

**SEVENTH REPORT**  
**COMMITTEE ON PUBLIC**  
**UNDERTAKINGS**  
**(1985-86)**

(EIGHTH LOK SABHA)

**DURGAPUR STEEL PLANT**  
**(MINISTRY OF STEEL AND MINES**  
**--DEPARTMENT OF STEEL)**

[Action taken by Government on the Recommendations contained in the Eighty Ninth Report of the Committee on Public Undertakings (Seventh Lok Sabha)]



*Presented in Lok Sabha on 29 April, 1986*  
*Laid in Rajya Sabha on 29 April, 1986*

**LOK SABHA SECRETARIAT**  
**NEW DELHI**

*April, 1986 (Chapter, 1908 (Sak)*

*Price: Rs. 2.50*

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COMMITTEE ON PUBLIC UNDERTAKINGS  
(1985-86)

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Shri K. Ramamurthy

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2. Shri S. S. Chawla—*Chief Financial Committee Officer.*
3. Shri Rup Chand—*Senior Financial Committee Officer.*

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\*Ceased to be a member consequent upon his retirement from Rajya Sabha on 2 April, 1986.

\*\*Ceased to be a member consequent upon his retirement on 15 April, 1986.

ACTION TAKEN SUB-COMMITTEE ON THE COMMITTEE  
ON PUBLIC UNDERTAKINGS

(1985-86)

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8. Shri S. M. Bhattam
9. Shri B. V. Desai

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\*Ceased to be a member consequent upon his retirement from  
Rajya Sabha on 2 April, 1986.

## INTRODUCTION

I, the Chairman, Committee on Public Undertakings having been authorised by the Committee to submit the Report on their behalf, present this Seventh Report on Action Taken by Government on the recommendations contained in the 89th Report of the Committee on Public Undertakings (Seventh Lok Sabha) on Durgapur Steel Plant.

2. The 89th Report of the Committee on Public Undertakings (1983-84) was presented to Lok Sabha on 27 April, 1984. Replies of Government to all the recommendations contained in the Report were received on 10 December, 1985. The replies of Government were considered by the Action taken Sub-Committee of the Committee on Public Undertakings (1985-86) on 21 March, 1986. The Committee considered and adopted this Report at their sitting held on 21st March, 1986. Minutes of the sitting are given in Appendix I.

3. An analysis of the action taken by Government on the recommendations contained in the 89th Report (1983-84) of the Committee is given in Appendix- III.

NEW DELHI;  
21 April, 1986  
1 Vaisakha, 1908 (Saka).

K. RAMAMURTHY,  
Chairman,  
Committee on Public Undertakings.

## CHAPTER I

### REPORT

This Report of the Committee deals with the action taken by Government on the recommendations contained in the Eighty-Ninth Report (Seventh Lok Sabha) of the Committee on Public Undertakings on Durgapur Steel Plant which was presented to Lok Sabha on 27 April, 1984.

1.2 Action taken notes were received from Government by 10 December, 1985 in respect of all the 28 recommendations contained in the Report. These have been categorised as follows:—

- (i) Recommendations/observations that have been accepted by Government  
S. Nos. 1-4, 6, 7, 10, 12, 18-22 and 25—28.
- (ii) Recommendations/observations which the Committee do not desire to pursue in view of Government's replies.  
S. Nos. 8, 11, 17, 23, and 24.
- (iii) Recommendations/observations in respect of which replies of Government have not been accepted by the Committee.  
S. Nos. 5, 9, 13, 14 and 16.
- (iv) Recommendations/observations in respect of which final replies of Government are still awaited.  
S. No. 15

1.3 The Committee are constrained to point out that after presentation of Eighty-Ninth Report (Seventh Lok Sabha) in April, 1984, it took the Ministry of Steel and Mines (Department of Steel) about 19 months in furnishing action taken replies duly vetted by Audit. The action taken replies were required to be submitted by 27 August, 1984. The last reply was furnished to the Committee only on 10 December, 1985 after repeated reminders. The Committee deprecate this inordinate delay in furnishing the action taken replies and the casual manner in which the Ministry have treated the recommendations of the Committee. Surely, the Committee expect greater attention of the Ministry in accepting and implementing their recommendations. The Committee, therefore, hope that the Ministry will take better care in future and furnish action taken replies within the stipulated time.

1.4 The Committee desire that final reply in respect of the recommendation for which only interim reply has been given by Government should be furnished to the Committee expeditiously.

1.5 The Committee will now deal with the action taken by Government on some of their recommendations.

*A. Need for adequate averaging and blending facilities and quality control.*

#### **Recommendation Sl. No. 5 (Paragraph 1.51)**

1.6 The Committee had observed that in spite of the fact that the inadequacy of averaging and blending facilities and quality control were highlighted by the Plant management in 1973, only a few short term measures had been taken by the Company which did not yield the desired results. The Committee had desired to be informed of the reasons for the delay in providing these facilities. The Committee had also urged the Government to ensure execution of the modernisation programme recommended by the British Steel Corporation within the minimum time possible.

1.7 In their reply the Government have stated that they have recognised the needs for modernisation of Durgapur Steel Plant. The modernisation scheme which has recently been approved by Government in principle includes facilities for adequate averaging and blending facilities and quality control. The reasons for delay in the provision of these facilities earlier have been submitted to the Committee in oral and written replies.

1.8 The Committee note that the modernisation scheme which includes adequate averaging and blending facilities and quality control, has now been approved in principle by Government. They hope that the modernisation programmes would be brought into operation expeditiously to minimise inconsistency in the quality of raw material.

1.9 The Committee are, however, not satisfied with the vague reply of the Ministry that the reasons for delay in providing proper averaging and blending facilities have earlier been submitted to the Committee in oral and written replies. On the other hand, the Managing Director of Durgapur Steel Plant had clearly admitted in his oral evidence that, "it is an obvious and serious omission during the designing of the original project that proper averaging and blending facilities were not provided for different types of coal. This error is sought to be rectified under the modernisation programme." The Committee, therefore, reiterate their original recommendation and would like to be informed immediately of the reasons for not providing earlier adequate averaging and blending facilities and quality control in spite of the fact that their inadequacy was highlighted by the Plant Management as far back as in 1973.

**B. Design deficiencies and damage to Equipments**  
**Recommendations Sl. Nos. 9.13 and 14 (Paragraphs 1.83, 1.139 & 1.140)**

1.10 The Committee on Public Undertakings (1983-84) in *paragraph 1.83* of their 89th Report had commented that the lower availability of blast furnaces was mainly on account of poor quality of refractory work and design deficiencies in Blast Furnace No. 4, which necessitated its relining much before its normal period and unusually long time was also taken in relining work. According to the Committee the matter required to be looked into with a view to fixing the responsibility. The Committee had also emphasised the need for intensifying the planned as well as preventive maintenance of the plant and machinery to improve its availability.

1.11 In *paragraph 1.139*, the Committee had expressed their distress over the poor performance of the Rolling Mills (Blooming Mill). The Committee had commented that by and large the actual production was lower than the budgeted production and there was inherent design and layout deficiencies in certain mills. The Committee had noted serious deficiencies in the plant and equipment of some of the Rolling Mills and desired that the responsibility therefor should be fixed.

1.12 The Committee had also pointed out in *paragraph 1.140* of the said report that the performance of the wheel and Axle Plant had been most unsatisfactory. The rated capacity of this plant after expansion was fixed as 75,000 wheel sets per annum but the Plant could produce only 40,000 wheel sets per annum and that too if various additional facilities were provided and remedial measures taken. The highest capacity utilisation was 19 per cent in 1978-79 which gradually deteriorated to barely 11 per cent in 1982-83. The Committee had also noted that the wheel & Axle Plant was seriously damaged and the replacement of affected equipment was estimated to cost Rs. 15 crores. The Committee desired that the responsibility for severe damage to the Plant should be fixed and action taken against defaulters.

1.13 In December, 1985, the Government had intimated that an Enquiry Committee was constituted by President in November, 1984 to identify reasons and to fix responsibility for relining Blast Furnace No. 4; non-performance of blooming mills and the damage caused to the equipment in the Wheel & Axle Plant. The committee submitted its report to the Department of Steel in *September, 1985* which was being examined.



1.14. In their further reply furnished on 6th January, 1986, the Department of Steel has *inter-alia* stated that the report of the Enquiry committee (Appendix II) has since been examined in the Department as under:

(i) *Relining of Blast Furnace 4*

Blast Furnace No. 4 was designed and supplied by M/s. Head Wrightson who had designed and supplied three blast furnaces at 1.0 million tonne stage. Blast Furnace No. 4 in its first campaign from December, 1967 to April, 1975 remained in operation for seven years and 4 months. In the second campaign starting from June, 1976, it started showing sign of early failure. This early failure of the furnace was due to failure of refractories which caused abnormal increase in the temperature of the furnace shell which also resulted in its slow deformation. The load of the skip bridge on the top of the furnace also added to the process of deformation. Also in September, 1978 due to unprecedented flooding of the premises, the furnace was kept without charge for about 10 hours which caused extensive damage to the lining. The failure of the furnace was thus due to technical reasons.

The abnormally long time taken in relining of the furnace was because of this un-planned shutdown and inexperience of plant officers who could not adequately arrange for the work to be done in time. This was compounded by industrial relations problem during the reconstruction work of the blast furnace when contractors' labour adopted delaying tactics to avoid retrenchment. As concluded by the Committee, the causes involved were such that no individual(s) can be held responsible.

(ii) *Non-performance of Blooming Mill*

The capacity of the blooming mill at 1.6 million tonnes stage was envisaged as 1.47 million tonnes ingot per year. The capacity assumed for the blooming mill could neither be tested at site for want of adequate raw materials nor the mill could ever achieve the rated capacity since it started operation (September, 1960). The maximum tonnage of ingot rolled through the mills so far was only 1.1 million tonne per annum. The Enquiry Committee is, however, of the view that with the advancement in technology it would be desirable to phase out the blooming mill in favour of continuous casting. In the

modernisation plan under consideration, adoption of continuous casting to handle about 0.6 million tonnes per annum of liquid steel is envisaged and about 1.0 million tonnes per annum of ingot steel is intended to be processed through the booming mill route. Rehabilitation and modification schemes have been planned so that the capacity envisaged for blooming mill (1.0 million tonnes per annum) under modernisation of Durgapur Steel Plant is achieved. The Committee has concluded that prime-facie there is no evidence of deficiency in erection or non-performance of the mill.

(iii) *Wheel and Axle Plant*

All the major equipment in Wheel and Axle Plant were commissioned by January, 1962. While, some of the items such as the water hydraulic system of the main forging presses and the wheel machining equipment need replacement from considerations of their health and absolescence of technology, others need overhauling to revive their general health after so many years of working.

The axle forging hammers which were installed in accordance with technology prevalent at the time of their installation do have technological limitations on account of eccentric forging resulting in dynamic shock & vibrations leading to frequent break-down of the hammer and its foundations, which now require major reconditioning. The drop forging press has also proved to be inefficient to meet increasingly stringent technological standards adopted for railway axles.

The Committee, thus feel that the damage to the equipment is on account of limitations of the design of the equipment and no individual(s) can be held responsible for this."

1.15 The Department of Steel has also stated that though it agrees with the findings and conclusions of the Enquiry Committee, it recognises the need for regular upkeep and maintenance of the plant and equipment to ensure efficient performance. SAIL/Durgapur Steel Plant has been advised to be more vigilant in this regard. They have also been advised to accelerate pace of maintenance work which will help in removing various constraints and bottlenecks.

1.16 The Committee have gone through the Report of the Enquiry Committee set up by the Government. The Committee note the various reasons and deficiencies pointed out by the Enquiry Committee for the dismal performance of the Blast Furnaces and Rolling Mills and also for

the severe damage caused to the equipments in the Wheel and Axle Plant necessitating their replacement which is estimated to cost more than Rs. 15 crores. The Committee are, however, not satisfied with the findings of the Enquiry Committee that no individual (s) can be held responsible for this. The Enquiry Committee has also pointed out lack of experience and expertise in handling rebuildings of blast furnaces. The Committee feel it was a clear case of lack of proper planning and supervision in regular upkeep and maintenance of the Plant and its equipments that has led to this whole situation. The Committee recommend that the matter may be reviewed carefully with a view to laying down clear instructions and guidelines for proper upkeep and maintenance of the Plant and its equipment and fixing individual or collective responsibility at various levels. In case clear instructions and guidelines are already laid down, then it should be possible for the Government to fix individual or collective responsibility for the deficiencies leading to damage caused to the equipment and plant. The Committee would like to be apprised of the action taken in this regard within three months of the presentation of this Report.

*C. Revamping of Wheel and Axle Plant of Durgapur Steel Plant.  
Recommendation Sl. No. 15 (Paragraph 1.141)*

1.17 The Committee had recommended that the whole question of the continuance of the production of wheels and axles in Durgapur Steel Plant should be thoroughly examined taking into consideration the pattern of demand and the cost effectiveness of the additional investment required for replacement or addition of equipment, etc. The Committee had also desired to be informed of the final policy decision taken by the Government in this regard.

1.18 The Government in their reply have stated that "an investment decision on revamping of Wheel and Axle Plant of Durgapur Steel Plant will be taken after detailed examination of the Railways requirements as well as the feasibility report submitted by HEC Ranchi, after identifying the most cost effective method of meeting the Railways' requirements."

1.19 The Committee regret to observe that although a period of nearly 19 months has lapsed since the presentation of the Report to the House, the investment decision with regard to revamping of Wheel and Axle Plant of Durgapur Steel Plant has not been taken so far. The Committee urge the Government that the policy decision with regard to the continuance of the production of wheels and axles in Durgapur Steel Plant should be taken without any further delay and the Committee apprised of the final

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.At the time of factual verification, the Department of Steel informed that SAIL had taken up the matter with the Railways. The long term projections of the requirement had not been furnished by the Railways so far. Railways have given only year-to-year requirements.

**decision taken in this regard within three months of the presentation of this Report to the House.**

*D. Delay in sanctioning additional Captive Power Plant.*

*Recommendation S. No. 16 (Paragraphs 1.151 & 1.152)*

1.20 The Committee had found that the non-availability of adequate power from DVC had also affected the production at the plant especially in the Rolling Mills. The loss of production of saleable steel during the last 10 years (1973—83) solely due to power shortage was stated to be about 9 lakh tonnes. The Plant was having a small captive power plant with a firm capacity of 15 MW. Unfortunately, the capacity utilisation of this plant had also been low affecting even the limited quantity of power which could be available from this plant. There had been delays in sanctioning setting up of additional captive power plant to meet the power requirement. Although a proposal for the installation of the captive power plant was initiated in March, 1974, this was not approved by the Government at that stage because of certain wrong assessment in regard to overall availability of power in that area. It was only in September 1978 that a power plant of 2x60 MW was sanctioned for Durgapur Steel Plant.

1.21 The Committee had also expressed their distress over the inordinate delay in sanctioning additional captive power plant to Durgapur Steel Plant and had observed that whatever might be the consideration for Government for not allowing captive power units for other industries, Durgapur Steel Plant should have been made a special case for sanctioning of captive power units, especially, in view of the direct effect of short supply of power on its production. This aspect assumed greater importance as the load factor from DVC ranged between 52 to 68 per cent during 1970-71 to 1982-83 and short supply could not be compensated from other sources.

1.22 Government in their reply have stated that the facts leading to sanction of two captive power plants of Durgapur Steel Plant have been submitted in the oral and written replies tendered before the Committee.

**1.23. The Committee are not satisfied with the reply of the Ministry. All the points mentioned in the oral and written replies were carefully considered by the previous Committee while commenting on the delay in sanctioning the additional captive power plant. The Committee are, therefore, not happy over the casual manner in which the reply of the Government is worded. The reply does not explain the reasons for the delay in setting up of the Captive Power Plants. The Committee hope that better care would be exercised by the Ministry in future in furnishing replies to their recommendations.**

*E. Delay in installation of Captive Power Plant.*

*Recommendation S. No. 17 (Paragraph 1.53)*

1.24 The Committee had observed that besides valuable time lost in sanctioning of the project there had also been delay in setting up of the plant on account of the delays in the supply of equipment as well as in civil and structural work. The first unit which was expected to be ready by the end of second quarter of 1984. The cost had also gone up and the revised cost was estimated to be Rs. 82.46 crores against the original approved estimate of Rs. 54.91 crores. The Committee had, therefore, expressed unhappiness over the delays in execution of works connected with installation of the plant and cost over run in its setting up.

1.25 In their reply, Government have stated that "it was expected that the first unit would be commissioned by June, 1985 and the second unit six months thereafter. Because of fire on 16th March, 1985 in the store-yard of equipment suppliers, commissioning of first unit is likely to be shifted to June, 1986. The commissioning of second unit is expected in March, 1987".

**1.26. Since the installation of the Captive power Units sanctioned for Durgapur Steel Plant has been delayed considerably, the Committee desire that the revised dates now set by the Government in their reply for the completion and commissioning of first & second Units of Plant, should be strictly adhered to and no further slippage in this regard allowed to occur.**

*E. Modernisation Scheme for Durgapur Steel Plant*

*Recommendation Sl. No. 28 (Paragraph 5.28)*

1.27 The Committee had noted that the Plant had continued to incur losses since inception expect for a few years. It suffered a record loss of Rs. 44.23 crores in 1982-83. The cumulative loss as on 31-3-83 amountde to Rs. 308.22 crores and represented 71 per cent of the total investment of Rs. 434. 72 crores. Considering the heavy losses suffered by the Plant no suitable remedial measures were taken to rectify the unfavourable product mix of the Plant. The Plant continued to have unfavourable product-mix which contained one-third semis with lower margin than on the finished products. There had also been failure to counter technological obsolescence in time, affecting adversely the output and the production cost. The Plant was still continuing with the dying and energy intensive open hearth process for steel making.

1.28 The Committee had also observed that the comprehensive modernisation plan costing Rs. 1550 crores, as approved by the Board, which was submitted to Government in August, 1981, was still under consideration. Even refurbishing schemes costing Rs. 236 crores which were considered necessary to wipe out backlog of maintenance and to improve upon the health of the equipment and without which it would hardly be possible to

sustain even the existing level of production were yet to be implemented. The Committee had desired that emergent measures be taken to increase production and productivity of Durgapur Steel Plant by providing the additional balancing facilities and by modernisation of the Plant. The Committee had desired that the schemes which were found to be cost effective should be taken up urgently to improve production and to minimise the heavy losses being suffered by the Plant from year to year.

1.29 In their reply, the Government have stated that the need to increase production and productivity of Durgapur Steel Plant by providing additional balancing facilities and by modernisation has been recognised by Government. The modernisation proposal of Department of Steel has been agreed to only in principle by Government and a sum of Rs. 25 crores only has been sanctioned to finance the selection of technology, preparation of detailed engineering design and finalisation of equipment specification.

1.30 The Committee note that the modernisation proposal has ultimately been recognised by Government and has been agreed to in principle. However, as against the requirement of Rs. 1550 crores, approved by the Board for comprehensive modernisation, the Government have sanctioned a sum of Rs. 25 crores only to finance the selection of technology, preparation of detailed engineering designs and finalisation of equipments specification.

1.31 The Committee, however, feel that there has been considerable delay in according sanction to the modernisation plan and refurbishing schemes submitted to Government as early as in August, 1981. Even the refurbishing schemes costing Rs. 236 crores which were considered necessary to improve the health of equipments and to wipe out the backlog of maintenance are yet to be implemented.

1.32 Considering the heavy losses being suffered by the plant year after year, the Committee are of the view that the Government have not given serious thought to improve the financial viability of the Plant. They, therefore, desire that the final and firm decision with regard to the modernisation plan especially the refurbishing schemes be taken by Government immediately. They Committee would also watch with interest the result of selection of new technology and would await the final outcome of that. . . .

#### **Implementation of Recommendations**

1.33 The Committee would like to emphasise that they attach the greatest importance to the implementation of the recommendations accepted by Government. They would, therefore, urge the Government to implement such recommendations expeditiously. In case where it is not possible to implement the recommendations in letter and spirit for any reasons, the matter should be reported to the Committee in time with reasons for non-implementation. . . . .

## CHAPTER II

### RECOMMENDATIONS THAT HAVE BEEN ACCEPTED BY GOVERNMENT

#### **Recommendation Serial No. 1 (Paragraphs 1.19 and 1.20)**

Durgapur Steel Plant set up in 1962 with a capacity of 1 million tonnes of ingot steel was expanded to 1.6 million tonnes by 1969-70. The production of the plant has lagged far behind the rated capacity. The capacity utilisation in terms of steel ingots ranged from 40 per cent to 68 per cent during 1970—83. The Plant has failed even to maintain the production level reached in 1976-77, the capacity utilisation during the last 3 years being only 46 per cent, 58 per cent and 60 per cent as against 68 per cent achieved in 1976-77.

The Committee have been informed by the Plant management that on account of raw materials and other constraints the effective capacity of the Plant was lower than 1.6 million tonnes. Assessments of capacity made by various experts ranged from 1.15 million tonnes to 1.4 million tonnes. However, neither the SAIL Corporate Office nor the Ministry have approved the derated capacity, as according to Chairman of SAIL, assuming any lower figure than originally indicated has many implications. In the circumstances, the Committee would be justified in judging the performance of the Plant with reference to rated capacity of 1.6 million tonnes. They, however, desire that the task force which is examining this matter should fix the attainable capacity of the plant on a rational and scientific basis so that the performance of the Plant could be judged in a realistic manner.

#### **Reply of Government**

It will be useful to give a background of the Task Force. After receipt of the proposals for modernisation of Durgapur Steel Plant, Secretary (Steel) had set up an informal Task Force consisting of representatives of SAIL, DSP, MECON, R&D Centre of SAIL and Department of Steel to inter-act with the various appraisal agencies of the Government of India and to guide SAIL to re-formulate their investment proposals, keeping in view the various points raised in the Department of Steel and by the various appraisal agencies. The members of the Task Force jointly and separately met the various appraisal agencies and had held discussions in the Department also. The results of all these deliberations were incorporated in a

revised proposal for modernisation submitted by SAIL in November, 1983, on the basis of which the final proposal was put up to PIB. The PIB note reflects the views of the Task Force. No formal report was either expected from or submitted by the Task Force.

The revised proposal of SAIL received in November, 1983, which was based on the deliberations of the Task Force, endorsed the opinion of BSC(OS) that the achievable capacity was 1.15 million tonnes of ingot steel per annum. In judging the day to day operations, this is kept in mind.

[Ministry of Steel & Mines (Department of Steel)]

O.M. No. 3-14/82-DUR(DR) dated 10th December, 1985]

**Recommendation Serial No. 2 (Paragraph 1.21)**

The Committee find that the capacity utilisation has not only been much lower than the rated capacity but even as compared to the production targets which never exceeded 1.25 million tonnes and which are fixed every year taking into consideration the various constraints. The loss of production with reference to Budget targets aggregated to 18.62 lakh tonnes of saleable steel and 2.06 lakh tonnes of pig iron during 1973—83. There was a colossal loss of contribution margin of Rs. 104.72 crores on this loss of production. But for this, the overall losses of the plant (Rs. 144.69 crores) would have been less to this extent during this period. The position becomes all the more serious when it is considered that capacity utilisation of Durgapur Steel Plant has been the lowest as compared to other steel plants of SAIL. For instance, in 1982-83 as against the overall capacity utilisation of 71 per cent for ingot steel and 79 per cent for saleable steel for all the plants of SAIL, the capacity utilisation for Durgapur Steel Plant was only 60 per cent and 65 per cent respectively. It was worse as compared to TISCO which attained 97 per cent capacity utilisation for ingot steel and 106 per cent for saleable steel. Although external causes like shortage of power and difficulties in movement of raw materials and their shortages, etc. have affected production, major share of loss of production has generally been on account of internal causes like industrial disputes, break-downs and shut-downs in excess of planned down-time, failure to provide blending and beneficiation facilities for raw materials etc. The Action Committee appointed by the Government in 1973 had also pointed out that neglecting of maintenance, lack of discipline and proper work culture had affected the production performance of the plant. The Committee cannot but take a serious view of the poor production performance of the plant on account of factors which were mainly if not wholly within the control of management. Apparently, there has been failure to take timely remedial measures to improve the production performance. The Committee urge the need for concerted efforts both by the Ministry and the management to ensure optimal capacity utilisation of the Plant.



### Reply of Government

Government have noted that observations of the Committee on the imperative need for maintaining the plant in such a manner as to ensure optimal capacity utilisation. The plant has been instructed to clear the backlog of maintenance expeditiously and initiate measures for technological upgradation of the plant.

[Ministry of Steel & Mines (Department of Steel)  
O.M. No. 3-14/82-DUR (DR) dated 10th December, 1985]

#### Recommendation Serial No. 3 (Paragraph 1.48)

In an integrated steel plant, the adverse performance of one unit affects the performance of other units as well. The Committee regret to note that in Durgapur Steel Plant the performance of various units has been unsatisfactory. Thus, in coke ovens units, the production of coke was much lower than the rated capacity of 17.40 lakh tonnes per annum on account of low availability of ovens and lower pushing rate. As a result there was a net production loss of 54.68 lakh tonnes of coke during 1970-71 to 1982-83. Labour troubles and poor maintenance resulted in rapid deterioration in the condition of coke ovens which necessitated taking them down for rebuilding earlier than their normal life, affecting their availability. Inordinate delays upto 6 years in their rebuilding aggravated the situation. The Committee need hardly point out the desirability of proper maintenance of the plant and machinery and taking up of effective measures for completion of repairs and maintenance jobs as per schedule. The Government should examine what suitable steps could be taken in future to minimise time for rebuilding batteries.

### Reply of Government

Work to re-build battery No. 4 has already commenced and the plant is taking action to re-build it within a period of 36 months from the date of Government approval. Timely action will be taken for re-building batteries in future.\*

[Ministry of Steel & Mines (Department of Steel)  
O.M. No. 3-14/82-DUR(DR) dated 10th December, 1985]

#### Recommendation Serial No. 4 (Paragraph 1.49 & 1.50)

The unsatisfactory working of the coke ovens and lower volatile content in the coal charged resulted in lower yield of gas as well. This not only affected the operations of the main units but also had the

\*At the time of factual verification the Ministry of Steel and Mines (Departmental Steel) informed that work of rebuilding has progressed satisfactorily and the oven pushing and gas make has improved considerably in the recent past. The rebuilding of Battery No. 4 is almost nearing completion.

effect of underutilisation of by-product plants. Further, on account of shortage of gas, furnaces had to be changed over to oil firing. This not only resulted in additional capital expenditure of Rs. 38.07 lakhs, but also in extra expenditure amounting to Rs. 81.67 crores from 1970-71 to 1982-83 on account of use of costly fuel.

Deterioration in the quality of coal received by the plant is also stated to have affected the performance of coke ovens. The average ash content of raw coal has increased to 26.5 per cent with increased fines and sand contents as against 22.8 per cent ash content envisaged in DPR. This has resulted in higher ash in coke produced and has deleterious affect on the operation of coke ovens, blast furnaces and rolling mills. There has also been fluctuation in the quality of coal received on account of the fact that a large number of collieries have been linked to the Plant with wide variations in quality of coal. The number of coal groups linked to the Plant is stated to have increased to around 12 as compared to two groups envisaged in the DPR. The matter deserves serious attention of Government as well as Coal India Ltd. who controls coking coal mines and also operates washeries which supply part of washed coal required by the Plant. Effective steps should be taken to ensure that the coal of required quality is available to the Steel Plant. In this connection, the question of reduction in the number of collieries linked to the plant also needs to be examined seriously.

#### **Reply of Government.**

The issue of linkages for coking coal for the SAIL plants including DSP was discussed between Secretary (Steel) and Secretary (Coal) on 23-9-83. Several meetings were also held between SAIL and BOCL officials as well as between the two concerned Departments. It was agreed in September, 1983 to classify all the sources of coking coal to three categories—

- A. Mutually acceptable coals.
- B. Mutually unacceptable coals.
- C. Doubtful cases which do not fit into designed parameter of the washery or are otherwise of indifferent quality.

This was reviewed by SAIL in October, 1983, where it was decided to collect bulk samples of ROM coals of Category C for detailed testing. Subsequently, 24 samples of Category C and 3 samples of Category B were collected and tested for their washability and the suitability of unwashed

coal for coking. Based on the test results, these sources have been categorised either as Category A and B. Coals in Category—A have been further classified into prime or otherwise.

In April, 1984, Department of Coal made certain projections of grade-wise availability of coking coal at 17.5 per cent ash content, 19.5 per cent ash and 20.5 per cent during 1984-85. The estimated demand and supply were further discussed by the two Departments and also at a meeting with Secretary (Coordn) on 14th May, 1984. It turned out that if supplies of coking coal from all the offending sources were to be eliminated the availability of coal would go down. It was also stated by the representative of CIL and BCCL that while efforts would be made to improve the quality of coking coal, further improvement in the ash content during 1984-85 did not appear feasible. It was decided that as an interim measure Coal India Ltd. (CIL) would supply prime coking coal in 1984-85 with weighted average ash content in blend of 20 per cent during the year. Based on the estimated availability of coking coal at this level of ash, the gap that would have to be met by imports was worked out. Actual import of coking coal by SAIL during 1984-85 was 0.665 million tonnes. In 1985-86, SAIL is likely to import about 2.034 million tonnes.

The full delinking of offending sources of coking coal could not be undertaken in 1984-85 as it would have led to substantial short supply of domestic coal especially of prime grade. However, efforts to obtain coking coal of better quality are being constantly made with Department of Coal and CIL. Efforts to reduce the number of collieries linked to the DSP are also being simultaneously made.

[Ministry of Steel & Mines (Department of Steel)  
O.M. No. 3-14/82-DUR(DR) dated 10th December, 1985]

**Recommendation Serial No. 6 (Paragraph 1.62)**

The problem of high ash content in coal could have been solved to some extent if the captive coal washery of the Plant had worked satisfactorily. The Committee regret to note that the capacity utilisation of the washery ranged from 36 per cent to 76 per cent only during 1970-71 to 1982-83. The capacity utilisation had come down from 76 per cent in 1976-77 to 56 per cent in 1982-83. In view of the low output of the washery, a sizeable quantity of coal obtained from other sources had to be fed to the coke ovens resulting in higher percentage of ash in coal blend and the coke produced. Higher down time for maintenance and labour problems are *inter-alia* stated to have affected capacity utilisation of the washery. Surely, these matters were not outside the control of management and could have been controlled.

### Reply of Government

As per design, Durgapur Steel Plant Washery was to wash coal of washability characteristic from upper Seams of Jharia field of Prime Coking Coal. The design throughput rate was 360 MT per hour.

Over the years the ash percentage in the Feed Coal has gone up considerably. Also the fines content ( $-0.5$  mm) in the coal supplied has increased to almost double the level compared to initial years because of gradual mechanisation of mines. The lower seam coals having difficult washability characteristic coupled with increased fines and inclusion of sands has led to lowering of throughput rate by more than 30 per cent compared to DPR. Not only equipment life has decreased, but also they required frequent attention/maintenance, resulting in lower utilisation. This was a technical necessity. Efforts were always made to maintain cordial industrial relations. There is constant effort to improve feed coal quality by frequent interaction with Coal India.

Modernisation proposal envisages augmenting washing capacity as well as modifying the washing circuit to suit difficult coals and increased fines content.

[Ministry of Steel & Mines (Department of Steel)  
O.M. No. 3-14/82-DUR(DR) dated 10th December, 1985]

#### Recommendation Serial No. 7 (Paragraph 1.63)

Not only the capacity utilisation was low but the reduction in ash content ranged between 3.19 per cent to 4.76 per cent during 1970—80 as against 6.3 per cent envisaged in the DPR. It is only since 1980 that as a result of certain modifications there had been improvement in ash reduction which has now come upto about 6 per cent. The reduction in ash content is however still lower than that in other washeries like Dugda and Bhojudih which have achieved reduction between 9 per cent to 11 per cent. The Committee has been informed that further modifications in the washery circuit to enable reduction in ash content to the extent of 8-9 per cent is proposed to be introduced in the modernisation programme. The Committee are unhappy over the delays in taking measures for the improvement in performance of the washery. They hope that, keeping in view the importance of captive washery in the Steel Plant, the Government and the management will take all steps necessary for modifications and modernisation, with utmost zeal on priority basis as on washery will depend to considerable extent the efficient and successful performance of the Steel Plant. These efforts for improvement of washery are all the more necessary in the wake of deteriorating quality of coal which is likely to be available from the collieries in future.

**Reply of Government**

The need for improvement of washery in the wake of deteriorating quality of coal which is likely to be available from the collieries in future has been appreciated by Government and the modernisation scheme makes adequate provisions for improvement of captive washery.

[Ministry of Steel & Mines (Department of Steel)  
O.M. No. 3-14/82-DUR (DR) dated 10th December, 1985]

**Recommendation Serial No. 10 (Paragraph 1.84)**

Not only was the production low but the quality of hot metal produced was also poor. The production of off-grade hot metal ranged from 20 per cent to 40 per cent as against the norm of 15 per cent. This not only led to production of off-grade pig iron but also affected the working of the steel melting shop. The higher production of off-grade hot metal has been attributed mainly to deteriorating quality of raw material particularly iron ore which had high silicon content. The Committee find that the management itself has to bear mainly the responsibility for it. The plant receives bulk of its requirement of iron ore from its captive mines at Bolani. Absence of adequate ore handling equipment, beneficiation plant and improper operation of the blending plant has affected the quality and consistency of the ore available for the blast furnaces. As early as 1966, the Committee on Public Undertakings suggested expediting the setting up of beneficiation plant at these mines. It is regrettable that in spite of their recommendation, the setting up of the plant has been badly delayed. While the plant for washing of fines is expected to be commissioned in 1984, the facilities for washing of lump ore are yet to be established. Surely, the Committee could expect greater attention to implementation of the schemes which go a long way in improving the performance of the plant.

**Reply of Government**

The scheme for technological upgradation of the plant envisages washing of iron ore, both lumps and fines. A smaller unit for washing of fines from the fines dump was completed on 8-6-1985 and was put to preliminary acceptance test.

[Ministry of Steel & Mines (Department of Steel)  
O.M. No. 3-14/82-DUR(DR) dated 10th December, 1985]

**Recommendation Serial No. 12 (Paragraph 1.109)**

Production was also affected because of lower availability of furnaces on account of lower roof life, excessive time spent on completion of re-lining work, and low percentage of yield due to factors like imbalance

between the steel ladle capacity and furnace capacity etc. All this shows that the production management left much to be desired. The Committee emphasise the need for constant vigil on the operations of the plant and taking up of measures to ensure its optimal utilisation. Effective steps should also be taken to control excessive consumption of raw materials and of ingot moulds and bottom plates, etc.

### **Reply of Government**

Due to imbalance between steel ladle and furnace capacity, spillage of steel occurs at times. This reduces the yield. To ensure charging of hot metal according to steel ladle capacity, schemes like provision of load cells in the mixer cranes and replacement of weigh bridges in the mixer bay by electronic types has been envisaged. The order for the latter has already been placed while order for the load cells attached to the mixer cranes was expected to be placed by October, 1985.

Higher consumption of raw materials in the Steel Melting Shop is mainly due to hot metal quality. In order to off set the deterioration in hot metal quality from operationally desired level, de-siliconising practice has been intensified to the extent technologically possible. Further a slag raker has been installed and put into operation for removal of the slag.

For reducing bottom plate consumption the practice of using double bottom plates is gradually being replaced by single bottom plate.

[Ministry of Steel & Mines (Department of Steel)  
O.M. No. 3-14/82-DUR (DR) dated 10th December, 1985]

### **Recommendation Serial No. 18 (Paragraph 2.14)**

The Committee find that the plant has continued to suffer from the problem of over-staffing and lower productivity. The present strength of Works Department at 24846 is much higher than the strength of 19614 fixed after detailed studies by the Administrative Staff College, Hyderabad in December, 1972. The Committee on Public Undertakings in their First Report (1971-72) had suggested that the Government/Company should take opportunity offered by the expansion scheme of the steel plants and Bokaro Project to gainfully employ the surplus staff as early as practicable. In fact, the number of persons has gone up both in the case of works as well as general administration and township even as compared to the actual men in position in 1971-72, the total strength as on 31.3.1983 being 31416 as against 29285 at the end of 1971-72. The reasons advanced for increase in man-power strength like installation of balancing facilities and departmentalisation of certain jobs which were previously

done by contractors are justified only to a limited extent. It is regrettable that no effective steps have been taken to reduce the manpower.

### Reply of Government

Government have noted the Committee's observations on the manpower strength of Durgapur Steel Plant.

The modernisation scheme of Durgapur Steel Plant envisages no additional manpower. It is expected that by redeployment of the existing manpower, any surplus would be effectively absorbed. However, it will also be necessary to have negotiations with the trade unions to obtain their agreement to specific redeployment plan.

[Ministry of Steel & Mines (Department of Steel) O.M. No. 3-14/82-DUR (DR) dated 10th December, 1985]

### Recommendation Serial No. 19 (Paragraph 2.15)

The inevitable casualty of over-staffing is the productivity of the organisation. The labour productivity in Durgapur Steel Plant was the lowest being only 39 tonnes of steel ingots per man-year as compared to the 44 in Rourkela, 71 in Bhilai and 72 in Bokaro, not to speak of world standards where the productivity was several times higher. This is in spite of the fact that the plant has introduced productivity linked incentive scheme and an amount of Rs. 257.31 lakhs was paid as incentive in 1982-83. The problem becomes all the more serious when it is taken into account that the Mehtab Committee in 1966 considered it possible to increase the productivity of works personnel to about 125 tonnes ingot per man-year in each steel plant and the management itself fixed the target of 90 tonnes per man-year for Durgapur Steel Plant. The cost of about per ton of steel in Durgapur Steel Plant was the highest as compared to the other steel plants and was about double of that in Bokaro Steel Plant. As stated by the Secretary of the Ministry in his evidence before the Committee, the labour productivity depended to an extent upon the type of equipment in each plant but the Committee feel that it depended to a very great extent on the work practices which left a lot of room for improvement in Durgapur Steel Plant. The Committee have been informed that the recent agreement by the management with all the trade unions provides that both the sides recognise that future prosperity and efficiency of steel industry rests heavily on the ability of the parties to work in cooperation to achieve higher productivity. The Committee welcome it and hope that sincere efforts would be made both by the management and labour to improve the work culture and to achieve higher productivity with a view to reducing the cost of production and the heavy losses being suffered by the plant.

### Reply of Government

It is expected that the introduction of modern technology of steel making as envisaged in the technological upgradation proposal will improve labour productivity. Efforts are also being made by the plant to improve the work culture in the steel plant.

The following steps have been taken in order to contain manpower and ensuring improvement in the work practices:

- (1) No increase in manpower has been allowed to take place during the last four years and in fact the vacancies against depletions are being filled up very rarely and that too, as far as possible, by redeployment.
- (2) A Union Management Committee has been constituted to work out detailed parameters for commissioning of new equipment/facilities likely to be added as a part of modernisation and refurbishing.
- (3) A comprehensive study of manpower is being carried out by Chief Industrial Engineer. After the study is completed, necessary plan for redeployment will be made.
- (4) To improve the work practices, constant dialogue is on with the Unions at various level like Shopfloor Committees, Zonal Committees, Central Committees, etc. wherein both Management and Union representatives are present. Also necessary actions have been taken in the matter of proper handing over and taking over of shifts etc. to prevent loss of time and production.

[Ministry of Steel & Mines (Department of Steel) O.M. No. 3-14/82-DUR (DR) dated 10th December, 1985]

### Recommendations Serial No. 20 (Paragraph 3.25)

The Committee find that in spite of very low capacity utilisation, the plant was carrying large inventories which amounted to Rs. 225.67 crores at the end of the year 1982-83. There was heavy accumulation, particularly, of finished and semi-finished goods which were of the order of Rs. 126.20 crores and were equivalent to more than six months sale in 1982-83. On the other hand, sizeable imports of iron and steel products had taken place during 1981-82 and 1982-83 to meet the projected demand which did not materialise and SALE was carrying stock of imported steel valued at about Rs. 46.2 crores as on 1-4-83. The Committee regret of note that there have been deficiencies in planning of imports and domes-



tic production. The Secretary of the Ministry was frank enough to admit that the marketing organisation of SAIL has to be more dynamic and much closer to the customers to assess correctly the changes in demand pattern and to change the marketing and production strategy accordingly. The existing co-ordination between steel production and imports also needed a lot of improvement. The Committee hope that at least in future there would be better planning of imports and domestic production of steel keeping in view not only the total confirmed demand but the pattern of consumption also.

### Reply of Government

In order to reduce stock of finished and semi-finished products, a strategy was adopted to make the production programme more market demand oriented. Also efforts were made to have closer co-ordination with Central Marketing Organisation and to prepare the production programme on monthly basis as per availability of orders. A closer liaison was being maintained with Railways for expeditious movement of materials against orders thus increasing customer satisfaction. Any complaint received from a customer was taken up expeditiously for settlement.

As a result of these steps taken both by the Plant and by SAIL Corporate office, the stock of finished and semi-finished products at Durgapur Steel Plant have come down to 0.149 million tonnes as on 1st April, 1984 as compared to 0.282 million tonnes on 1st April, 1983.\*

[Ministry of Steel & Mines (Department of Steel) O.M. No. 3-14/82-DUR (DR) dated 10th December, 1985]

### Recommendation Serial No. 21 (Paragraph 3.26)

The Committee have been informed that there has now been a reduction in the existing stock which have gone down from 2.90 lakhs tonnes on 1st April to 2.10 lakh tonnes on 1st August, 1983. This is a step in the right direction. They would emphasise the need for constant review of the stock position to reduce the stocks to the minimum to save the unnecessary locking up to funds and the heavy inventory carrying costs.

### Reply of Government

Government have noted the observations of the Committee. As a result of certain actions initiated by the plant management for improving coordination with the customers and also by making a constant review of the stocks of semi and finished products, the stock of Durgapur Steel pro-

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\*At the time of factual verification the Department of Steel informed that the stock of finished and semi-finished products at Durgapur Steel Plant as on 1-4-1985 had further come down to 0.098 million tonne.

ducts, have come down during 1983-84 stock as on 1-4-1984 was 1.49 lakh tonnes and as on 1-4-1985, 0.98 lakh tonnes. The steps taken include:—

- (i) Production planning as per market demand.
- (ii) Increasing sales of finished products by more dynamic marketing efforts.

[Ministry of Steel & Mines (Department of Steel) O.M. No. 3-14/82-DUR (DR) dated 10th December, 1985]

#### **Recommendation Serial No. 22 (Paragraph 3.27)**

Not only was the plant having huge stock of finished products but that of stores and spares also. The total value of stores and spares was equivalent to about 20 months consumption which needs to be brought down. Stores worth about Rs. 31.14 crores had not moved for more than two years. The Committee desire that effective steps be taken to dispose of surplus items of stores expeditiously.

#### **Reply of Government**

Government have noted the observations of the Committee. Steps have already been initiated by the plant to reduce the inventory of stores and spares. The following steps have been taken:—

- (i) Close review of purchase indents.
- (ii) Constant review of stock position with consumers department.
- (iii) Disposal of obsolete and surplus stores.
- (iv) Regulating delivery schedule.

**As a result of these steps, inventory of stores and spares have come down to Rs. 96.31 crores as on 1st April 1984 as compared to Rs. 98.28 down as on April 1983.\***

[Ministry of Steel & Mines (Department of Steel) O.M. No. 3-14/82-DUR (DR) dated 10th December, 1985]

#### **Recommendation Serial No. 25 (Paragraph 4.16)**

The Committee take a serious view of the heavy demurrage charges paid by the plant. The total amount paid as demurrage charges during the last 5 years amounted to Rs. 14.37 crores, that is on an average about Rs. 3 crores per annum on account of detention of wagons beyond the free time allowed by the Railways. Such long detention of wagons resulting in heavy demurrages charges can by no means be considered as reasonable.

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\*At the time of factual verification the Department of Steel intimated that the inventory of stores and spares had further come down to Rs. 84.50 crores as on 1-4-1985. As on 1-4-86 the inventory of stores and spares was only Rs. 76.03 crores (provisional).

A major factor attributed to this has been operational delays like break-down of the handling equipment, deficiencies in layout of the exchange yard and insufficient storage capacity. Keeping in view the heavy demurrage charges paid year after year it was expected of the management to take effective steps to remove the various operational deficiencies. The Committee would like to know why this was not done all these years. The Committee have been informed that the Department of Steel and Management of the Plant now propose to take up some scheme and projects of expansion, modernisation, and installation of certain devices in the yards with a view to achieve quicker movement of wagons and reduce demurrages. They urge the authorities concerned and especially the Department of Steel not only to finalise these schemes and plans without delay but also see that they are implemented at the earliest.

### **Reply of Government**

Government have noted the Committee's recommendations on finalising the schemes and projects of expansion, modernisation and installation of certain devices in the yards with a view to achieve quicker movement of wagons and reduce demurrages.

Schemes that were indicated in the oral and written replies given by Department of Steel to COPU are under various stages of implementation.

Durgapur Steel Plant has taken certain steps since 1982-83 to improve operational efficiency and to reduce demurrages charges. These steps are: laying down of 2 Nos. stabling lines for heavier rake formation in rolling mill yards for outward despatch, 2 Nos. marshalling and stabling lines for sorting out mixed rake in coal siding yard and putting into operation 8 Nos. heavy duty locos (1400 HP). As a result of these measures, the incidence of demurrage has come down from Rs. 367.07 lakhs in 1982-83 to Rs. 360.48 lakhs in 1983-84. It has further come down to Rs. 321.68 lakhs in 1984-85.

[Ministry of Steel & Mines (Department of Steel) O.M. No. 3-14/82-DUR  
(DR) dated 10th December, 1985]

### **Recommendation Serial No. 26 (Paragraph 4.17)**

The Committee would also like to stress the need for strict watch over the preventive maintenance of the handling equipment as per schedule to minimise their break-down.

### Reply of Government

Government have noted the Committee's recommendations on the need for strict watch over the preventing maintenance of handling equipment as per schedule to minimise their break-down.

[Ministry of Steel & Mines (Department of Steel) O.M. No. 3-14/82-DUR (DR) dated 10th December, 1985]

#### Recommendation Serial No. 27 (Paragraph 4.18)

Bunching of wagons and receipt of defective wagons are also stated to have contributed to delays in loading and unloading of wagons. The matter should be examined in detail with the Railways to ensure more regulated flow of wagon to and from Durgapur Steel Plant. Other suitable measures should also be evolved to minimise the demurrage charges on this account.

### Reply of Government

Certain facilities for stocking including higher stocking capacity, marshalling yard movement and unloading have been envisaged under the plant's modernisation programme to reduce the impact of bunching on demurrage. For rectification of defective BFR wagons for loading finished materials, a system has been introduced to sort them out and to stable them for repairs. The matter is being constantly pursued with railways, Coal Controller, Central Board of Transport, Iron & Steel Controller to regulate the flow of wagons with a view to reduce bunching and demurrage charges on this account are expected to be reduced.

[Ministry of Steel & Mines (Department of Steel) O.M. No. 3-14/82-DUR (DR) dated 10th December, 1985]

#### Recommendation Serial No. 28 (Paragraph 5.28)

The Committee regret to note that the Plant has continued to incur losses since inception except for a few year. It suffered a record loss of Rs. 44.23 crores in 1982-83. The cumulative losses as on 31.3.83 amounted to Rs. 308.22 crores and represented 71 per cent of the total investment of Rs. 434.72 crores. Some of the main deficiencies in production management and cost control which have contributed to heavy losses of the Plant have been dealt with earlier in this Report. With a capacity utilisation of only 60 per cent and other deficiencies, the Plant faces a big challenge in making up the past losses and to earn a reasonable surplus even for its own renovation and modernisation not to speak

of generating surplus for financing the Plan schemes and this calls for more imaginative and concerted efforts both on the part of the Management and the Government to improve its performance. The Committee were surprised to find that the DPRs of the Plant for neither the one million tonne stage nor for its expansion to 1.6 million tonnes contained any profitability analysis. It was only at the stage of consideration of revised estimates for expansion in 1963 that the profitability analysis was made which showed that the Plant would incur a net loss of Rs. 1 crore per annum at 100 per cent capacity utilisation which was assumed as 1.6 million tonnes and after fulfilling all projected technological performance norms. This should have made the company and the Government to examine in all seriousness the question of financial viability of the Plant and to take suitable remedial measures. However, considering the heavy losses suffered by the Plant, it is apparent that no serious efforts were made in this direction. The Plant continues to have unfavourable product-mix which contains one third semis with lower margin than on the finished products. There has also been failure to counter technological obsolescence in time, affecting adversely the out-put and the production cost. The Plant is still continuing with the dying and energy intensive open hearth process of steel making. The energy consumption per tonne of ingot steel was the highest as compared to other steel plants viz. Rourkela, Bhilai and Bokaro. The comprehensive modernisation plan costing Rs. 1550 crores, as approved by the Board, which was submitted to Government in August, 1981 is still under their consideration. Even refurbishing schemes costing Rs. 236 crores which were considered necessary to wipe out backlog of maintenance and to improve upon the health of the equipment and without which it would hardly be possible to sustain even the existing level of production are yet to be implemented. The Committee consider that it is high time to take emergent measures to increase production and productivity of Durgapur Steel Plant by providing the additional balancing facilities and by its modernisation. They, therefore, desire that the schemes which are found to be cost effective should be taken up urgently to improve production and to minimise the heavy losses being suffered by the Plant from year to year.

#### **Reply of Government**

The need to increase production and productivity of Durgapur Steel Plant by providing additional balancing facilities and by modernisation has been recognised by Government. The modernisation proposal of Department of Steel has been agreed to only in principle by Government and a sum of Rs. 25 crores only has been sanctioned, to finance the selection

of technology, preparation of detailed engineering design and finalisation of equipment specification.

[Ministry of Steel & Mines (Department of Steel) O.M. No. 3-14/82-DUR (DR) dated 10th December, 1985].

**Comments of the Committee**

(Please see paragraph 1.30 to 1.32 of Chapter I of the Report)

### Chapter III

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

### Recommendation Serial No. 8 (Paragraph 1.64)

The Committee are perturbed by another factory which affects production in steel plant. It has been stated by the representative of Durgapur Steel Plant in evidence before the Committee that, apart from the high degree of ash content, stones are also found mixed up in the coal supplied which results in frequent break-down of equipment and affects continuity in production. The Committee desire that the Government should take suitable measures so that mixing of stones, with coal is eliminated altogether and quality of coal supplied to steel plants is considerably improved.

### Reply of Government

To ensure that good quality coal is received from CIL, a representative of Coal India Limited is stationed at Durgapur Steel Plant and joint inspections are made at the plant. The quality aspect is regularly brought up in the plant level Joint Infrastructural Co-ordination Committee meetings on coal, power and Railways, which are chaired by the Managing Director. At Government level the quality of coal supply is regularly reported to the Cabinet Committee on Industrial Infrastructure. Regular dialogues are also held with Department of Coal for improving quality of coal supplied to steel plants.

[Ministry of Steel & Mines (Department of Steel) O.M. No. 3-14/82-DUR (DR) dated 10th December, 1985].

### Recommendation Serial No. 11 (Paragraph 1.108)

The Committee find that the production of steel Melting shop has suffered inter alia due to deficiencies in planning and execution of expansion programme. The capacity of the open hearth furnaces was not expanded as envisaged in the DPR. Provision of double oxygen lancing facility which was decided as an alternative to increase production, was

also not made except in two furnaces. The reasons for this failure should be looked into and steps taken to correct the imbalance between the capacity of the steel melting shop and other units of the plants.

### **Reply of Government**

For enhancing the production of ingot steel from 1.0 to 1.6 Mtpa, the DPR envisaged upgradation of the 7 Nos. 200-tonnes and 1 No. 100-tonnes open hearth furnaces installed at 1.0 Mtpa Stage to 240-tonnes and 120-tonnes capacity each respectively. It was also envisaged to add one 240-tonnes open hearth furnace. The increase in capacity of the 200-tonne furnaces beyond 220-tonnes necessitated major modifications involving longer shut-downs and loss in production. It was, therefore, decided to upgrade the 200-tonne furnaces to 220-tonnes only instead of 240-tonnes as envisaged in the DPR.

The present oxygen balance in Durgapur permits double lancing on maximum of two furnaces. Double lancing on all the furnaces would necessitate a major investment on setting up additional oxygen plants. Since the present open hearth process is sought to be replaced by basic oxygen converter process in the proposed modernisation, any additional investment to augment production by open hearth process is not considered desirable.

[Ministry of Steel & Mines (Department of Steel) O.M. No. 3-14/82-DUR (DR) dated 10th December, 1985].

### **Recommendation Serial No. 17 Paragraph 1.153)**

The Committee are also sorry to note that besides valuable time lost in sanctioning of the project there had also been delay in setting up of the plant on account of delays in the supply of equipment as well as in civil and structural work. The first unit which was expected to be commissioned in December, 1982 is now expected to be ready by the end of second quarter of 1984. The cost has also gone up and the revised cost is estimated to be Rs. 82.46 crores against the original approved estimate of Rs. 54.91 crores. The Committee are unhappy over the delays in execution of works connected with installation of the plant and cost over run in its setting up. They hope that now all out effort will be made to commission the captive power plant by the revised target date and effective monitoring of progress of the works will be done to achieve this end. In the meantime steps should be taken to see that adequate power is made available to the Plant from other sources.



### Reply of Government

Government as well as Durgapur Steel Plant are taking action to see that implementation of the captive power plant is expedited. It was expected that the first unit would be commissioned by June, 1985 and the second unit six months thereafter. Because of fire on 16th March, 1985 in the storeyard of equipment suppliers, commissioning of first unit is likely to be shifted to June, 1986. The commissioning of second unit is expected in March, 1987.

2. Despite best efforts, power supply to the plants from DVC was 29.5 MW (Avg) in 1984-85 against 27.5 MW (Avg) in 1983-84 against contractual demand of 50 MW and minimum requirement of 35 MW.

[Ministry of Steel & Mines (Department of Steel) O.M. No. 3-14/82-DUR (DR) dated 10th December, 1985]

### Comments of the Committee

(Please see paragraph 1.26 of Chapter I of the Report)

#### Recommendation Serial No. 23 (Paragraphs 3.28 & 3.29)

The physical verification of raw materials and finished stocks has revealed heavy shortages. In the case of raw materials there were abnormal shortages of the order of Rs. 2.12 crores during the last 5 years. This was in addition to the shortages of the value of Rs. 6.02 crores during the last 5 years which were considered normal by the plant management. Test check of certain wagons of raw coal disclosed shortages ranging from 8 per cent to 11 per cent. Admittedly there have been pilferages of materials in transit. However, as the weighment of incoming wagons was on test check basis and accountal thereof was made on the basis of weight indicated in the Railway receipt, it was not possible to ascertain the transit losses and to lodge the claims on the Railways.

Not only there were shortages in raw materials, heavy net shortages to the extent of Rs. 10.21 crores were also found in the case of finished and semi-finished goods during the last 5 years. The shortages in finished stocks had also arisen *inter alia* on account of the fact that while despatching goods the wagons were not tare-weighed. The possibility of some of these wagons having weight lesser than the declared tare weight and consequential despatch of goods in excess of the quantity booked could not be ruled out. The committee take a serious view of heavy shortages noticed both in the case of raw materials as well as finished and semi-finished stocks resulting in an average loss of Rs. 2.5 crores per annum besides the normal handling losses of Rs. 1.2 crores in raw materials. They desire that the shortage be investigated.

### **Recommendation Serial No. 24, (Paragraph 3.30)**

The Committee are dismayed at the sorry state of affairs in Durgapur Steel Plant in the matter of physical verification of stocks of raw materials, spares, semi-finished and finished goods. The verification is based on rough estimation and approximation. There is no fool-proof system of weighment of wagons, raw materials and finished items. The whole system leaves room for loopholes and pilferages. Various excuses for shortages are given. For example, it is stated that charging machines go off very often, resulting in break-downs, there are errors in assessment of consumption and even in stock verification, there are only test checks of wagons, tare weight of wagons is not checked, and so on. The Committee recommend that the Government give serious consideration to this problem and devise ways and means to develop fool-proof system of weighment of raw materials and finished goods so that losses resulting from inaccurate weighment and thereby wrong costing are eliminated.

### **Reply of Government**

Improvement over the current practice in respect of weighment of wagons is currently difficult because of inadequacy in the facilities related to movement, handling and weighment. Hence, 100 per cent weighment is reserved for the higher value items. However, action has been taken by the plant to replace two of the existing weighbridges by 'electronic in-motion' weighment facilities.

Major schemes for improvement of wagons movement, enhanced storage capacity, provision of marshalling yard, etc. alongwith weighing facilities have been envisaged under the Plants modernisation programme. After these weighing facilities are installed, 100 per cent weighment of both incoming and out going wagons would be possible.

The system of recording actual tare weight of the wagons for despatch of semi-finished and finished products is not yet accepted by the Railways and this matter is being pursued with them.

For stores and spares 100 per cent physical verification is done every year in respect of A class items while for B and C class items, 100 per cent verification is done once in three years.

### **Comptroller & Auditor General's comments**

Reply does not indicate any thing about investigation of shortages as recommended in Recommendation No. 23.

**Reply to observations of Comptroller & Auditor General**

A Committee is constituted every year for investigation into the reasons of shortages and surpluses in the stock of raw materials, semi-finished and finished products. The Committee submits the investigation report, including recommendations for reducing the abnormal shortages and surpluses. The recommendations mainly covered streamlining of weighment system.

Improvement over the current practice in respect of weighment of wagons is currently difficult because of inadequacy in the facilities related to the movement, handling and weighment. Hence 100 per cent weighment is reserved for the high value items. However, actions have been taken by the Plant to replace two Nos. of the existing weigh-bridges by "Electronic in-motion" weighment facilities.

For checking the actual tare weight of wagons a test check of 65 wagons were conducted which revealed that on average tare weight of wagon is 1.15 tonne less than the declared tare weight by the Railways. This matter is being pursued with the Railways and the Railways are yet to accept the weighment on the actual tare weighment of wagons. So far as pilferage of coal is concerned, the matter has been taken up with the Railway Authorities as well as Coal India Limited.

Comprehensive schemes for improvement of wagons movement including the weighment is envisaged to be implemented in the Plant's Modernisation.

[Ministry of Steel & Mines (Department of Steel) O.M. No. 3-14/82-DUR  
(DR) dated 10th December, 1985]

## CHAPTER IV

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

#### **Recommendation Serial No. 5 (Paragraph 1.51)**

In regard to inconsistency in the quality of raw materials much could be done by the management to minimise its effect by having adequate averaging and blending facilities and quality control. In spite of the fact that the inadequacy of these facilities was highlighted by the Plant management in 1973, only a few short term measures were taken by the Company which did not yield the desired results. It is only now that the averaging facility for washery feed coal and augmentation of bedding and blending facilities in coal handling plants are proposed to be introduced under the modernisation programme. The Committee regret to note the delay in the provision of these facilities and would like to be informed of the reasons thereof. They, however, hope that the Government will ensure execution of the modernisation programme recommended by the British Steel Corporation within the minimum time possible.

#### **Reply of Government**

Government have recognised the need for modernisation of Durgapur Steel Plant. The modernisation scheme which has recently been approved by Government in principle includes facilities for adequate averaging and blending facilities and quality control. The reasons for delay in the provision of these facilities earlier have been submitted to the Committee in oral and written replies.

[Ministry of Steel & Mines (Department of Steel) O.M. No. 3-14/82-DUR (DR) dated 10th December, 1985]

#### **Comments of the Committee**

(Please see paragraphs 1.8 & 1.9 of Chapter 1 of the Report)

#### **Recommendation Serial No. 9 (Paragraph 1.83)**

The performance of the blast furnaces was none to satisfactory. The lower availability and lower productivity of blast furnaces accounted for loss of production of hot metal to the extent of 91.04 lakh tonnes during

1970—83. The fact that the furnaces were in operation for only 73 per cent of the hours for which these were expected to be available is a matter of concern. The lower availability of blast furnaces was mainly on account of poor quality of refractory work and design deficiencies in blast furnace No. 4, which necessitated its taking down for relining much before the normal period and unusually long time taken in relining work. The matter requires to be looked into with a view to fixing the responsibility. The Committee would also emphasise the need for intensifying the planned as well as preventive maintenance of the plant and machinery to improve its availability.

### Reply of Government

The Committee's recommendations have been noted. The plant has already taken action to intensify maintenance programme.

A Committee was constituted in November, 1984 to identify reasons and to fix responsibility for the need to reline blast furnace No. 4 much before its normal period and also for the unusual long time taken in relining work. The Committee has recently (Sept. '85) submitted its report to the Department. This is presently being examined.

[Ministry of Steel & Mines (Department of Steel) O.M. No. 3-14/82-DUR (DR) dated 10th December, 1985]

### Recommendation (SI. 13 Para 1.139)

The Committee are distressed to note the poor performance of the Rolling Mills. None of the Mills had attained the rated production. By and large, the actual production was also lower than the budgeted production. In this connection the Committee find that there were inherent design and layout deficiencies in certain mills. For instance, in the case of blooming mill, the British Steel Experts had concluded that the optimum utilisation which a mill of such design and lay-out could achieve was 66 per cent. The Managing Director of Durgapur Steel Plant was frank enough to admit in his evidence before the Committee that there were certain areas which could have been planned a little better and the equipments could have been a little more sturdy. The Secretary of the Ministry also stated that the blooming mill could process only 1 million tonnes of ingot steel per annum without any further investment as against rated capacity of 1.6 million tonnes. The Committee regret to note the serious deficiencies in the plant and equipment of some of the Rolling Mills and desire that the responsibility for it be fixed.

### Reply of Government

The Committee appointed to go into the problem of Blast Furnace No. 4 (under recommendation No. 9) has also been asked to identify reasons for non-performance of the blooming mill to rated capacity, to examine if there was defective planning in design or erection deficiencies and whether the equipment installed was sturdy enough to process 1.6 million tonnes ingot as was envisaged and to fix responsibility. The Committee has recently (Sept. 1985) submitted its report to the Department. This is presently being examined.

[Ministry of Steel & Mines (Department of Steel) O.M. No. 3-14/82-DUR (DR) dated 10th December, 1985]

#### Recommendation Serial No. 14 (Paragraph 1.140)

The performance of the Wheel & Axle Plant has also been most unsatisfactory. The rated capacity of this plant after expansion was fixed as 75,000 wheel sets per annum. However, a number of Committees that had gone into it had assessed that the plant could produce only 40,000 wheel sets per annum and that too if various additional facilities were provided and remedial measures taken. The actual production has been nowhere near the rated capacity, the highest capacity utilisation being 19 per cent in 1978-79 which has also gradually deteriorated to barely 11 per cent in 1982-83. Various factors like slackness in inter-stage inspection, heavy rejections, deficiencies in maintenance of equipment, unsatisfactory industrial relations and work practices, failure to provide balancing equipment, etc. which have been responsible for lower production were not beyond the control of the Management. The low production besides entailing heavy financial loss to the company resulted in heavy drain of foreign exchange on import of wheels and axles by the Railways. The total foreign exchange released on this account during the last 2 years (1981-83) alone amounted to Rs. 68.82 crores. As early as 1971, the Committee on Public Undertakings had recommended in their First Report (5th Lok Sabha) that the Ministry should make a detailed inquiry into the working of the unit to find out the reasons for abnormally low production and remedial measures should be taken to improve production performance. Although the matter is stated to have been inquired into by two Committees and steps taken for the implementation of their recommendations, the performance of the plant instead of showing any improvement had gone from bad to worse. Apparently the half-hearted measures taken by the Management had little impact on the performance of the plant. Presently, the plant has been seriously damaged and the replacement of affected equipment is estimated to cost Rs. 15 crores. The Committee

desire that the responsibility for severe damages to the plant be fixed and action taken against defaulters.

### **Reply of Government**

The facts relating to the performance of the Wheel & Axle Plant have been submitted in the oral and written evidence tendered before the Committee,

The Committee referred to under recommendations No. 9 and 13 has also been asked to enquire into the causes of damage to equipment in the Wheel & Axle Plant particularly to the axle forging press and to fix responsibility. The Committee has recently (Sept. '85) submitted its report to the Department. This is presently being examined within the Department.

[Ministry of Steel & Mines (Department of Steel) O.M. No. 3-14/82-DUR (DR) dated 10th December, 1985].

**Further reply of Government to Recommendation Serial Nos. 9, 13 & 14 (Paragraph Nos. 1.83, 1.139 & 1.140)**

The Committee constituted by this Department on 6th November, 1984 under the Chairmanship of Dr. G. Mukherjee, Vice-Chairman (Tech.), Steel Authority of India Ltd. (SAIL) to enquire into the need (i) to reline blast furnace No. 4 much before its normal period and also the unusual long time taken in the relining work; (ii) reasons for non-performance of blooming mill to the rated capacity and to examine if there was defective planning, design or erection; and (iii) the causes of damage to the equipment in the Wheel & Axle Plant particularly to axle forging press, and to fix responsibility for above deficiencies and defects, had submitted its report in September, 1985. The report (Appendix II) has since been examined in the Department as under:—

#### **I. Relining of Blast Furnace No. 4**

Blast Furnace No. 4 was designed and supplied by M/s. Head Wrightson who had designed and supplied three blast furnaces at 1.0 million tonne stage. Blast Furnace No. 4 in its first campaign from December, 1967 to April, 1975 remained in operation for seven years and 4 months. In the second campaign starting from June, 1976, it started showing signs of early failure. This early failure of the furnace was due to failure of refractories which caused abnormal increase in the temperature of the furnace shell which also resulted in its slow deformation. The load of the skip bridge on the top of the furnace also added to the process of deformation. Refractories have de-generated early because of deterioration in the quality of raw materials, specially that of coke and on account

of running the furnace on reduced blast. Also in September, 1978, due to unprecedented flooding of the premises, the furnace was kept without charge for about 10 hours which caused extensive damage to the lining. The failure of the furnace was thus due to technical reasons.

The abnormally long time taken in relining of the furnace was because of this un-planned shut-down, inexperience of plant officers who could not adequately arrange for the work to be done in time. This was compounded by industrial relations problem during the reconstruction work of the blast furnace when contractors' labour adopted delaying tactics to avoid retrenchment. Appropriate planning of re-building work and procurement of material well in advance of proposed shut-down of a blast furnace can no doubt, help in reducing the rebuilding time. But in this case, as concluded by the Committee the causes involved were such that no individual(s) can be held responsible. This Department agrees with the findings of the Committee.

## II. *Non-performance of blooming mill*

The capacity of the blooming mill at 1.6 million tonnes stage was envisaged as 1.47 million tonnes ingot per year. The capacity assumed for the blooming mill could neither be tested at site for want of adequate raw materials nor the mill could ever achieve the rated capacity since it started operation (September, 1960). The maximum tonnage of ingot rolled through the mills so far was only 1.1 million tonne per annum.

The performance of the mill had been studied earlier by several expert committees. The Common consensus is that the present health of the plant and equipment calls for major expenditure on replacement and that with substantial renovation the mill capacity can be restored to 1.47 million tonnes per annum. The Committee is, however, of the view that with the advancement in technology it would be desirable to phase out the blooming mill in favour of continuous casting. In the modernisation plan under consideration, adoption of continuous casting to handle about 0.6 million tonnes per annum of liquid steel is envisaged and about 1.0 million tonnes per annum of ingot steel is intended to be processed through the blooming mill route. Rehabilitation and modification schemes have been planned so that the capacity envisaged for blooming mill (1.0 million tonnes per annum) under modernisation of Durgapur Steel Plant is achieved.

The Committee has concluded that prima-facie there is no evidence of deficiency in erection or non-performance of the mill. This Department agrees with the finding of the Committee.

## III. *Wheel & Axle Plant*

All the major equipment in wheel & axle plant were commissioned by January, 1962. While, some of the items such as the water hydraulic



system of the main forging presses and the wheel machining equipment need replacement from considerations of their health and obsolescence of technology, others need overhauling to revive their general health after so many years of working.

The axle forging hammers which were installed in accordance with technology prevalent at the time of their installation do have technological limitations on account of eccentric forging resulting in dynamic shock and vibrations leading to frequent breakdowns of the hammer and its foundations, which now require major reconditioning. The drop forging presses has also proved to be inefficient to meet increasingly stringent technological standards adopted for railway axles.

The Committee, thus feels that the damage to the equipment is on account of limitations of the design of the equipment and no individual (s) can be held responsible for this. This Department agrees with the findings of the Committee.

Though this Department agrees with the findings of the Committee and its conclusions, it recognises the need for regular upkeep and maintenance of the plant and equipment to ensure efficient performance. SAIL/Durgapur Steel Plant has been advised to be more vigilant in this regard. They have also been advised to accelerate pace of maintenance work which will help in removing various constraints & bottlenecks.

[Ministry of Steel & Mines (Department of Steel) O.M. No. 10—21/85-DUR (DR) dated 6th January 1986].

#### **Comments of the Committee**

(Please see paragraph 1.16 of Chapter 1 of the Report)

#### **Recommendation Serial No. 16 (Paragraphs 1.151 & 1.152)**

The Committee find that the non-availability of adequate power from DVC had also affected the production at the Plant especially in the Rolling Mills. The loss of production of saleable steel during the last 10 years (1973—83) solely due to power shortage is stated to be about 9 lakh tonnes. The Plant was having a small captive power plant with a firm capacity of 15 MW. Unfortunately the capacity utilisation of this plant has also been low affecting even the limited quantity of power which could be available from this plant. There has been delay in sanctioning and setting up of additional captive power plant to meet the power requirement. Although, a proposal for the installation of the captive power plant was initiated in March, 1974, this was not approved by the Government at that stage because of certain wrong assessment in regard to

overall availability of power in this area. It was only in September, 1978 that a power plant of 2x60 MW was sanctioned for Durgapur Steel Plant.

The Committee are distressed to note that there has been inordinate delay in sanctioning additional captive power plant to Durgapur Steel Plant. Whatever may be the considerations for the Government taking a decision for not allowing captive power units for other industries, in view of direct effect of short supply of power on its production, Durgapur Steel Plant should have been made a special care for sanctioning captive power unit. This aspect of the matter assumed greater importance as the load factor from DVC ranged between 52 per cent to 68 per cent only during 1970-71 to 1982-83 and short supply could not be compensated from other sources.

#### **Reply of Government**

The facts leading to sanction of two captive power plant of Durgapur Steel Plant have been submitted in the oral and written evidence tendered before the Committee.

[Ministry of Steel & Mines (Department of Steel) O.M. No. 3-14/82-DUR (DR) dated 10th December, 1985].

#### **Comments of the Committee**

(Please see paragraph 1.23 of Chapter I of the Report)

## CHAPTER V

### RECOMMENDATIONS IN RESPECT OF WHICH FINAL REPLIES OF GOVERNMENT ARE STILL, AWAITED

#### Recommendation Serial No. 15 (Paragraph 1.141)

The Committee also find that the Railways have been permitted to set up a captive wheel and axle plant with substantial capacity. The Ministry of Railways have also indicated that most of their future demand for wheels and axles from Durgapur Steel Plant would be in special new types of wheels since they were likely to cover their requirement of standard wheels from their own plant. The plant at Durgapur was, however, not in a position to produce them and would require modifications and substantial additional investment. Added to this, is the question of the price for the supplies to be made to the Railways. In spite of the fact that the price fixed at present is higher as compared to the import price, it is not still remunerative in view of high cost of production. The Committee, therefore, recommended that the whole question of the continuance of the production of wheels and axles in Durgapur Steel Plant needs to be thoroughly examined, taking into consideration the pattern of demand and the cost effectiveness of the additional investment required for replacement or addition of equipment, etc. The Committee would like to be informed of the final policy decision taken by the Government in due course.

#### Reply of Government

An investment decision on revamping of Wheel and Axle Plant of Durgapur Steel Plant will be taken after detailed examination of the Railways requirements as well as the feasibility report submitted by HEC, Ranchi, after identifying the most cost effective method of meeting the Railways' requirements.\*

[Ministry of Steel & Mines (Department of Steel) O.M. No. 3-14/82-DUR (DR) dated 10th December, 1985].

#### Comments of the Committee

(Please see paragraph 1.19 of Chapter I of the Report)

NEW DELHI;  
21 April, 1986

1 Vaisakha 1908 (S)

K. RAMAMURTHY  
Chairman,

Committee on Public Undertakings.

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\*At the time of factual verification, the Department of Steel informed that SAIL had taken up the matter with the Railways. The long term projections of the requirement had not been furnished by the Railways so far. Railways have given only year-to-year requirements.

## APPENDIX I

### Minutes of the 62nd sitting of the Committee on Public Undertakings held on 21-3-1986.

The Committee sat from 15-30 hrs. to 16.00 hrs.

#### PRESENT

Shri K. Ramamurthy—*Chairman*

#### MEMBERS

2. Shri Satyagopal Misra
3. Shri Brajamohan Mohanty
4. Shrimati Geeta Mukherjee
5. Shri D. K. Naikar
6. Shri Chiranji Lal Sharma
7. Shri Nand Kishore Bhatt
8. Shri Gulam Mohi-ud-Din Shawl

#### SECRETARIAT

1. Shri N. N. Mehri—*Joint Secretary*
2. Shri S. S. Chawla—*Chief Financial Committee Officer.*
3. Shri Rup Chand—*Senior Financial Committee Officer*

REPRESENTATIVES OF COMPTROLLER & AUDITOR GENERAL  
OF INDIA

1. Shri K. S. Murthy—*Chairman, Audit Board.*
2. Shri B. D. Duggal—*Joint Director (Commercial).*

The Committee considered and adopted the Action Taken Report on 89th Report of Committee on Public Undertakings (1983-84) on Durgapur Steel Plant as approved by the Action Taken Sub-Committee.

2. The Committee authorised the Chairman to finalise the Report on the basis of factual verification by Ministry of Steel & Mines (Department of Steel)/Durgapur Steel Plant (SAIL) and Audit and to Present the Same to Parliament.

\* \* \* \* \*  
\* \* \* \* \*

*The Committee then adjourned*

## APPENDIX II

### REPORT OF THE ENQUIRY COMMITTEE CONSTITUTED BY PRESIDENT OF INDIA IN PURSUANCE WITH THE RECOMMENDATIONS CONTAINED IN PARAS 9.13 AND 14 OF THE 89TH REPORT OF THE COMMITTEE ON PUBLIC UNDERTAKINGS (1983-84) ON DURGAPUR STEEL PLANT.

Department of Steel *vide* their Office Order No. 3-14/82-DUR(DR) dated 6th November, 1984 communicated that the President was pleased to constitute an enquiry committee consisting of the following to identify the causes for the defects and deficiencies pointed out by Committee on Public Undertakings (COPU) in its report in the paras mention above.

- |   |          |
|---|----------|
| 1. Dr. G. Mukherjee,<br>Vice-Chairman (Tech.), SAIL.          | Chairman |
| 2. Shri K.R. Parmeswar,<br>Adviser (L&M), Planning Commission | Member   |
| 3. Dr. S.R. Pramanik,<br>Director (Technical), MECON          | Member   |
| 4. Shri R.P. Sinha,<br>Ex-General Manager, RSP                | Member   |

Copy of the Office Order is enclosed at Annexure.

2. The terms of reference of the enquiry were:

- (i) To fix responsibility for the need to reline blast furnace No. 4 much before its normal period and also to the unusual long time taken in relining work.
- (ii) To identify reason for non-performance of blooming mill to the rated capacity to examine if there was defective planning, design or erection and whether the equipment installed is sturdy enough to process 1.6 million tonne ingot as envisaged and to fix responsibility.
- (iii) To enquire into the causes of damage to the equipment in the wheel & axle plant particularly to axle forging press and to fix responsibility.

3. The Committee had its first meeting at Durgapur on 30.1.1985. During the meeting a team of plant officers led by GM(Works) of DSP

explained to the Committee various aspects of the three issues mentioned in the terms of reference to the enquiry Committee.

4. The Committee had its next meeting at New Delhi at the office of Vice-Chairman (Tec.), SAIL on 16-9-1985. During the meeting the various aspects of different issues as emerged from the discussions and also the clarifications submitted by DSP were examined. The Committee came to the following conclusion based on their study of different fact and figures placed at their disposal.

4.1 Responsibility for the need to reline the Blast Furnace No. 4 much before its normal period and the unusual long time taken in relining work.

4.1.1 Blast Furnace No. 4 was planned and designed by M/s. Headwrightson who had also designed and supplied three blast furnaces at 1 million tonne stage. The No. 4 furnace during its first campaign from December 1967 to April 1975 produced 2.565 Mt in a duration of 7 year and 4 months.

During the second campaign starting from June 1976 the furnace started showing early failures resulting in hot spots in the stack area. This was due to failure of refractories causing abnormal increase in the temperature of the furnace shell finally resulting into slow deformation. As the load of the skip bridge and the top structure of this furnace is designed to be transferred through the furnace shell, this might have added to the process of deformation, originally caused through failure of refractories.

4.1.2. The main reasons for the failure of the refractory were due to general degradation in the raw material quality specially the coke and prolonged running of the furnace in reduced blast condition causing erosion of lining and increased thermal load on the refractory lining. Secondly, the furnace operation was seriously disturbed in September, 1978 due to unprecedented floor when this furnace had to be kept on without charging for about 10 hours causing the sack level to go down in absence of continued charging and consequent increased in the temperature of the top up to about 600°C. This might have caused damage to the lining leading to ultimate failure and generation of hot spots which showed up at the later part of the campaign.

4.1.3 Blast Furnace No. 4 was blown out on 3rd November, 1980 as it was considered unsafe to continue operation in view of its progressive deterioration in the health. The furnace was commissioned after relining on 17-8-1983 i.e. after 1016 days after blowing out.

The major delays in this are as follows:

(a) Procurement of essential structural materials . . . . .	369 days
(b) Delay on account of review of technology of repair during the progress of work . . . . .	196 days
(c) Industrial Relations problems . . . . .	84 days
(d) Reworking on pre-fabricated plates, technical problems of erection and increase in refractory work . . . . .	92 days
TOTAL . . . . .	741 days

The Committee noted that actual days lost on account of industrial relations problems and stoppages of work were 390 days. However, the overall implementation of the rebuilding work was delayed on this account by 84 days only as the rest of the delay was covered on account of either procurement of structural materials, fabrication or reworking of the pre-fabricated plates and other technical problems of erection etc.

4.1.4. It is appreciated that delay on account of procurement of essential structural materials could not be avoided in view of the unforeseen damage for which the plant was not prepared and hence necessary pre-planning could not be done.

4.1.5 The delay on account of review of repair technology and reworking of pre-fabricated plates and technical problems for erection was on account of the nature of the work for which previous experience was not readily available.

The Committee noted that the plant consulted the Soviet personnel available at Bhilai Steel Plant on different occasions. The Committee also noted that the original suppliers (M/s. Headwrightson) not being readily available, the Plant associated M/s. Bridge & Roof who were the Indian erectors of the blast furnaces.

4.1.6 The industrial relations problem during the reconstruction work of the blast furnace was essentially due to the vested interests of local contractor labourers in delaying the rebuilding work so that their retrenchment gets accordingly delayed.

4.1.7 Leaving aside the delays for 741 days, the rebuilding time of 275 days is also considered to be on higher side. Appropriate planning of rebuilding and advance procurement well in advance of proposed shut down of a blast furnace will help in reducing the rebuilding time.

4.1.8 The major reason for the premature failure of the blast furnace lining is identified as the deterioration of raw material condition and the



unprecedented flood situation in Durgapur. The reasons for the unusual delay has been identified as the unplanned shutdown for which the Plant was caught unaware, lack of experience and expertise in handling such type of rebuilding of blast furnaces; and industrial relations problems. Causes so involved are such that no individual (s) could be held responsible.

4.2 Reasons for non-performance of blooming mill to the rated capacity Defective planning in design or erection and the sturdiness of the equipment for the blooming mill.

4.2.1 The Committee noted that at the 1 million tonne stage the blooming mill was planned to process a charge weight of 940,000 tonnes per year. At the time of expanding the facilities to 1.6 million tonnes per year (Mtpa), the capacity of the blooming mill was envisaged as 1.47 million ingot tonnes per year. The capacity as envisaged in the DPR for the 1.6 million tonne expansion could not actually be tried at site primarily on account of the limitation in the steel availability. The maximum tonnage of ingot rolled through the blooming mills so far has not exceeded 1.1 Mtpa.

4.2.2 The Committee notes that the issue of the capacity of the mill has been studied by several expert committees both departmental alongwith MECON and BSC(OS). It is emerged that the mill has been in operation since Sept. 1960. The present health of the plant and equipment calls for major expenditure on replacement, renovation, etc. with adequate expenditure, the mill capacity can be restored (to 1.47 Mtpa). However, the technology has advanced in this area and it is considered desirable to phase out the blooming mill in favour of continuous casting. The Committee notes that the modernisation plan now under consideration of the Government envisages to adopt continuous casting to handle about 0.6 Mtpa of liquid steel and intends to process about 1.0 Mtpa of ingot steel through the blooming mill route. To ensure efficient operation of the blooming mill for the envisaged capacity (1.0 Mtpa) necessary rehabilitation and modification work for the blooming mill has been planned for being taken.

4.2.3 *Prima facie* there is no evidence of deficiency in erection or non-performance of the equipment. However, the mill had no occasion to be tested for its rated capacity primarily on account of shortage of ingot steel. The Committee has also noted that the major expenditure now due for maintenance of this equipment has been to some extent on account of accumulation of backlog of maintenance work over years. The Committee notes that the Plant has already taken up schemes to liquidate such backlogs.

### 4.3 Causes of damage to equipment in the Wheel & Axle Plant and responsibility for the same:

4.3.1 All the major equipment in wheel & axle plant were commissioned by January, 1962. While some of the items such as the water hydraulic system of the main forging presses and the wheel machining equipment need replacement both from the consideration of the health and obsolescence of the technology the others need overhauling to revive back their general health after so many years of working.

4.3.2 The axle forging hammers which were installed in accordance with technology prevalent at that time do have some technological limitations on account of eccentric forging resulting in dynamic shock and vibration leading to frequent breakdowns of the hammer and also its foundation and major reconditioning. The drop forging process has also prove to be inefficient to meet the increasingly stringent technological standards adopted for the railway axles.

The Committee feels that the damage is on account of limitations of the design of equipment as it was available during the time of setting up of the Plant

Sd/-

(G. Mukherjee)  
Vice-Chairman (Tech., SAIL  
16-9-1985)

Sd/-

(K. R. Parmeswar)  
Adviser (I&M), Plg. Commission  
16-9-1985.

Sd/-

(DR. S.R. Pramanik)  
Director (Technical), MECON  
16-9-1985.

Sd/-

(R.P. Sinha)  
Ex-General Manager, RSP  
16-9-1985.

ANNEXURE TO APPENDIX II

(COPY)

No. 3-14/82-DUR (DR)  
Government of India,  
Ministry of Steel & Mines  
(Department of Steel)

New Delhi, dated the 6th Nov., 1984.

**ORDER**

**SUBJECT:**—Recommendations contained in the 89th Report of the Committee on Public Undertakings (1983-84) on Durgapur Steel Plant—Constitution of an Enquiry Committee.

In pursuance of the recommendations contained in Paras 9, 13 and 14 of the 89th Report of the Committee on Public Undertakings (1983-84) on Durgapur Steel Plant, the President is pleased to constitute an Enquiry Committee consisting of the following to identify the causes for the defects and deficiencies in the various plants pointed out by COPU in its report in the above referred paras and to fix responsibility therefor: —

- |   |          |
|---|----------|
| 1. Dr. G. Mukherjee,<br>Vice-Chairman (Tech.), SAIL.          | Chairman |
| 2. Shri K.R. Parmeswar,<br>Adviser (I&M), Planning Commission | Member   |
| 3. Dr. S.R. Pramanik,<br>Director (Technical) MECON           | Member   |
| 4. Shri R.P. Sinha,<br>Ex-General Manager, RSP                | Member   |

2. The following are the terms of reference of the enquiry:—

1. To fix responsibility for the need to reline Blast Furnance No. 4 much before its normal period and also to the unusual long time taken in the relining work.

2. To identify reasons for the non-performance of the Blooming Mill to the rated capacity to examine if there was defective planning, design or erection and whether the equipment installed is sturdy enough to process 1.6 MT ingot as envisaged and to fix responsibility.

3. To enquire into the causes of damage to equipment in the Wheel & Axle Plant (particularly to Axle Forging Press) and to fix responsibility.

3. The Committee will submit its report by 31-12-1984.

Sd/-

(Thangam Sankaranarayanan)  
Dy. Secretary to the Govt. of India.

## APPENDIX III

(Vide Para 3 of Introduction)

Analysis of action taken by Government on the recommendations contained in the Eighty-Ninth Report of the Committee on Public Undertakings.

(Seventh Lok Sabha)

I. Total number of recommendations made . . . . .	28
II. Recommendations that have been accepted by the Government (Vide recommendations at S. Nos. 1-4, 6, 7, 10, 12, 18-22 and 25-28) . . . . .	17
Percentage to total . . . . .	60.7%
III. Recommendations which the Committee do not desire to pursue in view of Government's replies (Vide recommendations at S. Nos. 8, 11, 17, 23 & 24) . . . . .	5
Percentage to total . . . . .	17.9%
IV. Recommendations in respect of which replies of Government have not been accepted by the Committee (S. Nos. 5, 9, 13, 14 & 16) . . . . .	3
Percentage to total . . . . .	17.9%
V. Recommendations in respect of which final replies of Govern- ment are still awaited (Vide recommendation at S.No. 15) . . . . .	1
Percentage to total . . . . .	9.5%

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PUBLISHED UNDER RULE 103 of THE RULES OF PRACTICE AND CONDUCT  
OF COURTESY IN LOS SAGES (SEVEN EDITION) AND PRINTED BY THE  
GENERAL MANAGER, GOVERNMENT OF INDIA PRESS,  
MINDO ROAD, NEW DELHI