feel that a strict watch on the work of the consultants was called for, especially because their contract is related to the passage of time and not to the progress of work. They recommend that efforts should be made to see that the construction of the project is completed according to the present schedule.

58. It is seen that the Project has not assessed the loss suffered or extra expenditure incurred by it on account of the delay in construction/commissioning. The standard conditions of the contract with the suppliers and contractors did not envisage the reimbursement of such losses but provided for the levy of liquidated damages on the completion of the contract.

59. The Committee find that there have been delays by the suppliers and contractors. Before final payment is made to them, the performance of each should be carefully examined and the clause providing for the levy of liquidated damages should be suitably invoked.

60. So far as the estimation of loss suffered or extra expenditure incurred is concerned, the Project authorities have admitted that it would be desirable to calculate them, but they have stated that it can be done comprehensively only at the completion of the project. The Committee think that such calculation, though it may be a little rough should be made concurrently so that the consequences of delay in construction/commissioning are brought home to all concerned more pointedly.

H. Contractors

(a) Civil Engineering Works.

61. Two items of work relating to the Project have been entrusted to contractors. The work relating to 'Equipment foundations and miscellaneous civil works' has been entrusted to M/s. G. S. Atwal & Co. and the work relating to structural fabrication has been given to M/s. BBJ.

62. The Consultants are stated to have complained about the slow performance of the contractor responsible for 'Equipment foundations and miscellaneous civil works'. The reasons for the slow performance are:---

- (i) Non-availability of working drawings of the entire Project in advance to plan for the completion of the work within the stipulated period of the contract; and
- (ii) Lack of progress within the sites and drawings available with the contractors.

63. Asked whether responsibility had been fixed for the poor performance of work relating to 'equipment foundations and civil engineering works' which had been awarded on contractual basis, it was stated that it was due to the cumulative effects of the shortcomings of all the agencies employed in the Alloy Steels Project. It was difficult to fix the responsibility on any individual or contractor, and that it was not possible to decide upon the question of penalty at this stage.

64. During evidence, the Chairman, H.S.L., stated that the agencies referred to above were the consultants, equipment suppliers, steel fabricators and contractors. He added that a joint meeting was held every month to resolve difficulties and to expedite work.

65. As regards the non-availability of drawings, reference has been made in para 39 ante, that it was the responsibility of the suppliers. As regards the drawings which were available and in respect of which the contractors had not made progress, it has been stated that these were mostly unimportant auxiliary works like, drainage, sewer lines, office buildings, etc. It was added that wherever important drawings had been made available the contractors concentrated their efforts and their performance was satisfactory.

66. The Committee find that the Consultants and Contractors have been blaming each other for poor progress in construction. It is regrettable that in spite of the fact that the Chief Engineer of the project was in overall charge for construction and erection, these delays and bickerings have occurred. This can be attributed to poor co-ordination and control. The Committee expect that those responsible for the delays will be penalised and proper supervision exercised in future.

(b) Steel fabrication

67. M/s. BBJ were engaged to fabricate a total quantity of 25709 tonnes of stee!. Out of these they have fabricated 16312 tonnes upto .August, 1965 as shown below:—

Year	· · · · ·	·			г	`onnes	
1963	•		•	•	•	1941	
1964		• .	•,	•	•	7 143 ,	
.1965 (upt	o Augi	lst)				7228	
•						16312	

68. The Project Report envisaged a time of 33 months—for the planning, procurement, fabrication and erection of structural steel work. This was on the basis that the fabrication would be done at the rate of 1600 tonnes per month. It is at present expected that the total time that will be taken will approximately be 56 months due to the following reasons:

- (i) Non-availability of complete matching steel.
- (ii) Inability of contractors to fabricate at the rate of 1600 tonnes per month. Orders were placed on M/s. BBJ on the assumption that they would fabricate at the rate of 1000 tons per month.
- (iii) Labour trouble has resulted in the contractors not being able to fabricate even at the rate of 1000 tonnes per month.

69. During evidence the Chairman, Hindustan Steel Limited stated'that in the country there were only four big steel fabricators of which BBJ was the consortium. He added that Hindustan Steel Limited was having difficulty with all these companies not only in regard to the Alloy Steels Project but with regard to Bhilai, Durgapur and Rourkela Steel Plants also.

70. The difficulty in getting matching sections has already been dealt with in para 50 to 52 ante. The Committee recommend that the Project should ensure that the work of fabrication is finished within the revised schedule at least. So a_s far as the need to increase the fabricating capacity in the country is concerned, they would draw attention to para 111* of their Eighth Report on Township and Factory Buildings of Public Undertakings.

I. **Production**

(a) Capacity

71. The Alloy Steels Project was originally envisaged to produce 25,000 tonnes of saleable finished products per year out of 40,000 tonnes of ingots. The project was to be expanded to produce 50,000 tonnes of saleable products from 80,000 tonnes of ingots. In April, 1960

^{*111.} Though the establishment of heavy structural works was recommended by the U.K. Heavy Engineering Mission as far back as 1957, nothing has yet been done to set up the same despite their inclusion in the Third Five Year Plan. These works are the pre-requisite for establishment of any heavy engineering industry. The Committee recommend that Government should now accord the highest priority for setting up adequate capacity for steel structural fabrication in the country.

Government decided to go in for an initial capacity of 50,000 tonnes of saleable products from 80,000 tonnes of ingots and with an expansion provision to 1,60,000 tonnes of ingots to yield 1,00,000 tonnes of saleable finished products. The Detailed Project Report accordingly envisaged a capacity of 80,000 tonnes of ingots.

72. After receipt of the tenders for supply of plant and equipment, a proposal was mooted in December, 1962 to increase the capacity of the Plant from 80,000 tonnes to 1,00,000 tonnes of ingots. It was finally decided in February, 1963 (by which time, tenders for plant and machinery had actually been received) to increase the size to 1,00,000 tonnes.

73. The Committee enquired about the background to the proposal to increase the capacity at such a late stage. It was stated that initial capital cost of some of the alloy and special steel plants planned to be set up elsewhere appeared to be comparatively less. Therefore, it was considered advisable to obtain alternative specification from the tenderers and equipment suppliers. The alternative schemes suggested in the tenders obtained were neither very efficient nor economical and the Production Adviser did not offer any advice in this matter. Since the initial capital expenditure was higher in relation to sale-receipts, attempts were made to increase the installed production capacity with minimum additions/alterations and this was achieved by making some modifications in the units at an additional cost of Rs. 1.2 crores.

74. During evidence, the Chairman, HSL, stated that initially no study was made of the profitability of the Project. The consultants had also not included such a study in the Detailed Project Report. The sale value, cost of production and the likely margin of profit were also not included in the Report.

75. The Chairman, HSL, stated that even while deciding to increase the capacity to 1,00,000 tonnes of ingots it was made not so much on the basis of profitability than as a measure of having a balanced system of units. While making a study of the profitability of the project in early, 1963, it was found that the profit in the first stage was expected to be only marginal. As such the question of having a bigger plant was taken up.

76. The Committee are surprised at the manner in which the decision to set up the Project was taken. No economic feasibility study was conducted and as such Government did not have adequate data on the economic viability of the Project, the cost of production and profitability or otherwise of the project as a whole. Government merely decided to set up an alloy steel plant in the public sector of a specified size without going into the economics of it.

(b) Product-mix

77. The table given below shows the anticipated production (product-wise) of the Plant during the first stage and after expansion. The target of production for the whole country of each product during the Fourth Plan period is also given alongside:—

51.		Target dur-	Alloy Steel	s Project	
0.	Types of steel	ing Fourth Plan for production of alloy steel in the country	Present pro- gramme 100,000/ 60,000	Further programme 3,00,000/ 1,80,000	
	、 · ·	country		(after ex- pansion)	
I	Free-cutting steel	80,000	Nil	Nil	
2	Low alloy and other constructional steel	200,000	16,000	60,000	
3	High alloy constructional steels	50,000	5,000	I 2,000	
3 4	High carbon & silicon manganese	50,000	,,	,	
4	spring steel	60,000	2000	5000	
5	Alloy spring steel	20,000	1,150	10,000	
56		70,000	18,000	54,000	
7	High speed steel-				
	(i) 18-4-1	7,000	1,500	3,000	
	(ii) 18-4-2-5/10 .	1,000	300	500	
	(iii) 6-4-2-5	3,000	450	I ,00 0	
8	Tool and alloy Steel-	·			
	(i) carbon tool steel	16,000	9,500	13,500	
	(ii) alloy tool steel, hot-die-steel and			•	
	high-carbon chromium die-steel	23,000	3,000	9,000	
	(iii) die block	3,000	600	2,500	
9	Ball bearing steels	12,000	2,500	9,000	
10	Magnet steels	5,000	Nil	500	
		550,000	60,000	180,000	

78. It has been stated that the product-mix was essentially based upon the requirements of alloy steels as estimated by the consultants. For 1965, the demand was estimated at 2,15,000 tonnes, break-up of which is given below:—

							Tonnes
Tool steels					•	•	42,000
Constructional steels			•	•	۰.	•	1,28,700
Stainless steel	. •	•	•	•	•	•	40,000
Other Alloy steels		•	•	•	•	•	4,000

79. As brought out in the table given in para 77 ante, the country's demand for various types of alloy steels is much more than the anticipated production of the Plant. Therefore, there can be no problem of marketing. Nevertheless, the Plant should determine judiciously priority of various items keeping in view the margin of profit thereon and also the importance of the items from the national angle.

(c) Raw materials

80. The statement given at Apendix I shows the raw materials required by the plant during 1966-67, the first year of production. It will be seen that out of a total of 38 raw materials 18 are to be imported. It has also been stated that the requirements of these raw materials are to become progressively greater during the succeeding years.

81. During evidence the General Manager stated that a small start had been made for producing low carbon Ferro-Chromium indigenously. In addition, efforts are being made to produce, though on a small scale, ferro-tungsten and to develop the production of special refractories.

82. The Committee are glad to learn of the efforts to produce indigenously these raw materials. Government should extend all facilities not only to those who produce these items but also to others, who have proposals for starting production of other materials required by the plant.

83. Since most of the ferro-alloys are imported, the plant has to pay the international price. One suggestion which the Plant has under consideration is to stockpile when the prices are favourable. At present, the stock of raw materials will last upto the middle of 1967. Since the Plant is to be commissioned in 1966-67, this cannot be considered a stockpile. The Committee recommend that the Project should keep in touch with the international market and arrange to build sufficient stock when the prices become favourable, so that production does not suffer.

84. Pedigree scrap is an important raw material for alloy steel production. The Project Report envisaged that all the scrap requirements of the Project would be met by the Durgapur Steel Plant at a cost of Rs. 200/- per ton. Owing to decontrol of steel, prices have gone up to Rs. 400 to 450 per ton. 85. To bring down the overall cost of scrap, the Plant is stated to be using scrap in the form of axle borings and also cheaper variety of scrap in small quantities with pedigree scrap.

86. The question of price of scrap is under negotiation. A rate of Rs. 250/- has been fixed for fluted ingot scrap. The price of outside pedigree scrap would be even higher than that of Durgapur Steel Plant. The high price of scrap is likely to increase the cost of production by Rs. 40/- per ton.

87. Since both the Alloy Steels Project and the Durgapur Steel Plant are units of Hindustan Steel Limited there should not be any difficulty in finding a solution to the price problem. It is understood that scrap is already being transferred from Durgapur Steel Plant to Alloy Steels Project. The Committee expect that an understanding with regard to the price of scrap will be reached soon, failing which the Head Office of HSL should fix it.

J. Ancillary Units

88. An indication was given in the initial lay-out prepared by the Consultants that a ferro alloys plant and an electrode plant were to be set up at Alloy Steels Project, Durgapur. Since Government had earlier issued licences to private parties for undertaking manufacture of these items, the matter was not pursued at the time of erection of the Plant. A feasibility study for a Ferro-Alloy Plant is, however, under the consideration of H.S.L. and Government.

89. It has been stated that imports of ferro-alloys worth Rs. 3 crores (approx.) per annum will be required for production of 60,000 tons of alloy and special steels. As against this, the total cost of setting up a ferro-alloy Plant would only be Rs. 5 crores with a foreign exchange component of Rs. $2\frac{1}{2}$ crores.

90. The Commtitee note that the private firms which had been given licences are expected to go into production only by 1970-71.* Since the Project is expected to commence manufacture in 1966-67, imports of ferro-alloys will have to be made for at least three years. At the rate of Rs. 3 crores per year, foreign exchange of Rs. 9 crores will have to be spent in case the prices do not rise during these years. If the ferro-alloy Plant had been set up along with the Project with a foreign exchange component of Rs. $2\frac{1}{2}$ crores, imports worth Rs. 9 crores could be saved and a net saving of Rs. $6\frac{1}{2}$ crores in foreign exchange could be effected. It remains to be seen whether the firms will go into production by 1970-71 and will be able to meet the demands of the Project.

^{*}At the time of factual verification, it was stated that some of the firms might go into production by the middle of the fourth plan period—that is 1968-69.

91. This is another instance where by trying to save a small amount of foreign exchange by not setting up a Project, considerably more foreign exchange will have to be spent on imports year after year. The Committee recommended that in future when proposals for setting up new projects are put up for Government approval, full details regarding the anticipated saving in foreign exchange should be stated. Government should also take into account the long term benefits while considering such proposals. Refusal to allot foreign exchange is not always a sure way of conserving it.

92. The Ferro-Alloys Special Committee set up by Hindustan Steel Limited had recommended the establishment of an integrated Ferroy-Alloy Plant at Durgapur. This was accepted by Government who asked Hindustan Steel Limited in November, 1963, to call for a Project Report for the production of 50,000 tonnes of ferro chrome and 5,000 tonnes of ferro-tungsten. Since the Central Engineering and Designs Bureau of the Hindustan Steel Limited was fully occupied with other work, tenders were invited by HSL. HSL selected M/s. Dastur & Co., who quoted the lowest fee. HSL's recommendation in this regard was sent to Government in February, 1964 and Government have approved the selection of M/s. Dastur & Co.

93. Further consideration of the proposal has been kept in abeyance until the progress of the schemes already licenced becomes known. A review is proposed to be made after six months.

94. The Committee feel that the setting up of a Ferro-Alloy plant has not been given the urgency it deserves. The licensing of private firms and their production should have been so timed as to coincide with the commissioning of the Alloy Steels Project. In fact, both the schemes should have been considered as parts of one project. It takes 34 years for a Ferrow-Alloy Plant to be commissioned after placing of orders for plant and machinery. Since the Alloy Steels Project is to be commissioned by 1966-67, the private firms ought to have been given a time limit upto end of 1963 to take a decision whether they were going to set up the plant immediately or not. Every facility should have been afforded to them for setting up the Project in time. Failing a positive response, arrangements should have been made to set it up as a part of the main project. It is surprising that this has not been done and Government are merely contemplating a review after six months. The Committee recommend that the setting up of a Ferro-Alloy plant should be given top priority and a decision in this regard taken without further delay.

K. Financial Matters

(a) Input-Output Ratio

95. The estimated capital cost of the project and the sale value of the products and the input-output ratio are given below:—

				I. Stage	II. Stage	Total
					(Rs. in cro	res)
Capital cost	•	•	•	70	70	140
Sale value	•	•		25.4	45.54	70 ·94
Input-output r	atio			1:0.36	1:0 [.] 65	1:0.2

96. It would be seen that the input-output ratio of the Project even after the second stage will be very low.

97. During evidence, the General Manager stated that in the production of special steels, initial capital investment was high but it would improve as production increased. The Chairman, HSL stated that in respect of the steel plants of HSL also, the input-output ratio was less than that in other Steel Plants in the country and abroad. He added that in the case of ASP, the ratio would be more favourable with the expected increase in yield.

98. The Committee recommend that strict control should be kept over the capital expenditure so that the expectation of better inputoutput ratio is realised.

(b) Profitability

99. The Project Report did not work out the break-even point or include any calculations regarding the profitability. When this question was mooted in December, 1962, the consultants made a study of the profitability of the project and estimated a return of 12.2 per cent on total investment and 24 per cent on equity. For this calculation, the total capital outlay was estimated aat Rs. 64 crores. The sales receips were estimated at Rs. 26.46 crores and the expenses at Rs. 18.64 crores. This calculation revealed a net profit of Rs. 7.81 crores (after depreciation, but before taxes).

100. As against the above estimate the present expectation is that there will not only be no profit, but marginal loss during the first stage. At the second stage of 120,000 tonnes of saleable products, a return of 7 per cent on equity (of Rs. 35 crores) is expected.

101. The Committee have referred in para 76 ante to the fact that without assessing the profitability aspect, the project had been proceeded with. The calculations made by the consultant later on are stated to be incorrect. As the project is expected to run at a loss during the first stage utmost economy will have to be exercised by restricting expenditure to the minimum. The position should be reviewed by Hindustan Steel Limited and Government from time to time so that, adverse trends, if any, are checked in time.

L. Organisation

102. The staff requirement as indicated in the Detailed Project Staff. Report and as worked out by the Project are given below:—

Cotogory			Estimated Requireme		
Category		Project Report	A.S.P.		
A. 1	Technical				
Senior Engineers	• •	•	50	65	
Junior Engineers .	•		214	278	
Skilled workers/Operatives	•	•	1963	2269	
Semi-skilled/Un-skilled wor		1620	626		
	TOTAL		3847	3232	
(Including .leave reserve)	• •		485 Leave	reserve	
B. N	on-Techn	lic a l			
Officers Class I & II			30	40	
Class III & IV staff	•		113	1393	
	Total	•	143	1433	
• Grand	TOTAL		3990	5437	

103. As regards the difference between the two estimates the following were stated to be the reasons: ---

- (i) Provision of officers and staff made in the report of Dastur & Co. for departments like Accounts, Purchase & Stores, Security etc. was very inadequate and not worked out in detail. For example they estimated 18 persons for the security force. This will mean less than six per shift. This number will not be sufficient to man all the gates even in one shift.
- (ii) The Project Report provided for two shift operation in conditioning shop, forging shop etc. while the Alloy Steels Project estimates provided for three shift operation.
- (iii) The Detailed Project Report provided for 80,000 tonne capacity while Alloy Steels Project provided for 100,000 tonne capacity.

104. The Committee have already stressed the need for exercising great vigilance on expenditure all round so that the Project attains the break-even point at the earliest. Since the calculations of manpower by the Project show an increase of 36 per cent over the estimate in the Detailed Project Report, it would be desirable to have standard force determined. The Head Office should keep a strict watch over the manpower.

105. The ratio of technical to non-technical staff employed in the Project is at present 3:4 approximately. This is because all the technical personnel required for different units are not yet in position. It has, however, been stated that when the Project goes into production, the ratio will come down to 3:1, a ratio which is prevalent in the factory of the Production Adviser. Secondly, in the construction stage, non-technical staff is bound to be more.

M. Township

106. The Project is constructing quarters for its staff on the land of the Durgapur Steel Plant. So far 369 houses have been built and another 904 are under construction.

107. The total cost of the township is Rs. 50 76 million. According to an undertaking with the Durgapur Steel Plant, charges, maintenance and other amenities are to be shared by the two Plants on the basis of number of employees/houses. The expenditure incurred by the Project in this account during 1963-64 and 1964-65 is shown below:—

yea r	<i>expenditure</i> .(Rs. in lakhs)			
1963-64	3.56			
1964-65	6.48			

108. In all 3404 houses are proposed to be constructed. These will provide accommodation to all the officers and 75 per cent of other personnel. Out of these, ASP has taken up the construction of 489 houses while the remaining ones will be constructed by the Durgapur Steel Plant. This decision was taken in the interest of economy.

109. The Committee welcome the decision taken by the Alloy Steels Project and the Durgapur Steel Plant to have pooling arrangements for the houses of their employees with a view to effect economy.

COAL WASHERIES PROJECT

A. Introductory

110. As the reserves of metallurgical coal in the country are limited, two measures for conserving them were kept in view while deciding to set up the steel plants. These measures were (i) to wash all metallurgical coals so as to lower the ash content and (ii) to blend weak or semi-coking coals with fully coking coals. In May, 1955, the question of meeting the demands of the essential consumers for metallurgical coal was discussed in the Planning Commission. As a result Government decided to set up a washery at Bokaro/Kargali and to negotiate with the private collieries for the establishment of washeries to meet the balance requirement of washed coal of all existing and projected steel plants. The response from the private sector for the establishment of washeries was disappointing. Out of 6 schemes received from the private parties only two were found suitable for prima facie consideration. Those proposals envisaged the washing of about two million tonnes of coal and that too of higher grade.

111. In 1958, Government made an estimate of the total requirements of washed coal for the steel plants both in the private and public sectors and the production capacity of the existing washeries. It was decided in the light of study to set up three new coal washeries at Dugda, Bhojudih and Patherdih respectively. Government invited tenders for setting up Dugda in June, 1957. At the consideration stage of tenders it transferred the whole scheme for setting up of the washeries to the Hindustan Steel Ltd.

112. In 1960-61, it was decided to double the capacity of Dugda and Bhojudih washeries. The contract for Bhojudih expansion was awarded in December 1961. The contract for design, supply and erection of a second coal washing plant (known as Dugda II Washery) was awarded in May, 1963.

113. The contracts for setting up the washeries were given to the following parties: —

Dugda I—M/s. Mc Nally Pittsburgh International Inc., U.S.A. Bhojudih—M/s. Coppee & Co., London. Patherdih—M/s. Robert & Schalffers, U.S.A. Dugda II-M/s. Robert & Schalffers, U.S.A.

Bhojudih Expansion-M/s. Copper & Sons, London.

114. So far only Dugda I and Bhojudih washeries have been commissioned. In the case of Patherdih washery, guarantee test runs were conducted in October, 1965. But certain shortcomings were noticed and Hindustan Steel Limited has therefore not taken over the washery. Trial runs are however still going on.

115. According to original schedule, Dugda II was to be commissioned by May, 1965. As per revised schedule, it is expected to be ready for commissioning by the end of 1966. The washeries are under the control of a Project Office in Dhanbad and form an integral part of Hindustan Steel Limited.

B. Location of Washeries

116. The location of washeries at Dugda, Bhojudih and Patherdih was decided after a joint inspection by a team of high officials headed by the then Secretary, Ministry of Iron and Steel. The general considerations which influenced the selection of the sites are given below:—

Dugda:

1. The washery to be located in the Western Region of Jharia Coal Field could draw the required raw coal from the Bhaga, Mohuda and Katras areas.

2. Chandrapura Yard was only two miles from the site and was well connected by rail to Bhaga and Dhanbad.

3. The huge quantity of water required for the plant and township could be drawn from the river Damodar nearby.

4. Availability of electricity from the Bihar State Electricity Board.

5. Availability of land required for plant and township.

Bhojudih:

1. The Washery located at the Eastern part of the Jharia Coal Field on S.E. Rly, could draw the required raw coal from Bhaga and Bhojudih areas.

2. The site is conveniently connected by rail to coal field.

3. Availability of electricity from the West Bengal State Electricity Board. 4. Water required for the plant could be drawn from the River Damodar which is flowing nearby.

5. Easy availability of land required for plant and Township.

Patherdih:

1. This washery is located in the Eastern part of Jharia field, very near to Patherdih Yard and could draw the required raw coal from Patherdih area (E. Rly.)

2. The site is well connected by road and rail to Dhanbad.

3. Water is available from the River Damodar.

4. Availability of Electricity from the Bihar State Electricity Board.

117. The Committee discussed with the Secretary of the Ministry of Iron and Steel whether it would not be advantageous to set up washeries as part of the steel Plants, as was the case with Durgapur. He stated that it would be correct to do so if the steel plant was located near the coal fields, as was the case with the Durgapur Steel Plant. But if the distance between the steel plants and the coal mines was considerable, as in the case of Rourkela and Bhilai and the Plants were designed to use more than one type of coal, then the advantage would lie in locating the washery near the coal mines. This would result in saving in transport costs as otherwise, for every tonne of clean coal required by the steel plant 1 4 tonnes of raw coal would have to be transported from the coal mine to the Plant. Secondly, middlings which are produced by coal washeries are utilised by power stations and expenditure would have to be incurred in transporting them from the steel plant to the power stations.

118. The Committee agree with the above reasoning and think that it will not be profitable to locate the washeries at the steel plants unless there are special advantages as at Durgapur.

C. Detailed Project Report

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119. No Detailed Project Report was prepared for Dugda-I, Bhojudih and Patherdih washeries. The Government of India had decided in consultation with the Planning Commission, Coal Controller, Central Fuel Research Institute and the Railways that the washeries should be located at Dugda, Bhojudih and Patherdih respectively. But in the case of Dugda-II washery, a Detailed Project Report was prepared. 120. The Committee were informed that there was no settled practice in this regard. No project report was prepared for the TISCO washery but the N.C.D.C. had prepared a project report before setting up their Kargali washery.

121. During evidence, the Secretary of the Ministry of Iron and Steel stated that the decision to proceed with the setting up of the washeries without preparing a Detailed Project Report was taken with a view to expedite the project. He said that it took about a year to get a Detailed Project Report prepared. He, however, agreed that it was desirable to have a Detailed Project Report prepared, but sometimes, due to pressure of time, it could not be done. In such cases only a rough assessment was made of capital cost, cost of washing coal, profitability etc.

122. The argument put forward by the Secretary of the Ministry of Iron and Steel, namely that the Detailed Project Reports were not prepared to save time, is not borne out by facts. The decision to set up the washeries was taken in April, 1956, while invitations to tender were issued much later as shown below:—

Washery	Date on which invi- tation to tenders was issued.	Time lag between the date of decision and the date on which tenders were invited I year and 2-1/2 months		
Dugda I	. 15-6-1957.			
Bhojudih	February, 1959.	2 years and 10 months.		
Patherdih	17 - 11 -19 59	2 Years and 6-1/2 months		

123. This shows that there was ample time for the Detailed Project Report to be prepared. The Committee, therefore, feel that it was not correct to have proceeded with the Projects without the preparation of Detailed Project Reports.

124. Had the Detailed Project Reports been prepared, a proper assessment of the demand for washed coal would have been made in respect of each washery, and the present position of the washeries not being able to work to full capacity for want of demand and incurring losses would not have arisen.

D. Terms of Contract

125. The following statement shows the dates on which tenders were invited, received/opened and contracts were awarded in respect of each of the Washeries. In respect of the Bhojudih Washery expansion, the contract was finalised on the basis of negotiations which started in November, 1960. The contract was awarded on 12th December, 1961.

Name of the Washery	Invitation of tender	Receipt/ opening of tenders	Time lag	Award of contract	Time lag	Total time lag between (2) and (5)
Dugda I .	15th June 1957	Jan. 1958	7 months	Nov. 1958	9-10 months	16 months
Bhojudih .	Feb. 1959	10-7-59	5 months	11-3-60	8 months	12 months
Bhojudih Expansion		ot invited, ba lov. 1960.	ut negotia-	12-12-61	13 months	••
Patherdih	17 -11-59	2- 7-60	8 1 months	8-6-61	11: months	19 months
Dugda II	15-11-61	30-4-62	51 months	21-5-63	13 months	18 months

126. The time-lag between the invitation of tenders and receipt/ opening of tenders in respect of all the Washeries has ranged between 5 and 8½ months. The time-lag between the scrutiny of tender and the award of contract ranged between 8 and 13 months. It was stated that since these Coal Washeries were designed and erected with foreign technical assistance, a detailed examination of the designs, specifications etc. by a Technical Committee appointed by Hindustan Steel Ltd. had to be conducted. Government also took time to examine and approve the contracts. The release of foreign exchange also consumed some time. In respect of Bhojudíh expansion where negotiations formed the basis of awarding the contract, the scrutiny of designs, specifications, and award of contract took only 13 months. 127. The Committee find that in respect of Kargali Washery of N.C.D.C. invitation to tender was issued by the Directorate General of Supplies & Disposals in April, 1955 and after some negotiations, the contract for the supply, installation and commissioning of the washery was placed in March, 1956. The time lag in that case amounted to 11 months.

128. Considering the time taken for awarding the contract for Kargali Washery, it appears to the Committee that the time taken for awarding contracts for Washeries at Dugda I, (16 months), Patherdih (19 months) and Dugda-II (18 months) is on the high side. As Government had gained experience by the setting up of the Kargali Washery, the time taken for setting up of HSL washeries should have been less. Moreover, the contract for the Kargali Washery was processed by the Directorate General, Supplies and Disposals. As Government and the HSL were directly dealing with these contracts, it should have been possible to examine the tenders and finalise the contracts in a shorter period than the DGS&D.

E. Erection and Commissioning

129. The table given below shows the scheduled dates of commissioning and the actual dates of commissioning of each washery:—

Weakawa		Date of Con	Extent of	
Washery		Scheduled	Actual	Extent of delay
Dugda I .	•	29-11-1960	9-12-1961	I year & II days
Bhojudih (original)		11-5-1962	7-11-1962	6 months.
Patherdih	•	End of 1964	Not yet com- missioned.	I year and 4 months (till April 1966)
Dugda II	•	May, 1965	Not yet com- missioned (Re- vised schedule- end of 1966)	I year (if revised schedule is adh- - ered to)

130. The reasons for delay in commissioning are stated to be as follows: ---

Dugda I:

- (i) Steel strike in U.S.A. during the period from 15-7-1959 to 4-1-1960.
- (ii) Delay in arranging bank guarantee for first 10% rupee payment.

- (iii) Delay in final approval of revised designs regarding washed coal bins and middlings and refuse bunkers by 12-14 months.
- (iv) Delay in providing the Railway siding.
- (v) Delay in providing import licence required for the import of material for the modification to manual unloading section.
- (vi) Modification to Manual Un-loading section.

Patherdih:

- (i) Delay in finalization of DLF loan by one year.
- (ii) Delay in the initial 10% payment to the Contractors.
- (iii) Delay in establishing letter of credit for supplies from U.S.A.
- (iv) Delay in finalization of Marshalling Yard Drawing.
- (v) Short supply of structural steel.
- (vi) Delay in fabrication work due to shortage of essential materials like electrodes.

Dugda II:

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- (i) Delay in finalization of USAID loan resulting in delay in establishing letter of credit by 5 months and 10 days.
- (ii) Soil bearing test took considerable time.
- (iii) Delay in the supply of steel from the Prime Producers.
- (iv) Shoremen's strike in U.S.A. from 11th January, 1965 to 6th March, 1965 (55 days).

131. In the case of Dugda I and Bhojudih washeries, the delay was stated to have been examined by the Board of Directors and they observed that the delay in completion of the plant was due to reasons beyond the control of the contractors and approved grant of extension of the delivery period. The delays in Patherdih and Dudga II are stated to be under examination.

132. It would be observed from para 130 that the case of Dugda I Washery, on several items delays were caused in India e.g. in arranging bank guarantee for first 10% rupee payment, import licence,

SI. No.	Factore	Date on which re- quired to be completed		Extent of delay
Ï	2	3	4	5
i.	Bank Guarantee for first 10% rupee payment.	29-1-1959	6-5-1959	3 months 8 days.
ii.	Rail siding	29-1-1959	26-6-1959	I month 20 days (upto 6-5-59 de- lay was Con- current).
iii.	Import licence	15-6-1959	9-7-1959	23 days.
iv.	Redesign of washed coal- bina.	24-7-1959	20-1-1960	5 months 26 days.
v.	Modification to Manual unloading section—letter of credit and import licene	17-11-1960	25-5-1961	6 months 8 days.

rail siding etc. The delay caused on account of each of these reasons is shown below:—

133. Similar would appear to be the case with Bhojudih, Patherdih and Dugda II washeries also. It appears that most of the delays have occurred because of lack of energetic efforts in the part of HSL. The fact that the contractors have been exonerated for delay lends support to this view. At the same time, Government have also to bear a fair share of responsibility, because, if proper vigilance had been exercised by them, such delays might have been reduced, if not avoided altogether.

134. When the commissioning of Dugda I Washery was delayed on account of delays within the country, action should have been taken to avoid similar pit-falls in the commissioning of Bhojudih and Patherdih washeries. For example, there was delay in arranging bank guarantee in the case of Dugda I and in opening letter of credit, in the case of Patherdih Washery. Again in the case of Dugda I there was delay in providing rail siding and this was repeated in the case of Bhojudih Washery. The Committee are concerned over repetition of similar omissions. As pointed out by the Committee in their thirteenth Report on Management and Administration of Public Undertakings, in the formative stages of a project, the responsibility of the Ministries should not cease after 'sanctioning the project and/or entering into agreement with contractors, but they should also ensure that they progress according to the schedule and whatever difficulties are likely to arise in their implementation are foreseen and attended to.

F. Raw Material

(a) Raw coal and clean coal

135. The table given below shows the percentage yield of clean coal in the washeries of H.S.L. as also in other washeries in the country and abroad:—

			Percentage of clean coa through raw coal						
Dugda I (original)	•		•	•	75%				
Dugda I (revised)		•			60%				
Bhojudih .	•				70%	(anticipated			
Patherdih .	•				65%	as it is yet			
Dugda II		••	•	•	50%	to be com- missioned).			
Durgapur .					60%	,-			
Kargali (of NCDC)					70%				
Kathara (Do.)					50%				
Gidi (Do.)					63.4%	6			
Jamadoba (of TISCO)				•	66.6%				
West Bokaro		•			57 · 5 %	ō			
Chasnatta (Do.)		• •			50%	-			
U. S. S. R.					75%				

136. It will be seen that the percentage yield of clean coal differs from washery to washery including the washeries of Hindustan Steel Ltd. It was stated that the percentage yield of clean coal depended upon the washability characteristics of the coal feed and also the sytem of washing in each washery. The washability characteristics of raw coal varied from area to area and no norm could be applied to it.

137. The main difficulty facing the washeries is the deterioration in the quality of raw coal supplied. The Committee were informed during evidence that the ash content of the raw coal was higher than anticipated earlier. For example, in the case of Dugda I washery, it was expected that 52% of raw coal feed would have maximum ash content of 19% and the remaining 48% of the raw coal would be with an ash content of 19% to 23.7%. The above forecast had not materialised and the washery got 32% of the coal with lesser ash content and the remaining 68% of raw coal contained higher ash content than envisaged. 138. The Committee were informed that subsequent to preparation of report and specifications for Dugda I washery by CFRI, the Government had appointed a Fourth Working Group to go into the question of supply of coal being linked to each washery. Due to changing production pattern and growing needs of metallurgical coal, even the linkage suggested by the Working Group did not work satisfactory.

139. The question of coal supply was, therefore further discussed in a meeting held on the 23/24th September, 1965 and it had been decided that the Coal Controller might be entrusted with the work of making a comprehensive review of the linkage of the collieries with HSL Washeries to ensure supply of right quality of coal in adequate quantities.

140. From the foregoing, it will be seen that deterioration in the quality of raw coal is not peculiar to HSL washeries, but a general phenomenon prevalent in the country. The linkage of collieries to washeries suggested by the Fourth Working Group appointed by Government has not worked well. Much, therefore, depends on the linkage which the Coal Controller might suggest. HSL, no doubt, will apprise the Coal Controller the factors which caused the failure of the present linkage and also make suggestions for a solution of the problem.

141. The Central Fuel Research Institute pointed out in their Report on Dugda I washery that for every 1% increase in the ash content of raw coal, the loss in yield of clean coal was of the order of 5%. The Committee enquired about the loss incurred by the Dugda I Washery by use of raw coal of higher ash content. They were informed that it was difficult to estimate the loss, because the washeries had not worked to full capacity and as such it was not possible to select raw coal of better quality than what it might have been possible if the washery had worked to full capacity.

142. Since the loss in yield of clean coal is as high as 5% for every increase of 1% in ash content of raw coal the Committee suggest that urgent steps should be taken to ensure that the raw coal purchased does not contain more ash than the washeries were originally designed for.

(b) Difference in grade of coal actually received and the coal for which payment was made

143. The Report on Dugda I washery by the Central Fuel Research Institute pointed out that the washery had been paying Rs. 2 to $2 \cdot 5$ more per tonne of raw coal, because the coal received was of the grade 'HH', while payment was made for grade 'F' or 'G'. This was due to the fact that collieries had to pay according to official gradation rather than their own analysis. This had been brought to the notice of Government and the Coal Controller by HSL and was under discussion.

144. After some consideration, Government are stated to have introduced the system of payment on the basis of actual quality assessed at destination, *i.e.* by a system of joint sampling. However, the scheme had not worked satisfactorily due to various reasons, the main reason being a reluctance on the part of the collieries to cooperate.

145. During evidence the Chairman, HSL stated that on HSL's suggestion, Government raised the price of coal by one rupee subject to the collieries agreeing to joint sampling. That had not proved attractive enough for the collieries. In fact out of the 19 collieries which covered 54% of the supplies to HSL washeries, 6 had dropped out. Government have suggested to HSL to enter into long-term agreements with the collieries by offering higher prices, if necessary, as a solution to the problem.

146. Since the supply of raw coal is a permanent affair, a solution has to be found for ensuring that the grade of coal for which payment is made conforms to the grade actually supplied. The Committee hope that the HSL, in consultation with the Coal Controller and the collieries will devise an equitable solution to the problem.

(c) Reduction in ash content as a result of washing

147. The table given below shows the ash content of the raw coal fed into the washeries, the ash in clean coal and the reduction in ash as a result of washing for 6 months during 1965:

		DUGD	4	BHOJUDIH			
Months	Ash in feed	Ash in clean coal	Reduc- tion in ash after washing	Ash in feed	Ash in clean coal	Reduc- tion in ash after washing	
April '65	20.8	- 18.0	2.8	20.9	17.5	3.4	
May '65 .	. 20.7	17.5	3 · 2	21.6	17-1	4.2	
June '65	21.2	17.6	3.6	21.5	17.1	414	
July '65	· 20·8	17.3	3.2	31.6	16.9	4.6	
August '65	20.9	17 . 2	3.2	21.7	17 · 2	415	
Sept. '65.	. 21.5	17.5	4.0	22 · 4	17.5	4.9	

148. It will be seen that the average reduction of ash content is 3.5 per cent and 4.4 per cent for Dugda I and Bhojudih Washeries, respectively.

149. The Committee understand that in the U.S.S.R. the average ash content of raw coal was 17 per cent and as a result of washing, it was reduced to 7 per cent to 8 per cent *i.e.*, a reduction in ash content of 9 per cent to 10 per cent.

150. The Committee recommend that studies should be initiated to find out the factors which are responsible for comparative inefficiency of the HSL Washeries with a view to adopt suitable remedial measures.

G. Production

(a) Utilisation of rated capacity

151. A statement showing the capacity installed and production in the two washeries which have so far been commissioned, namely Dugda I and Bhojudih is given below:—

	Yea			DUGDA I			BHOJUDIH			
	16	41		Rated F Capa- city	roduc- 1 tion	Percent- age to rated capa- city	Rated capa- city	Produc- tion	Percent- age to rated capa- city	
1962-63				1.44	0.7	48.6	I'4	0.2	17.5	
1963-64				1.44	1.03	71.6	1.4	0.96	48.0	
1964-65	:	t	ŗ	I · 44	Q·8	53.5	1.4	1 · 22	87 ∙o	

152. It will be seen from the statement that the production in these washeries has all along been much less than the rated capacity. It would be further observed that the production at Dugda I has shown a decline in 1964-65 as compared to 1963-64.

153. It has been stated that production in both the washeries had to be restricted to a level lower than the rated capacity because of the decreasing intake of washed coal by the Steel Plants. Dugda I was operated to a lesser extent in 1964-65 as compared to 1968-64, because of a number of reasons, viz., shortage of spares, interruption due to constructional activity, lower off-take of washed coal and transport difficulties. 154. During evidence, the Chairman. H.S.L. advanced the following reasons for the decrease in the off-take of washed coal by the steel plants:—

- (i) Certain dates were envisaged for the starting of the blast furnaces and there was some delay in the starting;
- (ii) Coke rate has improved from 1:5 tons to 1:3 tons of coal per tonne of steel.

155. The Committee are not convinced with these arguments. It seems that the demand for washed coal was over assessed. What is worse is that the rated capacity of Bhojudih was enhanced from 0:84 to 1:4 million tonnes in 1961. It is true that in the context of expansion of the steel plants, the outlook for off-take of washed coal might improve but this does not justify the establishment/expansion of the washery at a time when there was not enough demand for the coal. As late as in 1963 the Steel Plants served by these washeries were expected to take only 1.93 million tonnes of washed coal from them whereas the installed capacity of these washeries was 2.84 million tonnes i.e. nearly one and a half times.

156. It is needless to point out that the creation of excessive capacity leads to locking up of capital which has to bear interest charges. The Committee, therefore, recommend that in future, proposals for setting up a new washery should be approved only after ensuring that the capacity of the existing washeries is being utilized in full. It is understood that HSL is in touch with the N.C.D.C. with regard to setting up of new washeries. Before deciding to set up new washeries, the Government should critically assess the demand and compare it with the installed capacity.

157. The Committee further note that Bhojudih washery was to supply washed coal to TISCO. According to the Calculation made in 1958, the demand for washed coal of Bhojudih was estimated at 2.47 million tonnes. The capacity of the two washeries of TISCO was estimated at 1:5 million tonnes of washed coal.

158. Bhojudih was originally expected to supply 0.9 million tonnes of washed coal to TISCO. The original capacity of that washery was 0.9 million tonnes of washed coal. Till the completion of expansion of the washery, more or less full supplies were made. Subsequently at a meeting held at the Coal Controller's office on 22nd October, 1963, it was decided that TISCO would take 56,000 tonnes per month, *i.e.* 0.67 million tonnes per annum. At this rate supplies are stated to have been made till February-March, 1964 whereafter TISCO reduced their intake to 0.54 million tonne per annum.

159. During evidence, the Chairman, HSL stated that HSL was not particularly anxious to press TISCO because the requirements of steel Plants for washed coal were growing.

160. The Committee think that the inability to supply TISCO, washed coal at the rate envisaged earlier was the reason for not working the washery to full capacity for a period of a little over two years. That there is now going to be adequate demand for the washed coal produced by that washery does not alter the fact that supply of washed coal to TISCO was taken for granted without entering into a contract. In not having entered into a specific agreement with TISCO regarding the supplies, Government and HSL had failed to provide one of the fundamental safeguards. The Committee hope that necessary lessons will be drawn from this experience.

161. Patherdih washery was originally expected to supply washed coal to IISCO. But that company refused to accept washed coal on the ground of high cost. Negotiations are stated to have gone on for two years without success. In December, 1965, however an understanding is stated to have been reached for the supply of 40,000 tonnes of clean coal to IISCO. The price to be paid by it and connected matters are yet to be worked out.

162. During evidence, the Committee were informed that HSL is not now anxious to supply coal to outside parties.

163. The Committee's observations with regard to supply from Bhojudih to TISCO are equally applicable to this.

(b) Effective Working hours of Dugda I Washery

164. The Report of the Central Fuel Research Institute on Dugda I washery pointed out that out of 16 working hours the effective working hours in that washery seldom exceeded 9 hours as against 14 to 15 hours in foreign countries. That Report estimated loss on. this account at Rs. 35 lakhs per annum.

165. As the washery was not required to work to full capacity, no loss was suffered by the washery on account of its being worked for lesser number of hours.

166. During evidence, the Superintendent of the Project admitted that the working hours were poor but that was mainly because of maintenance problems and lack of certain spare parts: which were not available.

167. The Committee recommend that steps should be taken to analyse the reasons for the washery working for less or hours than normal. The Committee suggest that due attention should be paid to this matter.

H. Plant and Equipment

(a) Cost

168. The table given below shows the cost of Plant and Equipment of each washery. Similar figures in respect of Kargali Washery have also been indicated for comparison purposes.

	Capacity of raw coal	Cost of plant and equip- ment. (Rs. Crores)	
Washery	(Million Tonnes)		
Dugda I	2.4	4.00	
Bhojudih	2.0	3 60	
Patherdih	2.0	3.64	
Dugda II	2 · 4	5.26	
Kargali (of N.C.D.C.)	2.2	2 42	

169. The cost of plant and equipment of HSL Washeries is stated to be more as compared to Kargali Washery of N.C.D.C., because their cost is made up of certain elements which were not included in the cost of Kargali Washery's plant and equipment. A statement showing the elements of cost of plant and equipment of H.S.L. Washeries and Kargali are given below:—

Kargali Washery **HSL** Washeries . (1) Main Plant. (1) Main Plant and standbys. . (2) Wagons and Locomotives. . . . (2) Spares . (3) Overheads, design and engineering (3) Furniture and fittings. services, (4) Service of foreign personnel . (4) Vehicles. (5) Fabrication of Structural Steel . (5) Railway sidings. . (6) Development. (6) Erection . . • (7) Civil Works including Washery (7) Civil Works Buildings.

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170. It will be seen that the cost of plant and equipment of HSL washeries includes certain elements which are not included in the cost of plant and equipment of Kargali Washery. The same is true of Kargali Washery also. Except items (1) and (7) the other elements which comprise the cost of plant and equipment of Kargali Washery are not included in the elements of cost oſ Hindustan Steel Limited Washeries. The Committee do not, therefore, consider the argument that the plant and equipment of HSL Washeries contains something more than the N.C.D.C. Washery as wholly valid. They recommend that a comparison of the cost of plant and equipment of HSL Washeries and other Washeries in the country should be made, elementwise, so as to pinpoint the elements which have accounted for the increase. Such an analysis will be helpful for future guidance.

171. The Committee also recommend that whenever such decisions are taken, the available comparable data should be collected to have an idea about the reasonableness of the cost of plant and equipment;

172. Dugda I and Dugda II have a capacity of 2.4 million tonnes each. The cost of plant and equipment in case of Dugda I is Rs. 4 crores while in case of Dugda II it is Rs. 5.26 crores. Though their capacity is the same the price difference is to the extent of Rs. 1.26 crores. The Plant of Dugda I was ordered in November, 1958 while order for Dugda II was placed in May, 1963.

173. The Committee cannot understand how prices for the same capacity of plant in the very same country could have risen by Rs. 1.25 crores or 31.5 per cent in $3\frac{1}{2}$ years even after taking into consideration technological advancement etc. The Committee desire that an enquiry should be held into this matter.

(b) Defects in Plant and Equipment of Dugda I Washery

174. In their Report on the performance of Dugda I Washery submitted in January, 1965, the Central Fuel Research Institute had pointed out that the Baum Jig Circuit had been wrongly designed ignoring directives given in the original specifications. According to the designer, only minus $\frac{1}{2}$ fraction of rejects were recirculated in the Jig Box and undersizes at $\frac{1}{2}$ came out of the box along with the cleans and remained unwashed. The design of the Baum Jig Circuit (unless major rectification was introduced) would not allow the adoption of washing scheme as envisaged earlier for increased recovery of clean coal and better control of the quality of cleaned products.

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175. Due to the non-washing of undersizes of $\frac{1}{4}$ " the yield of cleans would go down by 2.7 to 15.4 per cent. The Report assessed the consequent financial loss in a year (presuming the difference between the selling price of clean and middlings to be at least Rs. 30 per ton) at Rs. 36 lakhs.

176. Asked about the reasons, HSL informed the Committee that the Director of the Central Fuel Research Institute was a member of the Technical Committee which examined the tenders. The Director CFRI had differed with some of the views expressed by the Technical Committee and the design of Baum Jig Circuit was one of them.

177. The view of the International Construction Company which had in the meantime been appointed as consultants to HSL were also obtained and they were in agreement with the views of the Technical Committee.

178. The Committee understand that the matter is being investigated by a Technical Committee. The stages through which the examination of the findings of the Central Fuel Research Institute have passed and the time taken at each stage are shown below:—

Report of CFRI received by HSL	25-1-65
Comments/Observations of Superintendent, Coal Washeries Project received	29-3-65
Proposal to set up a Technical Committee to go into the different aspects	April, 1965
Change of incumbant of the post of Superintendent of the Project and the need to enly rge the terms of reference so as to include Bhojudih and Patherdih Washeries	22-5-65
Correspondence with various authorities to nominate persons to serve on the Committee and the appoint- ment of the Committee	27-7-65

179. It will be seen that the appointment alone of the Technical Committee took 6 months. That Committee was originally expected to submit its Report by the 3rd October, 1965, but the Report had not been received till February, 1966. If the findings of the Central Fuel Research Institute regarding the loss of yield of clean coal are correct, then HSL will have lost Rs. 36 lakks due to delay in setting up the Technical Committee and its coming to a finding. The Committee cannot but observe that Hindustan Steel Limited has failed to treat the matter with the urgency which it deserved. The Technical Committee should be asked to submit its Report quickly and expeditious action should be taken to implement its decisions. If the Technical Committee has not yet completed investigation, they should examine the following matters:—

- (i) The extent of loss due to lesser recovery of clean coal;
- (ii) The steps that are necessary for washing coal of ¹/₄" and less;
- (iii) Cost of equipment and capital expenditure necessary for installing the facilities for washing such material; and
- (iv) Whether considering the capital expenditure and the accrual of benefits, it would be economic to wash the material referred to.

(c) Spares

180. Because of poor maintenance of Dugda I plant for want of FOB spares, (imports of which had been delayed considerably due to non-release of foreign exchange), frequent break downs had occurred in that Washery and the production could not be stepped up. The losses so suffered have not been assessed.

181. During evidence, the Chairman, HSL admitted that there had been no proper planning with regard to spares. The Superintendent of the Project stated that the suppliers gave 5% of spares for maintenance but these were consumed during the commissioning period. Replacements took 18 to 24 months'. The Committee were informed that due to inexperience this had happened.

182. While the Committee have invariably noticed that there are excessive stocks of spares and stores in most public undertakings, in this particular project, the reverse is the case. In the light of this experience, steps should be taken to build up necessary stocks of spares in all the washeries.

I. Financial Matters

(a) Capital Cost

183. The capital cost of the Dugda I, Bhojudih and Dugda II Washeries is very high as compared to the Washeries at Kargali of

Washery				Capacity of raw coal		Capital cost (Rs. crores)
				 	(Millio	on tonnes)
Kargali Wash		DC			2.2	2 . 42
Durgapur Wa	shery			•	••	1·57
Dogda I	•			s .	2.4	7.36
Dugda II	٠			•	2.0	7.33 (likely to
						be revised upward.)
Bhojudih					2.0	
Patherdih	•		•		2.2	

N.C.D.C. and at Durgapur Steel Plant, as the following table will show:-

184. The capital cost of Kargali Washery is stated to be less because it is a pit head washery resulting in savings in lay-out and buildings like bunkers and conveyor belts etc. In the case of Durgapur Washery, since it was a part of the steel plant, all expenditure on railway marshalling yard, the township, the power line communication etc. were all part of the steel plant. Moreover the cost of the plant was also less because it was part of a package deal.

185. It is understandable that these favourable factors made it possible to set up the Kargali and the Durgapur Steel Plant Washeries at a lesser cost. But, the Committee are not convinced that these factors account for such a large difference in the capital costs. The Committee recommend that the reasons for the large difference in the capital cost of NCDC Washery and the Hindustan Steel Limited Washeries should be properly analysed for future guidance.

(b) Cost of Washing

186. The table given below shows the cost of washing coal per tonne in Dugda I and Bhojudih washeries as compared to the Kargali Washery of N.C.D.C.:

	NCDC'S Kargali Washery	Dugda I l	Bhojudih
Operating cost and over-heads	4 ·48	2 9.7	4.67
Depreciation	0.92	3.27	1 • 94
Interest on Govt. Loan	0·90	1.96	<mark>9</mark> ٠57
	6.30	13.15	7.18

187. it will be seen from the above statement that the operating costs of Dugda and Bhojudih washeries are higher than at Kargali. The reason for this was stated to be that Kargali was a Pit-head Washery and the bulk of its raw coal came from Bokaro and Kargali collieries. But in the case of HSL washeries additional expenditure on Marshalling yards and handling costs had to be incurred. Dugda I had been designed to wash raw coal received from 26 different collieries, which have varying washability characteristics. This also necessitated additional facilities for blending of the different types of raw coal.

188. The actual operation of Dugda I in 1964-65 was only 42% of rated capacity.

189. The incidence of depreciation at Dugda I and Bhojudih was higher than at Kargali. This was because the capital cost of Kargali washery was only Rs. 2.25 crores as against the cost of Rs. 7.0 crores of Dugda I and Rs. 6.18 crores of Bhojudih washeries respectively. All these factors contributed to increase operating costs at Dugda I and Bhojudih as compared to Kargali Washery.

190. In the case of Dugda I the cost of washing is more than double that of Kargali Washery. While the Committee agree that the factors referred to in the preceding paragraph account for some increase in the cost of washing, they are not convinced that they can account for such a wide difference. They feel that the working of the washery needs close scrutiny with a view to bringing down the cost. They urge that immediate steps should be taken towards this end and proper watch kept till the cost comes down to a comparable level.

(c) Working results

Year			Dugda I	Bhojudih (R	Net profit/ Loss s. in lakhs)
A		 	 (Profit - + (Loss	·) -)	
1962-63			()31 · 28	(+) 6·02	()25·26
1963 -64	•		()19·69	(+)34·92	(+)15.23
1964-65			••	••	(+) 23·6

191. The table given below shows the working results of the two washeries which have been commissioned so far:---

192. The losses during 1962-63 in Dugda I are stated to be due to the fact that the price charged from the Steel Plants for washed coal was based on an estimate prepared in the beginning of the operation. 'The actual cost for the washery proved higher than the estimate.

193. On the other hand, it was possible to make profits in the Bhojudih Washery, because the supplies were made to TISCO on the basis of standard cost, *i.e.* on the basis of optimum working plus a return of 8%.

194. The Committee enquired why even after fixing the price of washed coal on cost basis, the Dugda I Washery incurred a loss of Rs. 19:69 lakhs in 1963-64. They were informed that it was because that washery did not work to full capacity in that year. The Chairman, HSL also stated that formerly the coal washeries were considered as independent units but lately thinking was for treating them as service units.

195. It will be seen that Dugda I Washery incurred heavy loss amounting to Rs. 50.97 lakhs in 1962-63 and 1963-64. The Committee are inclined to think that in addition to the fact that the washery worked at a lesser capacity, there must be other reasons for the losses. Some of the deficiencies in the working of the washery which accounted for substantial losses and which were referred to in the Report of the Central Fuel Research Institute are given below along-with the amount of loss as estimated in that report:

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 (Rs. in lakhs)

 (i) Loss in yield of clean coal due to higher ash content in raw coal.
 72

 (ii) Non-washing of under-sizes at 1/4" due to defective design in the jig box
 36

 (iii) Unsteady operating conditions of the washery
 14

 (iv) Lesser number of effective working hours
 35

 TOTAL
 157

196. The deficiencies pointed out by the Central Fuel Research Institute are stated to be under the examination of a Technical Committee. In the light of the findings of that Committee, HSL should reassess the extent to which the losses were due to the defects in its operations. HSL should also examine the prospects of sales cost of washing and the price which can be obtained and take suitable steps to make the working of the washery economic. 197. As regards the suggestion that the washeries should be treated as service units, the Committee are of the opinion that if the Washeries are to work with maximum efficiency at minimum cost, they should function as independent commercial enterprises and show comparable results with other washeries in the country. If on the other hand, they are treated as service units, there will be no incentive for them to keep their cost of production down and it will perpetuate inefficiency.

J. Organisation

198. The washeries at Dugda, Bhojudih and Patherdih are each managed by a Washery Manager under the general control of the Central Project office at Dhanbad. It has been stated that the location of the Project Office at Dhanbad is the most suitable one because it is the centre of coal mining industry.

(a) Staff employed in Central Project Office

199. The main functions of the Central Project Office are to arrange for the supply of raw coal, distribution of washed coal to the steel plants and to look after wagon allotments. The Superintendent of the Coal Washeries Project is responsible for the efficient and smooth working of the washeries. This, he ensures, by inspecting the washeries periodically and by getting weekly reports on their working.

200. Considering the main responsibilities of the Project Office enumerated above, the staff employed by that Office appears to be on the high side. The Committee understand that a standard force is being finalised for the Project Office. This should be done soon.

(b) Staff employed in washeries.

201. The Table given below shows the sanctioned and actual staff strength of the Coal Washeries Project during the years 1961-62 to 1963-64 and the expenditure on establishment during the same period:---

		Staff strength		Establishment	
Year •			Sanctioned Actual		- expenditure
1961-62	•	•	 666	479	Rs. 7.13 lakha
1962-63			1289	1148	Rs. 19.70 "
1963-64 .			1936	1355	Rs. 28 · 53 "

202. It has been stated that the standard force had been fixed for Dugda I and that for Bhojudih was being finalised. Asked whether the trend towards decrease in intake of washed coal by plants had been taken note of in determining the staff requirements, it was stated that the off-take of washed coal was a variable factor and that the actual strength within the standard force would be altered depending upon it and other factors.

203. The Committee have already referred in para 153 ante that the demand for washed coal had decreased and the washeries had consequently to be operated much below the rated capacity. In the circumstances, urgent action should have been taken to determine the standard force of the Washeries. Apart from the question of determining the standard force, the decrease in off-take of washed coal, which became apparent in November, 1963 and was expected to continue until the additional blast furnaces and coke oven complexes in the expansion schemes of the steel plants went into production, should have been followed by a freezing of recruitment. The Committee are surprised to note that the staff has actually been considerably increased during 1962-63 and marginally during 1963-64.

CONCLUSION

204. The examination of the Alloy Steels Project has revealed that there has been considerable avoidable delay in planning and setting up the Project. From the stage of appointment of the consultant to the present stage of construction and erection of plant and equipment, it is apparent that a sense of urgency has been lacking. It is further seen that Government decided to set up the project without obtaining data on the economic viability of the project, the cost of production and profitability with the result that during the first stage there will be a marginal loss. The Committee also found that there are several lacunae in the agreements with the consultants, suppliers, Contractors, etc., in regard to matters like demarcation of responsibilities, fixation of fee, watching progress of work, etc. It is rgerettable that such mistakes should occur even after Government had experience of setting up projects of much greater complexity in the country.

205. Much cannot perhaps be done at this stage so far as the profitability and the concluded agreements are concerned. But so far as the expeditious completion of the project is cocerned, Government can do a lot. The Alloy Steels Project is an important Project in the Public Sector as there is great shortage of alloy steel in the country. The Committee trust that the Project authorities would direct their energies to the speedy completion of the Project so that the country may become self reliant to a considerable extent in this vital product.

206. The examination of the Coal Washeries has disclosed that before setting up the Washeries, the demand for the washed coal was not properly assessed with the result that the demand has been losses. The capital cost of setting up these washeries has been tal has been unnecessarily locked up and the washeries have shown losses. The capital cost of setting up these washeries has been excessive. Fortunately, with the expansion of the Steel Plants under Hindustan Steel Limited, the prospects of utilisation of the products of these washeries are becoming bright. The Committee would, however, emphasise that there should be no complacency so far as their efficient operation is concerned. This is important because the HSL wanted to treat them as service units which was likely to prove a disincentive towards maximum efficiency. The Committee feel that these Washeries should be worked on commercial basis and show comparable results with other washeries in the country.

New Delhi; April 23, 1966. Vaishakha 3, 1888 (S). D. N. TIWARY, Chairman. Committee on Public Undertakings.

APPENDIX I

(Vide para 80)

List of Raw Materials

Imported Materials:

- 1. Ferro Boron
- 2. L. C. Ferro Chrome
- 3. L. C. Fe mn.
- 4. Fe Cr Silicon
- 5. Ferro Silicon Zirconium
- 6. Ferro Titanium
- 7. Ferro vanadium
- 8. Ferro Tungston
- 9. Ferro Molybdenum
- 10. Ferro Columbium
- 11. Ferro Silicon
- 12. H. C. Fe Cr
- 13. Electrolytic Mn
- 14. Electrolytic Ni cathode
- 15. Cobalt
- 16. Fluorspar
- 17. Calcium Silicide
- 18. H² removed Nickel.

Indigenous materials

- 1. Scrap (M.S.)
- 2. Tool Steel Scrap (W-Brg)
- 3. Stainless Steel Scrap
- 4. Magnetic Iron
- 5. H. C. Fe Mn
- 6. H. C. Fe Cr.

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7. Ferro Silicon Lump Si-70 per cent.

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- 8. Ferro Silicon (fines)
- 9. Scilion Manganese
- 10. Chrome Ore
- 11. Burnt Lime
- 12. Burnt Dolomite
- 13. H. G. Iron Ore
- 14. Lime Stone
- 15. Pig Iron (Low P) ·
- 16. Silica Sand
- 17. Petroleum Coke
- 18. Aluminium Wire
- 19. Aluminium Shots
- 20. Silicon Carbide

APPENDIX II

	Reference to para No. in the Report	Summary of Conclusions/ Recommendations
1	2	3
I	II	The Committee feel that in the case of the consultants Government should have stipulated the fee for completion of the work and not relat- ed it to time. In that case it would have been in the interest of the consultants also to complete their work as quickly as possible. As events have proved the consultants have gained by the non-completion of the work within the original schedule. They will get an additional fee of Rs. 55 lakhs for the extended period. As admit- ted by the Secretary of the Ministry of Iron and Steel during evidence, the consultants cannot be wholly free from blame for the delay in comple- tion of the consultancy work. In view of this statement, Government should be cautious in dealing with such firms. The Committee recom- mend that Government should ensure that they do not in future enter into consultancy agree- ments on these terms.
	12-13	The total consultancy fee payable to the consul- tants (Rs. 1:43 crores) works out to 2 per cent of the total estimated capital cost of the Project (Rs. 70.64 crores). There are several instances where Government secured consultancy services from foreign countries at a much lower propor- tion to the total capital cost. It appears that in their negotiations with the consultants, Govern- ment had no comparable standards, probably because no other firm in India was available to quote competitive rates. In the opinion of the Committee the total fee paid or agreed to be paid is on the high side.
3	16-17	The Chairman, H.S.L. stated that if the consul- tants had been given the entire responsibility for construction, including supervision and payment

Summary of Conclusions/Recommendations of the Committee on Public Undertakings contained in the Report.

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of the bills, it might have been right to determine the fee for the completion of the project as a whole. Since the payments to contractors etc. were made by H.S.L., the payments to consultants in the case of H.S.L. units including Alloy Steel Project had been related to passage of time.

The Committee are unable to appreciate the distinction sought to be made by the Chairman, H.S.L. The responsibilities of consultants enumerated in para 7 indicate that except for payments to the contractors the entire responsibility for construction is theirs. In the opinion of the Committee the difference made out is so insignificant that it did not justify the adoption of a different procedure in the matter of payment of consultancy fees. The Committee would draw attention to para 110 of their 13th Report on Management and Administration of Public Undertakings in which they have recommended that payments to consultants should be related to the progress of work.

The Committee recommend that one agency should be made responsible for supervision of construction work and making payments. It can be either the consultants or the Plant authorities according to the nature of work. Work, for which know-how is available within the public sector should not be entrusted to outside agencies.

It appears that Government at the time of appointment of the consultants did not realise that in addition a Production Adviser will be needed due to the incapacity of the consultants to discharge that function. When this was brought to their notice time had to be taken in selecting a suitable firm. This process was unnecessarily prolonged as it took over 20 months to appoint a Production Adviser after the appointment of the consultant.

The Committee feel that the time of 1½ years taken in approving the Detailed Project Report was too long. Perhaps it was not necessary to send it to all the parties mentioned in para 26 who necessarily took their time on scrutiny. If

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a sense of urgency was shown it should have been possible to reduce this time considerably.

The Committee are surprised to see so many revisions of the capital cost. With the experience which Government had acquired in launching public sector projects by 1961, specially the three steel plants, there is no reason why the original estimate should have omitted such basic items.

The Committee feel that where a preliminary estimate for a project is submitted to the Cabinet in connection with the approval of the Project, it should be incumbent to resubmit the revised estimates to the Cabinet where variation exceeds a certain prescribed limit. The reasons for the increase and how the economics of the project would be affected by the increase in the cost of the Project should also be placed before the Cabinet. The adoption of such a procedure should result in framing of more realistic estimates.

The delay caused by the suppliers in furnishing working detailed drawings for the equipment foundations would at the most result in holding up payment to them for some time. The Committee recommend that provision should be included in the future agreements to ensure that the project is not put to any loss on account of the delay on the part of suppliers. Such delay should also attract penalty provisions.

10 . 44-46 The Detailed Project Report envisaged completion of all the preliminary stages within 12 to 15 months. The time actually taken for their completion was 30 months. The delay in the appointment of Production Adviser has been referred to in para 25 ante. The Committee find that even after the approval of Detailed Project Report, Government had taken three months to give approval for the issue of invitations to tenders. After inviting tenders, it took nearly an year for the ultimate selection of the suppliers.

> The Committee cannot escape the conclusion that the entire work has proceeded in a leisurely manner. In none of the various stages could it

be said that delay was inevitable. If a purposeful effort had been made at any stage it should have been possible to reduce the delay considerably.

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The Committee are not satisfied with the reasons given for not being able to obtain structural steel in time. From the post-evidence information they note that the Alloy Steels Project had agreed to accept joists in standard lengths of 5.5 to 13.5 metres offered by the Bhilai Steel Plant against the former's requirements of 15 metre lengths. Similarly the Alley Steels Projert had accepted the channels lying with Durgapur Steel Plant in stock against some other order. The decision to accept joists of inappropriate lengths was also motivated with a view to avoid transportation difficulties which - 15 metre lengths would have had to face. In the case of channels, it is also noted that the Alloy Steels Project did approach the Durgapur Steel Plant direct. It is not, therefore, correct to blame the steel producing Plants, solely. The Alloy Steels Project should have planned its requirements early and intimated the same to the steel producing plants. Apparently this was not done. In fact in the case of channels, the requirements were not intimated at all; it was just a chance that the material was lying in stock with the Durgapur Steel Plant. So far as the suppliers are concerned, the Committee are unable to appreciate that the Hindustan Steel Limited Plants (e.g. Bhilai in this case) should be unable to produce what is required by another sister unit, merely because it was a small order. If this is the case with the Alloy Steels Project the Committee apprehend that other consumers must be experiencing much greater hardships. The Committee recommend that Government should enquire into this matter to determine the reasons for such failures and suggest remedies for future guidance. Steel is a precious commodity and losses resulting due to wastages on account of supplies in random sizes, as occurred in the case of Alloy Steels Project should be treated with concern.

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12 56 The Committee feel that a very lenient view has been taken of the slow progress of work by the consultants. There has been delay from the very beginning. Soil investigation, which was to have been completed by July, 1961 was completed in January, 1962. Soil preparation which was to have been done between February, 1961 and February, 1962 was not completed even by the 30th June, 1964. The progress achieved by 30th June, 1964 was site levelling, 84 per cent and embankment, 50 per cent.

> 57 The Committee feel that a strict watch on the work of the consultants was called for, especially because their contract is related to the passage of time and not to the progress of work. They recommend that efforts should be made to see that the construction of the project is completed according to the present schedule.

14 59 The Committee find that there have been delays by the Suppliers and Contractors. Before final payment is made to them, the performance of each should be carefully examined and the clause providing for the levy of liquidated damages should be suitably invoked.

15 60 So far as the estimation of loss suffered or extra expenditure incurred is concerned, the Project authorities have admitted that it would be desirable to calculate them, but they have stated that it can be done comprehensively only at the completion of the project. The Committee think that such calculation —though it may be a little rough—should be made concurrently so that the consequences of delay in construction/commissioning are brought home to all concerned more pointedly.

> The Committee find that the Consultants and Contractors have been blaming each other for poor progress in construction. It is regrettable that in spite of the fact that the Chief Engineer of the Project was in overall charge for construction and erection, these delays and bickerings have occurred. This can be attributed to poor co-ordination and control. The Committee expect that those responsible for the delays will

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		be penalised and proper supervision exercised in future.
17	70	The Committee recommend that the Project should ensure that the work of fabrication is finished within the revised schedule at least. So far as the need to increase the fabricating capa- city in the country is concerned, they would draw attention to para 111 of their Eighth Report on Townships and Factory Buildings of Public Undertakings.
18	76	The Committee are surprised at the manner in which the decision to set up the Project was taken. No economic feasibility study was con- ducted and as such Government did not have adequate data on the economic viability of the Project, the cost of production and profitability or otherwise of the project as a whole. Govern- ment merely decided to set up an alloy steel plant in the public sector of a specified size with- out going into the economics of it.
19	79	The country's demand for various types of alloy steels is much more than the anticipated production of the Plant. Therefore, there can be no problem of marketing. Nevertheless, the Plant physical determine indiciously priority of

Plant should determine judiciously priority various items keeping in view the margin profit thereon and also the importance of the items from the national angle.

The Committee are glad to learn of the efforts to produce indigenously these raw materials. Government should extend all facilities not only to those who produce these items but also to others, who have proposals for starting production of other materials required by the plant.

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The Committee recommend that the Project should keep in touch with the international market and arrange to build sufficient stock when the prices become favourable, so that production does not suffer.

Since both the Alloy Steels Project and the 87 22 Durgapur Steel Plant are units of Hindustan Steel Limited there should not be any difficulty Īt in finding a solution to the price problem. is understood that scrap is already being trans-

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ferred from Durgapur Steel Plant to the Alloy Steels Project The Committee expect that an understanding with regard to the price of scrap will be reached soon, failing which the Head Office of H.S.L. should fix it.

If the ferro-alloy Plant had been set up along with the Project with a foreign exchange component of Rs. 21 crores, imports worth Rs. 9 crores could be saved and a net saving of Rs. 61 crores in foreign exchange could effected. This is another instance where be by trying to save a small amount of foreign exchange by not setting up a Project, con-siderably more foreign exchange will have to be spent on imports year after year. The Committee recommend that in future when proposals for setting up new projects are put up for Government approval, full details regarding the anticipated saving in foreign exchange should be stated. Government should also take into account the long term benefits while considering such proposals. Refusal to allot foreign exchange is not always a sure way of conserving it.

The Committee feel that the setting up of a Ferro-Alloy plant has not been given the urgency it deserves. The licensing of private firms and their production should have been so timed as to coincide with the commissioning of the Alloy Steels Project. In fact both the Schemes should have been considered as parts of one project. It takes 31 years for a Ferro-Alloy Plant to be commissioned after placing of orders for plant and machinery. Since the Alloy Steels Project is to be commissioned by 1966-67, the private firms ought to have been given a time limit upto end of 1963 to take a decision whether they were going to set up the plant immediately or not. Every facility should have been afforded to them for setting up the Project in time. Failing a positive response, arrangements should have been made to set it up as a part of the main project. It is surprising that this has not been done and Government are merely contemplating a review after six months. The Committee recommend that the setting up of a Ferro-Alloy plant should be given top priority and a decision in this regard taken without further delay.

The Committee recommend that strict control should be kept over the capital expenditure so

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	. '	that the expectation of better input-output ratio is realised.
26	101	The Committee have referred in para 76 ante to the fact that without assessing the profitabi- lity aspect, the project had been proceeded with. The calculations made by the consultant later on are stated to be incorrect. As the project is expected to run at a loss during the first stage, utmost economy will have to be exercised by restricting expenditure to the minimum. The position should be reviewed by Hindustan Steel Limited and Government from time to time so that, adverse trends, if any, are checked in time.
3ý	104	The Committee have already stressed the need for exercising great vigilance on expenditure all round so that the Project attains the break-even point at the earliest. Since the calculations of manpower by the Project show an increase of 36 per cent over the estimate in the Detailed

Project Report, it would be desirable to have standard force determined. The Head Office should keep a strict watch over the manpower.

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The Committee welcome the decision taken by the Alloy Steels Project and the Durgapur Steel Plant to have pooling arrangements for the houses of their employees with a view to effect economy.

118-119 The Committee discussed with the Secretary of the Ministry of Iron and Steel whether it would not be advantageous to set up washeries as part of the steel Plants, as was the case with Durgapur. He stated that it would be correct to do so if the steel plant was located near the coal fields, as was the case with the Durgapur Steel Plant. But if the distance between the steel plants and the coal mines was considerable, as in the case of Rourkela and Bhilai and the Plants were designed to use more than one type of coal, than the advantage would lie in locating the washery near the coal mines. This would result in saving in transport costs as otherwise, for every tonne of clean coal required by the steel plant 1:4 tonnes of raw coal would have to be transported from the coal mine to the Plant.

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Secondly, middlings which are produced by coal washeries are utilised by power stations and expenditure would have to be incurred in transporting them from the steel plant to the power stations.

The committee agree with the above reasoning and think that it will not be profitable to locate the washeries at the steel plants unless there are special advantages as at Durgapur.

The argument put forward by the Secretary of the Ministry of Iron and Steel namely, that the Detailed Project Reports were not prepared to save time is not borne out by facts. The decision to set up the washeries was taken in April, 1956, while invitations to tender were issued much later *i.e.* after a lapse of 1 year and 2½ months in the case of Dugda I, 2 years and 10 months in the case of Bhojudih and 2 years and 6½ months in the case of Patherdih washeries.

This shows that there was ample time for the Detailed Project Report to be prepared. The Committee, therefore, feel that it was not correct to have proceeded with the Projects with out the preparation of Detailed Project Reports.

Had the Detailed Project Reports, been prepared, a proper assessment of the demand for washed coal would have been made in respect of each washery, and the present position of the washeries not being able to work to full capacity for want of demand and incurring losses would not have arisen.

Considering the time taken for awarding the contract for Kargali Washery, it appears to the Committeee that the time taken for awarding Contracts for Washeries at Dugda I. (16 months). Patherdih (19 months) and Dugda-II (18 months) is on the high side. As Government had gained experience by the setting up of the Kargali Washery, the time taken for setting up of H.S.L. washeries should have been less. Moreover, the contract for the Kargali Washerv was processed by the Directorate General of Supplies and Dis-As Government and the H.S.L. were posals. directly dealing with these contracts, it should

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have been possible to examine the tenders and finalise the contracts in a shorter period than the D.G.S. & D.

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When the commissioning of Dugda-I washery was delayed on acount of delays within the country, action should have been taken to avoid similar pit-falls in the commissioning of Bhojudih and Patherdih washeries. For example, there was delay in arranging bank guarantee in the case of Dugda I and in opening letter of credit, in the case of Patherdih Washery. Again in the case of Dugda I there was delay in providing rail siding and this was repeated in the case of Bhojudih Washery. The Committee are concerned over repetition of similar omissions. As pointed out by the Committee in their Thirteenth Report on Management and Administration of Public Undertakings, in the formative stages of a project, the responsibility of the Ministries should not cease after sanctioning the project and or entering into agreement with contractors, but they should also ensure that they progress according to the schedule and whatever difficulties are likely to arise in their implementation are foreseen and attended to.

The main difficulty facing the washeries is the deterioration in the quality of raw coal supplied. The Committee, were informed during evidence that the ash content of the raw coal was higher than anticipated earlier. For example, in the case of Dugda I washery. it was expected that 52 per cent of raw coal feed would have maximum ash content of 19 per cent and the remaining 48 per cent of the raw coal would be with an ash content of 19 per cent to 23.7 per cent. The above forecast had not materialised and the washery got 32 per cent of the coal with lesser ash content and the remaining 68 per cent of raw coal contained higher ash content than envisaged.

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The deterioration in the quality of raw coal is not peculiar to H.S.L. washeries, but a general phenomenon prevalent in the country. The linkage of collieries to washeries suggested by the Fourth Working Group appointed by Government has not worked well. Much therefore, de-

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pends on the linkage which the Coal Controller, might suggest. H.S.L. no doubt, will apprise the Coal Controller the factors which caused the failure of the present linkage and also make suggestions for a solution of the problem.

34 142 Since the loss in yield of clean coal is as high as 5 per cent for every increase of 1 per cent in ash content of raw coal, the Committee suggest that urgent steps should be taken to ensure that the raw coal purchased does not contain more ash than the washeries were originally designed for.

- 35 146 Since the supply of raw coal is a permanent affair, a solution has to be found for ensuring that the grade of coal for which payment is made conforms to the grade actually supplied. The Committee hope that the HSL, in consultation with the Coal Controller and the collieries will devise an equitable solution to the problem.
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The Committee recommend that studies should be initiated to find out the factors which are responsible for comparative inefficiency of the HSL Washeries with a view to adopt suitable remedial measures.

During evidence, the Chairman HSL advanced the following reasons for the decrease in the off-take of washed coal by the steel plants:—

- (i) Certain dates were envisaged for the starting of the blast furnaces and there was some delay in the starting;
- (ii) Coke rate has improved from 1.5 tons to 1.3 tons of coal per tonne of steel.

The Committee are not convinced with these arguments. It seems that the demand for washed coal was over assessed. What is worse is that the rated capacity of Bhojudih was enhanced from 0.84 to 1.4 million tonnes in 1961. It is true that in the context of expansion of the steel plants, the outlook for off-take of washed coal might improve but this does not justify the establishment/expansion of washery at a time when there was not enough demand for the coal. As late as in 1963 the Steel Plants served by these

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		washeries were expected to take only 1.93 mil- lion tonnes of washed coal from them whereas the installed capacity of these washeries was 2.84 m.t. <i>i.e.</i> nearly one and a half times.
3 8	156	It is needless to point out that the creation of excessive capacity leads to locking up of capital which has to bear interest charges. The Com- mittee, therefore, recommend that in future, pro- posals for setting up a new washery should be approved only after ensuring that the capacity of the existing washeries is being utilized in full. It is understood that HSL is in touch with the N.C.D.C. with regard to setting up of new washeries. Before deciding to set up new washeries, the Government should critically assess the demand and compare it with the installed capacity.
39	160	The Committee think that the inability to sup- ply TISCO washed coal at the rate envisaged earlier was the reason for not working the washery to full capacity for a period of a little over two years. That there is now going to be adequate demand for the washed coal produced by that washery does not alter the fact that sup- ply of washed coal to TISCO was taken for grant- ed without entering into a contract. In not having entered into a specific agreement with TISCO regarding the supplies, Government and HSL had failed to provide one of the funda- mental safeguards. The Committee hope that necessary lessons will be drawn from this experience.
40	163	The Committee's observations with regard to supply from Bhojudih to TISCO (para 160) are equally applicable to the supply from Patherdih to IISCO.
41	167	The Committee recommend that steps should be taken to analyse the reasons for the Dudga I washery working for lesser hours than normal. The Committee suggest that due attention should be paid to this matter.

43 170-171 The cost of plant and equipment of H.S.L. washeries includes certain elements which are

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not included in the cost of plant and equipment of Kargali Washery. The same is true of Kargali Washery also. Except two items, the other elements which comprise the cost of plant and equipment of Kargali Washery are not included in the elements of cost of Hindustan Steel Limited Washeries. The Committee do not, therefore, consider the argument that the plant and equipment of HSL Washeries contains something more than the N.C.D.C. Washery as wholly valid. They recommend that a comparison of the cost of plant and equipment of HSL Washeries and other Washeries in the country should be made, element-wise, so as to pinpoint the elements which have accounted for the increase. Such an analysis will be helpful for future guidance.

The Committee also recommend that whenever such decisions are taken, the available comparable data should be collected to have an idea about the reasonableness of the cost of plant and equipment.

172-173 Dugda I and Dugda II have a capacity of 2'4 million tonnes each. The cost of plant and equipment in case of Dugda I is Rs. 4 crores while in case of Dugda II it is Rs. 5:26 crores. Though their capacity is the same the price difference is to the extent of Rs. 1:26 crores. The Plant of Dugda I was ordered in November, 1958 while crder for Dugda II was placed in May, 1963. The Committee cannot understand how prices for the same capacity of plant in the very same country could have risen by Rs. 1:5 crores or 31:5 per cent in 3-1/2 years even after taking into consideration technological advancement etc. The Committee desire that an enquiry may be held into this matter.

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It will be seen that the appointment alone of the Technical Committee took 6 months. That Committee was originally expected to submit its Report by the 3rd October, 1965, but the Report had not been received till February, 1966. If the findings of the Central Fuel Research Institute regarding the loss of yield of clean coal are correct, then HSL will have lost Rs. 36 lakhs due to delay in setting up the Technical Committee and its coming to a finding. The Committee can-

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not but observe that Hindustan Steel Ltd. has failed to treat the matter with the urgency which it deserved. The Technical Committee should be asked to submit its Report quickly and expeditious action should be taken to implement its decisions. If the Technical Committee has not yet completed investigation, they should examine the following matters:—

- (i) The extent of loss due to lesser recovery of clean coal;
- (ii) The steps that are necessary for washing coal of ¹/₄" and less;
- (iii) Cost of equipment and capital expenditure necessary for installing the facilities for washing such material; and
- (iv) Whether considering the capital expenditure and the accrual of benefits, it would be economic to wash the material referred to.
- While the Committee have invariably noticed that there are excessive stocks of spares and stores in most public undertakings in this particular Project, the reverse is the case. In the light of the experience of the Dugda I Washery, steps should be taken to build up necessary stocks of spares in all the washeries.

The capital cost of Kargali Washery is stated to be less because it is a pit head washery resulting in savings in layout and buildings like bunkers and conveyer belts etc. In the case of Durgapur Washery, since it was a part of the steel plant, all expenditure on railway marshalling yard, the township, the power line communication etc. were all part of the steel plant. Moreover the cost of the plant was also less because it was part of a package deal.

It is understandable that these favourable factors made it possible to set up the Kargali and the Durgapur Steel Plant Washeries at a lesser cost. But, the Committee are not convinced that these factors account for such a large difference in the capital costs. The Committee recommend that the reasons for the large difference in the capital cost of NCDC Washery and

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the Hindustan Steel Limited Washeries should be properly analysed for future guidance.

In the case of Dugda I the cost of washing is more than double that of Kargali Washery. While the Committee agree that the factors referred to in the preceding paragraph account for some increase in the cost of washing, they are not convinced that they can account for such a wide difference. They feel that the working of the washery needs close scrutiny with a view to bringing down the cost. They urge that immediate steps should be taken towards this end and proper watch kept till the cost comes down to a comparable level.

195-196 Dugda I Washery incurred heavy loss amounting to Rs. 50 97 lakhs in 1962-63 and 1963-64. The Committee are inclined to think that in addition to the fact that the washery worked at a lesser capacity, there must be other reasons for the losses. Some of the deficiencies in the working of the washery which accounted for substantial losses and which were referred to in the Report of the Central Fuel Research Institute are given below along-with the amount of loss as estimated in that report:

a	Loss in yield of clean coal	Rs. lakhs
X=7	due to higher ask content in raw coal	72
(if)	Non-washing of under-sizes at $\frac{1}{2}$ " due to defective design in the jig box	36
(1 11)	Unsteady operating condi- tions of the washery .	14
(i v)	Lesser number of effective working hours	35
	TOTAL	157

The deficiencies pointed out by the Central Fuel Research Institute are stated to be under the examination of a Technical Committee. In the light of the findings of that Committee, HSL should reasses the extent to which the

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losses was due to the defects in its operations. HSL should also examine the prospects of sales' cost of washing and the price which can be obtained and take suitable steps to make the working of the washery economic.

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As regards the suggestion that the washeries should be treated as service units, the Committee are of the opinion that if the Washeries are to work with maximum efficiency at minimum cost, they should function as independent commercial enterprises and show comparable results with other washeries in the country. If on the other hand, they are treated as service units, there will be no incentive for them to keep their cost of production down and it will perpetuate inefficiency.

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Considering the main responsibilities of the Project Office enumerated in para 199 ante, the staff employed by that Office appears to be on the high side. The Committee understand that a standard force is being finalised for the Project Office. This should be done.

already referred in The Committee have para 153, that the demand for washed coal had decreased and the washeries had consequently to be operated much below the rated capacity. In the circumstances, urgent action should have been taken to determine the standard force of the Washeries. Apart from the question of determining the standard force, the decrease in off-take of washed coal, which became apparent in November, 1963 and was expected to continue until the additional blast furnaces and coke oven complexes in the expansion schemes of the steel plants went into production, should have followed by a freezing of recruitment. been The Committee are surprised to note that the staff has actually been considerably increased during 1962-63 and marginally during 1963-64.

54 204-205 The examination of the Alloy Steels Project has revealed that there has been considerable avoidable delay in planning and setting up the Project. From the stage of appointment of the consultant to the present stage of construction and erection of plant and equipment, it is

apparent that a sense of urgency has been lacking. It is further seen that Government decided to set up the project without obtaining data on the economic viability of the project, the cost of production and profitability with the result that during the first stage there will be a marginal loss. The Committee also found that there are several lacunae in the agreements with the consultants, suppliers, Contractors, etc., in regard to matters like demarcation of responsibilities, fixation of fee, watching progress of work, etc. It is regrettable that such mistakes should occur even after Government had experience of setting up projects of much greater complexity in the country.

Much cannot perhaps be done at this stage so far as the profitability and the concluded agreements are concerned. But so far as the expeditious completion of the project is concerned, Government can do a lot. The Alloy Steels Project is an important Project in the Public Sector as there is great shortage of alloy steel in the country. The Committee trust that the Project authorities would direct their energies to the speedy completion of the Project so that the country may become self reliant to a considerable extent in this vital product.

The examination of the Coal Washeries has disclosed that before setting up the Washeries, the demand for the washed coal was not properly assessed with the result that the demand been much below the rated capacities. has Another result has been that capital has been unnecessarily locked up and the washeries have shown losses. The capital cost of setting up these washeries has been excessive. Fortunately, with the expansion of the Steel Plants under Hindustan Steel Limited, the prospects of utilisation of the products of these washeries are becoming bright. The Committee would, however, emphasise that there should be no complacency so far as their efficient operation is concerned. This is important because the HSL wanted to treat them as service units which was likely to prove a disincentive towards maximum efficiency. The Committee feel that these Washeries should be worked on commercial basis and show comparable results with other washeries in the country.

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