

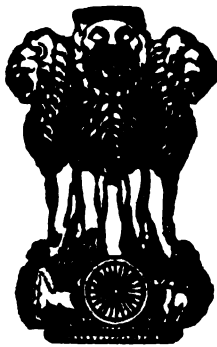
# **ESTIMATES COMMITTEE**

**SECOND REPORT**

**1957-58**

**SECOND LOK SABHA**

**ACTION TAKEN BY GOVERNMENT ON THE RECOM-  
MENDATIONS CONTAINED IN THE FOURTEENTH  
REPORT OF THE ESTIMATES COMMITTEE  
(FIRST LOK SABHA)**



**सत्यमेव जयते**

**LOK SABHA SECRETARIAT**

**NEW DELHI**

**1958**

## CORRIGENDA

### Second Report of the Estimates Committee, 1957-58.

Back of Title page, *insert* 'Price Rs. 1 20'.

Page 4, column 3, line 3, *for* 'advise' *read* 'advice'.

Page 11, column 4, line 4, *for* 'Government' *read* 'Govern-  
ment'.

Page 11, column 4, line 4 from bottom, *delete* 'to'.

Page 12, column 4, line 19, *for* 'dealy' *read* 'delay'.

Page 14, column 4, line 10, *for* 'maintenances' *read* 'main-  
tenance'.

Page 17, column 3, line 6, *for* '8½' *read* '8½'.

Page 17, column 4, line 9, *for* 'Association' *read* 'Association'.

Page 24, column 3, line 3 from bottom, *for* 'dated' *read*  
'dates'.

Page 27, column 4, line 18, *delete* 'a' *after* 'also'.

Page 52, column 3, line 7, *for* 'manufactures' *read* 'manufac-  
ture'.

Page 63, line 31, *for* 'below' *read* 'biew'.

Page 68, line 7 from bottom, *for* 'perfected' *read* 'perfected'.

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**MEMBERS OF THE ESTIMATES COMMITTEE,  
1957-58**

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2. Shri S.A. Dange
3. Shri Jogendra Singh
4. Shri Mahavir Tyagi
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29. Shri B.K. Gaikwad
30. Shri Shraddhakar Supakar

**SECRETARIAT**

Shri S. L. Shakhder—*Joint Secretary.*

Shri A. R. Shirali—*Deputy Secretary.*

Shri C. S. Swaminathan—*Under Secretary*

## INTRODUCTION

I, the Chairman of the Estimates Committee, having been authorised by the Committee, present this Second Report of the Estimates Committee of the Second Lok Sabha on the action taken by Government on the recommendations contained in the Fourteenth Report of the Estimates Committee of the First Lok Sabha.

2. The Fourteenth Report of the Estimates Committee of the First Lok Sabha was presented to the House on the 21st September, 1955. The Government furnished their first replies to the recommendations pertaining to the Hindustan Machine Tools Limited on the 31st January, 1956 and furnished further information on the progress of action taken on 5th February, 1957, 17th April, 1957 and 11th November, 1957. A Sub-Committee of the Estimates Committee (1957-58) examined the replies on the 20th November, 1957. The replies pertaining to the Hindustan Shipyard Limited were furnished on the 29th March, 1956 and examined by the Sub-Committee of the Estimates Committee (1956-57) on the 13th August, 1956. The comments of this Sub-Committee were communicated to the Government and the further replies received from them were examined by the Sub-Committee of the Estimates Committee (1957-58) on the 20th November, 1957. Comments of this Sub-Committee were also communicated to the Government and the replies received from them have been included in this Report.

3. The Report has been divided into four Chapters :-

I. Report.

II. Recommendations that have been accepted by the Government.

III. Replies of the Government that have been accepted by the Committee.

IV. Replies of the Government that have not been finally accepted by the Committee and are being pursued.

4. An analysis of the action taken by Government on the recommendations contained in the Fourteenth Report is given at Appendix IV.

NEW DELHI;  
*The 15th February, 1958.*

BALVANTRAY G. MEHTA,  
*Chairman,  
Estimates Committee.*

## CHAPTER I

### REPORT

#### **Hindustan Machine Tools Limited**

When the Estimates Committee examined the H.M.T.L. in 1954-55 the factory was still in a preliminary stage and had not started production. Their examination was, therefore, confined only to certain major aspects regarding the setting up of the factory and they made only a preliminary report.

2. There were ten recommendations in the Report and these can be grouped under three categories:

- (i) The production programme of H.M.T.L.
- (ii) The assessment of country's requirements *vis-a-vis* the production programme of H.M.T.L. as regards machine tools.
- (iii) Agreement with the Oerlikons.

3. As regards (i) and (ii) the Government appointed a High Power Committee to examine all these points. The High Power Committee which included non-officials also made an assessment of the country's requirements of machine tools in different categories and recommended a programme of manufacture for the existing machine tools manufacturing units both in the public and private sectors. So far as H.M.T.L. is concerned, the Committee recommended the inclusion of certain items in the future programme of this undertaking. In order to process this recommendation and to finalise the future production programme of the H.M.T.L. the Government set up a working group of machine tools experts. The recommendations of this working group have also been approved by Government.

4. The original agreement with Messrs. Oerlikons who were also the shareholders in the Company has since been revised. The Oerlikons are now only the technical consultants. A comparative study of the terms and conditions of the old and the revised agreement shows that the revision has not been generally unfavourable to the Government.

5. As far as the recommendations of the Estimates Committee contained in the preliminary report are concerned, the Committee feel that there is little scope for the Committee to pursue further any of them. The factory seems to have made progress since the time the original examination was made and according to the annual report for the year 1956-57, has showed a profit in that year. The Committee feel, therefore, that further comments on the present working of H. M. T. L. may be made only after a *de novo* examination which they will take up in due course.

#### **Hindustan Shipyard Limited**

6. The Estimates Committee, in para 81 of their Fourteenth Report had recommended that the question of payment of subsidy should be re-examined, with a view to placing it, if such payment has to be continued, on a more rational basis. In reply Government stated that the question of fixing the basis of subsidy was closely linked with other issues like pricing of ships built at

Vizag, payment of instalments by the ship-owners, etc., and that it was, therefore, not possible to take a decision on subsidy alone without deciding the basis on the other issues. These matters are still under the consideration of Government in consultation with the Ministry of Finance. The Committee regret to note that although this recommendation was made nearly two years back, no concrete result has been achieved so far in the matter of revision of subsidy.

7. In para 83 of the Report, the Estimates Committee recommended that the Shipyard should not depend on foreign imports for their timber requirements. They understood that teak from Madhya Pradesh and Travancore-Cochin could replace Burma teak and that chir wood of Indian forests would be a satisfactory substitute for Oregon pine. They suggested that commercial bodies and organisations should also be consulted besides the Indian Forest Research Institute, wherever difficulties were encountered in the matter of exploitation of the forests and cutting of wood according to the required specifications. In their reply dated 29th March, 1956, Government stated that the question of supply of timber to H.S.L. was considered by a Standing Committee of the Central Board of Forestry. It was recommended by that Committee that in view of the small quantity required by the Shipyard annually the State Forest Department should endeavour to meet the requirements as far as possible and that no special efforts to replace imports need be made. It was stated in the reply given on the 20th May, 1957, that the matter had been taken up with the Andhra Pradesh Forest Department with a view to see whether they could make a special effort to supply some of the requirements. The Committee feel that action in this matter has not been taken with sufficient urgency. It is seen from the reply received from the Ministry on the 14th January 1958, that a trial order for 20 tons of timber was placed with the Andhra Pradesh Forest Department in July, 1957 and that some quantities of the timber had been received and were being tried out. The Committee hope that the Indian Forest Research Institute will also be closely associated in these trials so that they may be able to suggest methods of overcoming any difficulty that may be met with.

## CHAPTER II

### *Recommendations that have been Accepted by Government*

Serial No. of Recommendation	Reference to para No. of the Report	Summary of Recommendation	Reply of the Government
I	2	3	4

#### Hindustan Shipyard Limited

4	64	<p>The Committee consider that the present system of working the yard by engaging experts to run the whole organisation is not very satisfactory, though technical experts may be required to be engaged in an advisory capacity. The terms of the agreement especially in this regard should be reviewed after the termination of the present agreement.</p>	<p>In essence, the recommendation of the Committee is that the Shipyard should consider whether in 1957 when the present Agreement with Messrs. A. C. L. expires, it would be possible for the Yard to have its own Indian employees in charge of all Branches, foreign experts being engaged only in an advisory capacity. The recommendation that this matter should be reviewed is accepted and the Shipyard will do every thing that is possible in this direction. (Ministry of Production letter No. P-12(10)/55, dated the 29th March, 1956).</p>
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Government should give attention to the question of alternative arrangements to be made for the technical advice to be available for the Shipyard when the agreement with the A.C.L. expires at the end of the stipulated period of five years. Other steps, besides that of sending a senior technical officer of the Ministry of Transport abroad for training should also be planned well in advance.

This recommendation deals with the question of alternative arrangements to be made for technical advice to be available for the Shipyard when the Agreement with Messrs. A.C.L. expires and the steps necessary for training officers to take over from the present consultants. The recommendation is accepted and necessary measures to implement it are already in hand. The Shipyard have appointed a Technical Committee of experts to prepare a comprehensive training programme. The experts of the Shipyard, of Scindias, of the Navy and of the French Consultants are represented on this Committee. Meanwhile, a number of officers have already been sent and more are being sent abroad for training in Europe. At the Shipyard itself, there is a team of 9 French technicians who are taking vigorous steps to increase the output and the pace of training of Indian Technical Officers. There is, besides, a Team of French workers which is being reinforced, for giving practical training to Indian workers on the spot by actual demonstration and supervision. It is necessary to watch the working of the Shipyard for another year or so to see how far the steps taken are successful. At the time of the expiry of the existing Agreement with Messrs. A.C.L. the question of renewing it with or without modifications or of entering into a suitable arrangement with some other firm of experts or making a new kind of arrangement for getting expert help, will be

considered and the views expressed by the Committee will be given full consideration at that stage. (Ministry of Production letter No. P-12(10)/55, dated 29th March, 1956).

9

Hindustan Shipyard Limited should proceed urgently with the scheme which the Shipyard have in hand for selecting a sufficient number of qualified young men and have them trained in all the branches of the work in the yard as well as abroad. Some of the existing personnel should also be given higher training.

70

Serial No. 9 & 11—Paras 70 & 72

The position in the matter of sending officers abroad for training is that the Board of Directors of the Shipyard initiated in 1954, the system of recruiting a number of engineering graduates as probationary officers with the view to sending them abroad for higher training. Eight officers recruited in this manner together with one officer of the Shipyard have been sent abroad and have returned after training in the Shipyards of the French consultants. Another nine men six recruited from outside and three selected from the shipyard are to be sent to the French shipyards within the first quarter of the current year. (Ministry of Production letter No P-12(10)/55, dated 29th March, 1956).

11

A detailed scheme both for the practical as well as for some theoretical training of skilled workers, as also for refresher courses for promotion to supervisory cadres should be drawn up as skilled labour cannot be obtained by the yard at Visakhapatnam Port at short notice.

72

So far as the recommendation at para 72 is concerned action is already in hand to draw up a detailed training scheme as envisaged by the Committee. An experts Committee consisting of (i) the Indian experts of the Shipyard (ii) the French experts from the A.C.L. (iii) the experts from Indian Navy, and (iv) the experts from Scindia has considered the appropriate measures for the training of skilled workers and for the supervisory cadres in the Shipyard. The Shipyard has already taken action to appoint a Mechanical Engineer to assist in carrying out the training schemes considered

suitable. To sum up, these two recommendations of the Committee have been accepted and are being fully implemented. (*Ministry of Production letter No. P-12(10)/55, dated 29th March, 1956.*)

Early action should be taken to settle the question of the hours of working in the Drawing Office which till recently were lower than in the Workshops Departments.

The question of the working hours of the Drawing Office has been satisfactorily settled now. The working hours for the office have been increased from 36 hours in summer and 33 hours in winter to 42 hours a week. As regards the consequential increased remuneration to be paid to the Drawing Office staff, the matter is being negotiated with the help of the Labour Commissioner of Andhra State. It is expected that this issue will also be settled very shortly. (*Ministry of Production letter No P-12(10)/55, dated 29th March 1956*)

17 79 To minimise loss of wastage the possibilities of supplying suitable sizes of plates to the yard should also be examined.

On examining the comparative costs of building ships in the Vizag Shipyard and in the U. K. the Committee have recommended that in order to minimise loss due to wastages the possibilities of supplying suitable sizes of plates to the Yard should be explored and have stressed the necessity for economy in the use of materials by careful planning of schedules and by a fuller utilisation of the idle capacity of the machines. This recommendation is accepted by the Committee will explore the avenues suggested by the Committee so as to reduce (i) the cost of steel, (ii) the cost of machinery, stores and equipment, and (iii) overheads. (Ministry of Production letter No. P 12(10) 55, dated the 29th March, 1956).

**Economy in the quantity of material used by a careful planning of schedules and by a fuller utilisation of the capacity of the machines, increased labour efficiency, strict supervision and careful management should be aimed so as to reduce costs.**

Government should take urgent steps to see that the supply of steel to the Yard is not delayed, and that steel plates and other steel material are made in the sequence in which and at the time, when they are required. Suitable stocks should be built up to tide over the delay that may occur between demand and supply.

At para 82, the Committee have recommended that Government should take urgent steps to see that the supply of steel to the Yard is not delayed and that steel plates and other steel materials are made in the sequence in which and at the time when they are required. The recommendation is accepted and in order to implement it, it has been arranged that imports of steel on a priority basis and at the equalised price will be available for the requirements of the Hindustan Shipyard. (*Ministry of Production letter No. P-12(10)/55 dated 29th March, 1956*).

Proposals for the building up of adequate facilities for hull construction for training of supervisory personnel, for securing continued and regular supply of such material as steel plants etc., for the construction of the machinery, and for the setting up of important marine subsidiary industries, which are so essential for ship-building activities and which normally exist in all the foreign ship-building countries, should be carefully worked out and implemented early.)

The matter is under consideration in consultation with the Ministry of Commerce and Industry and the Planning Commission. (*Ministry of Production letter No. P-12(10)/55, dated 29th March, 1956.*)

[*Comments of the Sub-Committee (1956-57) on the reply*].

The Ministry may be requested to intimate the present position in

The recommendation is accepted in principle. The final decision in respect of the various subjects

respect of this recommendation. (L.S.S.  
O. M. No. 109-EC-1/56, dated 24th Sep-  
tember, 1956).

mentioned in this recommendation is as follows:

*Hull Construction:* Arrangements have been made to provide adequate facilities for the construction of hulls in Hull Shops and building berths, pre-fabrication shops with steel yards and auxiliary bays.

*Training of Supervisory Personnel:* A training scheme has been prepared. It has been decided to establish a training school at the shipyard for training skilled workmen and junior supervisory technical staff. Engineering graduates are being deputed from time to time to the shipyards of A.C.L. to receive training in the modern methods and practice of ship-building. It has also been arranged with A.C.L. to make available from time to time the services of a few skilled French workers from their own shipyards to work along with our workers to train them in the various processes involved.

*Regular Supply of Steel Plates:* Arrangements have been made with the assistance of the Ministry concerned for importing the requisite quantity of steel from Europe and Japan. The total quantity of steel now ordered is expected to meet shipyard's requirements for ship-building upto the middle of 1958. It is not possible to stock large quantities of steel because there is always

the danger of rusting and pitting in which case steel is rendered useless for ship-building purposes. The position is expected to ease after the new steel plants in the country come into production.

*Construction of Machinery:* Please see remarks against recommendation No. 25.

*Setting up of important marine subsidiary Industries:* Please see remarks against recommendations Nos. 22 to 24. (*Ministry of Transport and Communications O. M. No. Sy/12 (10)/55, dated 20th May, 1957*).

30 For the fuller development of coastal trade and for improvement of facilities at the minor ports, immediate attention should be given to the formation of the more important of the minor Ports into a new category of intermediate Ports under the control of Central Government and development by them to the fullest extent possible.

99

As a part of Government policy for the development of shipping and ship-building, Government accept the recommendation that steps should be taken to develop a category of 'intermediate ports'. It may be observed that although the development of intermediate ports is being co-ordinated by the Central Government, administrative control is left to the State Governments. Government do not propose to alter this arrangement. (*Ministry of Production letter No. P-12(10)/55, dated 29th March, 1956*).

## CHAPTER III

*Replies of the Government that have been accepted by the Committee*

Serial No. of Recommendation	Reference to para No. of the Report	Summary of Recommendations	Reply of the Government
1	2	3	4

### Hindustan Machine Tools Limited

1	13	<p>The Committee regret to observe that the Government of India have not so far assessed the consequential loss in terms of money to the Hindustan Machine Tools Ltd. due to delay on the part of Messrs. Oerlikons in the construction side as well as in supply of jigs, tools fixtures etc., and have not taken steps to demand compensation for the same.</p>	<p>In paragraphs 13 and 14 of the Report the Committee have pointed out the delay in the setting up of the factory and have observed that the causes of the delay both on the Government's part and on the part of Oerlikons should be investigated and the steps taken to retrieve the loss arising out of the delay attributable to Oerlikons should be intimated to them.</p>
2	14	<p>Government should immediately investigate the causes of delay in the setting up of the Hindustan Machine Tools Limited, both</p>	<p>In this connection attention is invited to the statement showing in chronological order the important stages of the project, which was submitted to the Committee and which has been reproduced as Appendix III to the Report. There has been delay on two accounts.</p>

on their part and that of the Swiss firm and apprise the Committee of the steps proposed to be taken to retrieve the loss arising out of the delay attributable to Messrs Oerlikons.

It took about 20 months to obtain the approval of the Standing Finance Committee and the Cabinet for the scheme. However, on account of the delay, there was no actual loss to Government, as no investments had been made. Then there was some delay on the part of Oerlikons in finalising the design of the lathe.

At the time the Heads of Agreement were signed a comprehensive project with a diversified production programme, estimated to cost Rs. 30 crores, was contemplated. The task of steering such a big proposal through the Planning Commission and later through the Standing Finance Committee involved elaborate examination of the proposals.

11

The period of financial stringency also intervened and the fate of the proposal was undecided for a long time. Further, there was initially considerable opposition from the private machine tool manufacturers to the scheme. Finally the production programme included in the Heads of Agreement was drastically modified by reducing the production programme in the first and second stages and by omitting altogether the last three stages of the programme. All these factors contributed to the initial delay of twenty months in getting sanction to the project.

There has been an overall delay of 9 to 12 months in starting production. This delay can be attributed to a variety of causes such as difficulty experienced in recruiting technical personnel of the required calibre and in procuring machinery because of the difficult



market situation created by the heavy armament programme undertaken in the continent consequent on the outbreak of war in Korea; slow progress in the construction of buildings by the C.P.W.D. owing to procedural difficulties; and delay in the supply of jigs, tools and fixtures. It has not been possible to assess the extent of delay due to each of the several factors.

The only delay for which M/s. Oerlikons can be said to have been responsible is that caused in the finalisation of the design of the lathe. It will be seen that the delay in this matter was the result of the attempt (in November, 1951) to introduce hydraulic drive after design work had gone on (since August, 1951) on the basis of mechanical drive, and the subsequent abandonment (in May 1952) of the hydraulic drive. The actual delay on this account, which could have been avoided with proper planning is, therefore, six months. The delay in the finalisation of the design resulted in the alteration of the layout and consequent revision of some of the building plans. This did not, however, involve additional expenditure or engagement of additional staff or otherwise because the alterations had to be made only in the drawings and not in any of the structures already constructed. Construction started in right earnest only after the design of the lathe was finalised.

It is not possible to calculate with any degree of accuracy the probable loss to Government on account of the delay in starting construction. One way of estimating it will be to equate it with the interest, for the period of the delay, on the capital invested by Government on the project upto the stage where the delay occurred. The delay attributable to M/s Oerlikons occurred between November, 1951 and May, 1952. The Capital invested up to August, 1951 was about Rs. 15 lakhs while about Rs. 45 lakhs were invested in January-February 1952. Interest at the rate of 3½% on this sum would come to about Rs. 66 thousands which may be taken as representing the loss to Government. This amount is not substantial in comparison with the total investment involved and the importance of the project.

On the question of claiming any portion of the loss from M/s Oerlikons, Government feel that, in the absence of a penalty clause in the agreement with them, it will be difficult to sustain such a claim unless it can be established firstly that the delay was due exclusively to them and, secondly, that it was due to negligence on their part. The delay in finalising the design of the lathe was due to their genuine desire to give us the best and most modern design incorporating the latest improvements. The hydraulic-driven design which was the best according to them had to be given up because it would not suit Indian conditions, of which Oerlikons were not aware till their representative visited this country in 1951-52.

The agreement with Oerlikons provides that their techni-

cal collaboration with Government will be spread over a period of 20 years by which time it is hoped production in the machine tool factory would have been established on sound lines and maintained up to the standard of the Oerlikon factory in Switzerland and the required number of Indian technicians trained to take charge of the technical direction and supervision of the factory. The successful achievement of this goal is naturally dependent largely on the maintenance of good relations with the foreign consultants. Government is, therefore, doubtful whether it would be either in the interests of the project in particular and of the country in general or in keeping with Government's prestige to make an issue of this delay. The Government would, therefore, suggest that the Committee may reconsider their recommendation in this regard. (*Ministry of Production O. M. No. Fy-1/6(50)55/Fy-II, dated the 31st January, 1956*).

3      18      The Committee fail to understand why it should not be possible for the Ministry of Production to supply the Committee with details of the quantum and value of work done by the Swiss experts, and do not see any justification for the payment by the Company of a huge sum of Rs. 5,31,515 towards salaries of certain European technicians on account of their

In para 18 of their report the Committee desired to know why it was not possible to supply them with details, quantum and value of work done by the Swiss experts. They also did not see any justification for the payment of Rs. 5,31,515 towards salaries of certain European technicians on account of their preliminary training with M/s Oerlikons and work on production planning done in Switzerland. In para 19 they have recommended that payment should be made in future to

preliminary training with Messrs. Oerlikons and work on production planning done in Switzerland. The responsibility for planning and training as visualised in the Heads of Agreement, devolves on Messrs. Oerlikons and no payment on that account should have been made by the Company. The Committee consider these payments as irregular and desire that legal opinion should be obtained on the question of incidence of these charges and final decision arrived at in the matter should be intimated to the Committee.

4

19

The implications of clause (7), relating to technical supervision etc., should be got clarified, and necessary steps should be taken to see that payments are made in future only for those items of services for which it is required to be paid for under the Agreement.

Oerlikons only for those items of service for which payment is to be made under the agreement.

The services rendered by the Swiss technicians fall under the following broad categories:

- (a) Training and Introduction period;
- (b) Planning; and
- (c) Acceptance of machine tools, jigs and fixtures etc.

By the very nature of these jobs, and the fact that no person was exclusively employed on any job it is not possible to assess with any degree of accuracy the quantum of work done by an individual in any of them. A rough assessment can, however, be made by comparison of the period of time spent by a person on each of these jobs. Such a comparative statement in respect of the technicians was prepared and supplied to the Estimates Committee. The statement showed the comparative percentage of time spent by each person on the work involved on the various categories. Further, as most of these technicians were employed by M/s Oerlikons in overall planning which is their responsibility under the Agreement further details of the work done by them are not available to the Government of India. The Payment of Rs. 5,31,515 made to Oerlikons includes planning charges as well as salaries of staff selected for the Machine Tool project during their period of training. But it does not include any payment for training as such which Oerlikons have to provide free of cost under the Agreement. Nor have they charged anything for training. So far as the element of planning charges included in

the above amount is concerned, the matter has been taken up with Oerlikons. The intention is to pay them only for such services as are really to be paid for under the Agreement. The final decision arrived at in the matter will be intimated to the Committee. (Ministry of Production O. M. No. Fy. (1)/6(50)/55 Fy. II, dated 31-1-56.)

Revised agreements have been negotiated and finalised on the basis that all claims by the Hindustan Machine Tools Limited and counter-claims by M/s Oerlikons under the old Agreement of 1949 should be withdrawn. It follows as a result that with the coming into force of the revised agreements M/s Hindustan Machine Tools Limited have had to give up the claim for planning charges under dispute under the old Heads of Agreement. (Ministry of Production O. M. No. Fy-(1)-6(50)/55-Fy. II, dated 17-4-1957).

26

41 With a view to place the future of Machine Tool industry both in the Public and Private sector on firm basis, Government should immediately examine (i) the question of comparative efficiency and price of the lathes produced by H.M.T.F. with those of the private sector, (ii) the demand for lathes in the country and the planning of production of the H.M.T.F. and (iii) clear up doubts and uncertainties that at

In para 41 of their Report the Committee have recommended that Government should immediately examine (i) the question of comparative efficiency and price of lathes produced by the H.M.T. factory with those of the private sector, (ii) the demand for lathes in the country and the Planning of production of H.M.T. Factory and (iii) clear up doubts and uncertainties that at present prevail by a clear statement of policy and programme. In para 46 they have suggested that the H.M.T. factory should work as a

present prevail by a clear statement of policy and programme.

Government should aim at the economic working of the Machine Tool Factory in the long run in view of the vast disparity in prices of 8½ lathes manufactured by them and by the private sector.

8

46 The Hindustan Machine Tools Factory should work as a complementary unit to the existing factories, and a coordinated programme for the production of the various types of machine tools which are either manufactured by the existing units or are capable of being manufactured by the existing units with some assistance should be drawn up in consultation with the indigenous industry.

9

47 With a view to rectifying the serious defects in the working of the Factory, an early meeting should be arranged between the Government of India and the representatives of the Hindustan Machine Tools Limited and the representatives of Indian Machine Tools Manufacturers Association. The representatives of all the Ministries concerned viz., Commerce and Industry, Production, Railways, Works, Housing and Supply and Defence etc., should also be invited to this meeting, the Hindustan Machine Tools

complementary unit to the existing factories and a coordinated programme for the manufacture of the various types of machine tools by the existing units should be drawn up in consultation with the indigenous industry. In para 47 a suggestion has been made for an early meeting between Government of India, the representative of the H.M.T.L. and the representatives of the Indian Machine Tool Manufacturers Association for fixing the production targets of the H.M.T.L. in the first and second stages of production.

Government have appointed a high power committee consisting of representatives from the different Ministries and some technical experts to assess accurately the demand for the various types of machine tools in the country and to advise Government on the healthy development of the industry in both the public and private sectors. This committee is expected to begin functioning shortly. (*Ministry of Production, O.M. No. Fy(1)-6(50)55-Fy. II, dated 31-1-56*)

The position is that the Machine Tool Committee, set up by the late Ministry of C. & I., submitted its final report in August, 1956. The recommendations made by the Committee are being processed by the Ministry of Heavy Industries and the Development Council for the Machine Tool Industry recently constituted by that Ministry. So far as the Hindustan Machine Tool Factory is concerned, the Committee have recommended the inclusion of certain items in the future production programme of this undertaking. In order to process this recommendation and to finalise the

Ltd. should fix their production targets in the first and second stages of production.

future production programme of the H.M.T.L., it has been decided by Government to set up a working group of three machine tool experts consisting of the following :

- (i) Shri Jang Bir Singh, Senior Industrial Adviser, Development Wing, Ministry of Heavy Industries, New Delhi.
- (ii) Shri P. C. Kapoor, Joint Director (Production), Ministry of Railways, New Delhi.
- (iii) Shri S. M. Patil, Deputy Technical General Manager, Hindustan Machine Tools (P) Ltd., Jalahalli, Bangalore.

The terms of reference of the working group are broadly :

- (i) What should the production of the works of Hindustan Machine Tools Limited be, keeping in view the types of machines needed in the country and the economics of the working of factory.
- (ii) What would be the balancing plant required if any, for the above programme.

On receipt of the recommendations of the said working group, a decision will be taken by Government, in

the matter, which will be communicated to the Lok Sabha Secretariat, in due course. [Ministry of Production O.M. No. Fy. (1)-6(50) /55-Fy. II, dated 17-4-57.]

*A note from the Ministry of Commerce and Industry regarding the recommendations of the Working Group and the decision of Government thereon has since been received.*

6      43      The post of Secretary to the Board of Directors of H.M.T.F. should be retrenched and the important part of his duties assigned to the Chief of Finance and Administration, the minor ones being entrusted to the Managing Director's Private Secretary.

In para 43 of their Report the Committee have recommended that the post of Secretary to the Company should be abolished, the important part of his duties being assigned to the Chief Finance and Administration, and the minor ones being entrusted to the Managing Director's Private Secretary. The Board of Directors of the Hindustan Machine Tools Limited have carefully considered this recommendation. The Managing Director's personal staff consists of one Private Secretary who is of the status of an Assistant and one Personal Assistant who is a stenographer. The duties of the Secretary to the Company are to see that the procedures, returns and other requirements prescribed under the Company Law Regulations are observed and to make arrangements for the meetings of the Board of Directors, Annual General Meetings etc. In short he is the coordinating officer between the Board of Directors and the different departments of the Managements. These duties require an officer who is free from other burdens of day-to-day administration.



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For these reasons no part of his duties can be entrusted to the personal staff of the Managing Director or to the Chief, Finance and Administration, who is completely occupied with the day-to-day problems of Administration and Finance. The Board of Directors is of the view that the post of Secretary to the Company is essential in addition to that of Chief, Finance and Administration. This is also understood to be in keeping with the practice in other commercial concerns of equal importance. The Government of India are in agreement with the Board of Directors and hope that, in the circumstances explained, the Estimates Committee will reconsider their recommendations in this regard. [*Ministry of Production O.M. No. Fy. (1)-6(50)/55-Fy. II, dated 31-1-56*]

8

7 Government should intimate their comments on the various criticisms levelled by Mr. Scaife and the action taken by them on the Panel for the Machine Tools Industry appended to the Report of the Engineering Capacity Survey Committee in so far as they relate to the rationalisation and streamlining of the requirements of the country in various types of machine tools and the manufacture thereof both by the Private and Public Sectors.

In para 45 of their report the Committee have stated that Government should intimate their comments on the criticisms levelled by Mr. Scaife and the action taken by them on the recommendations made in the Report of the Panel for the Machine Tools Industry appended to the Report of the Engineering Capacity Survey Committee.

A note giving the Production Ministry's comments on the two Reports is attached (Appendix I). The necessity for coordination between the private and the

public sector in the manufacture of machine tools has been recognised by Government and this is one of the terms of reference to the high level committee whose appointment has been referred to in para 12 above. [Ministry of Production O.M. No. Fy. (1)-6 (50)/55-Fy. II, dated 31-1-56].

### Hindustan Shipyard Ltd.

60 The progress of deliveries of ships has been extremely slow. In the three years of working of the contract with ACL even less than two ships on the average have been delivered while the number under construction on the average is five. Vigorous steps should be taken immediately so that heavy arrears do not develop. In general the agreement with ACL has not worked satisfactorily and work in the Shipyard has not progressed according to expectations.

At para 60 of their report, the Committee have observed that the progress of deliveries of ships by the shipyard has been extremely slow and have concluded from this that the Agreement with Messrs. A.C.L. has not worked satisfactorily. It may be clarified in this connection that when the Government took over the shipyard, the management had to face several difficulties resulting in slow delivery of ships. The first and greatest difficulty was that Messrs. Scindias were not in a position to do any advance planning prior to handing over the Yard to the Government. In the first two years from March 1952, therefore, the Shipyard had no orders in hand except that preliminary arrangements had been made for ordering two engines required for two of the ships under construction. These engines were ordered by Scindias towards the end of 1951 and were supposed to be delivered by the end of December 1953. Actually, however, delivery was not effected till quite late in the first half of 1954. No steel had been ordered by Messrs. Scindias and when the Hindustan Shipyard Limited, placed orders after March, 1952, there were considerable difficulties in getting steel because of the general shortage of this material and because of the

breakdown in Tatas rolling mill which is the only mill in the country supplying plates of the size required by the Shipyard.

The Committee have recommended that vigorous steps should be taken to speed up deliveries from the Shipyard, and to improve the output from the Yard. The management are conscious of the necessity for doing so and are taking all possible steps towards this end. An extract from the Directors' report for 1954-55 giving the comparative figures of the performance of the shipyard since 1950 is reproduced below :—

	1950 Jan.-Dec. (12 months)	1951-52 Jan. 51 to Feb. 52 (14 months)	1952-53 March 52- March 53 (13 months)	1953-54 April 53 March 54 (12 months)	1954-55 April 54- March 55 (12 months)
Total cost of work done during the year (Rs. in lakhs) . .	132.92	202.53	125.36	116.49	210.84
Total average No. of workmen on roll . . . .	3951	3793	3714	3052	2911
Idle labour (cost) (Rs. $\frac{1}{2}$ in lakhs). . . . .	5.29	11.28	17.01	4.44	..

It may be observed from these figures that there has been a marked improvement in the working of the Shipyard. The output in the year 1954-55 average of Rs. 17.57 lakhs per month, was substantially more than in previous years and was better than the greatest output ever achieved under the previous management in a period of 14 months (Rs. 14.47 lakhs per month). The output in the first ten months of 1955-56 has been even better, being an average of Rs. 18.62 lakhs per month.

The question of the working of the agreement with Messrs. A.C.L. is discussed in a subsequent para.

[*Comments of the Sub-Committee (1956-57)*  
*on the reply*]

The Ministry may be requested to furnish a detailed statement in respect of all orders received showing the date of confirmed order, name of the ship and tonnage, date on which work commenced, schedules of delivery, revised schedules of delivery, target dates of completion of various stages of construction and dates on which the stages were actually completed. The statement may include details of all orders received since the H.S.L. was taken over. It may also be enquired whether the comparative figures of the performance of the Shipyard since 1950 which have]

[*Ministry of Production letter No. P-12(10)/55 dated 29th March, 1956.*]

A statement furnishing the required particulars in respect of the orders executed by the shipyard after it was taken over by Government is given in Appendix II.

As regards the turnover figures furnished to the Estimates Committee, they represent the cost of material, labour, etc. ruling at the different periods compared, and it is not possible to eliminate variations in such costs from time to time. Nevertheless the increase is substantial and does in fact reflect an increase in the output of the shipyard. #

(*Ministry of Transport and Communications O.M. No. Sy/12 (10)/55, dated 20th May, 1957*)

been furnished by the Ministry are at ruling costs of material, labour, etc. or have eliminated variations in cost. Unless such variations are eliminated, the value of output cannot prove that output has increased.

*(L.S.S.O.M. No. 109EC-1/56, dated 24th September, 1956.)*

2 61 It appears that the commitments with the various buyers for the delivery of vessels according to certain time schedule were never observed.

Here the Committee have pointed out that the delivery of vessels according to the time schedule was never observed and have concluded that the original schedules were drawn up without properly assessing the practical aspects of the work.

7 68 The Shipyard should also draw up its schedule of delivery dated with due care and make the period of delivery as short as possible.

At para 68 the Committee has recommended that the Shipyard should draw up its schedule of delivery dates with due care and make the period of delivery as short as possible. The recommendation is accepted and has been complied with. The schedule of deliveries drawn up by Mr. Bourrelly in March, 1955, with due care has been communicated to the shipowners after it has been suitably checked. It may be stated that after this schedule was prepared in March 1955 the shipyard's progress has generally kept pace with it and the next two ships to be delivered to Scindias have

been delivered in accordance with the schedule. A third will also be delivered.

(Ministry of Production letter No. P-12 (10)/55, dated 29th March, 1956)

The Ministry may be requested to furnish the turn over figures of the performance of the Shipyard for the year 1956-57 and to state how far the revised schedule of construction has been kept up in regard of deliveries due in 1957.

(L.S.S.O.M. No. 109-E.C.I./56, dated the 25th September, 1957.)

The turnover figures of the performance of the Shipyard for the year 1956-57 are appended below. For purposes of comparison the figures for the previous two years are also shown alongside :

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1954-55 (12 months)	1955-56 (12 months)	1956-57 (12 months)
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(Rs. in lakhs)

Productive labour .	23.21	25.96	29.75
Materials .	129.29	147.72	183.52
Total production .	210.84	247.92	298.04
Average number of workmen on roll .	2911	3157	3479

1	2	3	4
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The quantity of steel erected and B.H.P. of machinery installed etc. during the year 1956-57 and in the previous two years are approximately as follows :

	1954-55	1955-56	1956-57
1. Cargo and passenger vessels :			
(a) Steel erected (in tons).	4415	5045	6738
(b) B. H. P. installed (Main Engine and Generators) .	4200	7480	11640
(c) Outfit work units (100 units=3,000 mandays)	120	250	323

2. Small size vessels :

(a) Steel erected (in tons) . . .	110	90	166
(b) B. H. P. installed (Main Engine and Generators) . .	900	200	908

It will be seen from the above figures that the total production of the Shipyard during the year was about

20% higher than in 1956-57 and more than 40 per cent higher than in 1954-55. There has also been a noticeable increase in the materials/labour ratio during the year. The original programme of delivering 4 modern ships during 1957, i.e. VC 120, 121, 122 and 135 could not be kept up, as there was need to revise their schedules of delivery owing to the reasons given below :—

(1) *V.C. 135*—Although this vessel was expected to be delivered in August, 1957, its delivery had to be postponed owing mainly to indeterminate delays in the receipt of certain essential items of imported equipment because of the Suez Crisis, the vessel has since been completed and is now in the process of being delivered to the owners.

(2) *V.C. 120*.—The work of completion of this vessel also suffered as a result of the delay in the receipt of imported materials just like *V.C. 135*. It, therefore, became necessary to revise the date of completion of this vessel. The vessel is expected to be completed by the end of November, 1957.

(3) *V.C. 121*.—Consequent on the delay on *V.C. 135*, the Shipyard had to resort to double banking alongside the jetty, which has adversely affected the progress of fitting out work on this vessel due to difficulties in craning, etc. However, the yard managed to do as much work on the vessel as



possible while she was on the berth, thus, reducing the quantum of work to be done on the jetty. It is now hoped to complete this vessel early in February 1958.

- (4) V.C. 122.—The shipyard are unable to launch this vessel as there is no space for her in the jetty. She is now scheduled to be launched somewhere during November, 1957 and is expected to be completed in April, 1958.

[Ministry of Transport and Communications O.M. No. Sy-12(5)/57, dated the 12th December, 1957].

It is clear that the original schedules were drawn up without properly assessing the practical aspects of the work.

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In this connection it may be clarified that the error in drawing up the time schedule was committed in spite of the best technical advice available at the time including that of Mr. Campbell, the Shipyard Manager of the Scindias who stayed for some time with the H.S.L. It has been admitted by Government in Parliament that the exact amount of work involved in the new types of ships had been underestimated. A further factor which contributed towards the error is that under the previous management, the Shipyard had nothing in the way of a designing and drawing office, since the practice

was for Messrs. Scindias to build the same type of ships according to working plans obtained from the United Kingdom. The time schedule for the delivery of ships has now been suitably revised and placed on a more realistic basis and instances of late delivery are not likely to recur in future.

[Ministry of Production letter No. P-12 (10)/55, dated 29th March, 1956].

66 Government should assess the losses sustained by the yard on account of the failure of the A.C.L. to render satisfactory technical advice as stipulated in the contract, and recover the same from the firm early.

This recommendation is under consideration at present. *Prima facie*, it would appear that there is no clause in the Agreement which can be said to have been breached. However, the management of the Shipyard have taken up with Messrs. A.C.L. all aspects of the matter including the undoubted fact that the schedule of progress indicated by the French Advisers was one which could not be kept and this has caused serious inconvenience to the purchasers. A director of the A.C.L. is arriving shortly to progress the matter by direct discussion. The considered conclusion of the Government on this recommendation of the Estimates Committee will be reported to the Committee as soon as possible, after the discussions have concluded.

[Ministry of Production letter No. P-12 (10)/55, dated 29th March, 1956].

[Comments of the Sub-Committee (1956-57) on the reply].

It is not possible to prove that there has been a specific breach of any of the terms contained in the agreement with the French firm M/s A.C.L. Nor is

The Ministry may be requested to intimate what is the loss sustained by the Yard on account of the failure of the A.C.L. to render satisfactory technical advice. Government have admitted in their reply to S. No. 8 that inaccurate estimates have been made by the technical advisers and that the question of getting the maximum possible assistance from them in order to make up as much as possible, for the time lost, is under discussion with the French firm. The results of the discussion may be intimated.

[L.S.S. O.M. No. 109-EC-1/56, dated the 24th September, 1956].

it possible to assess, in terms of money, the loss sustained by the Yard as a result of the faulty estimating and other mis-calculations by the French firm. It is quite true that because deliveries were slower than anticipated the shipyard has been doing part of the financing of the construction itself. But if French firm had assessed the position correctly even to start with and had advised that the construction of ships would take that period which it is now taking, H.S.L. would have necessarily entered into an arrangement very similar to what they are now adopting for new orders. H.S.L. has since accepted that since construction at Vizag takes longer time than the construction in the U.K. and as the basis is the U.K. Parity Price, H.S.L., would not take instalments at the same rate as U.K. ship-builders take but would finance part of the construction itself and take a comparatively larger portion of the purchase price only on delivery. The loss on financing is thus not due to the faulty estimating by A.C.L. (which there undoubtedly has been) but because construction at Vizag takes more time than the U.K. shipyards.

The discussions with the A.C.L. have since been concluded. It was estimated that the progress of the shipyard had been delayed by one year—Accordingly the shipyard have obtained the consent of the Consultants—

(a) to extend the agreement for one year at a reduced rate of commission at 2% on so much of the turnover as is equal to the average of the turnover of the previous two years and 3% on the excess-over such average, as against the present rate of commission of 4 %;

(b) to make available, upto the 15th July, 1958, the services of French workmen for a total of 144 man-months wholly at their cost; and

(c) a very senior technician of A.C.L. visiting the shipyard every year at their expenses to advise the shipyard on any special problems and schedules of progress of work.

[Ministry of Transport and Communications O.M. No. Sy/12 (10)/55, dated 20th May, 1957].

The shipyard should have a proper planning and marshalling of all the materials, stores and other equipment required by them. Thereafter a system should be devised whereby a systematic comparison of the results of actual performance with such estimates is ensured.

The technical advice given by the A.C.L. experts in the matter of organising the schedules of work in the Yard was unsatisfactory. They failed to organize the 'Red Light System'. In matters like this, Government should consider the

question of alternate methods of getting such advice at the cost of A.C.L. as a penalty for breach of the terms of contract.

the help of Mr. Campbell, the previous Manager of Messrs. Scindias who had many years experience and with the help of the experts of the A.C.L. This estimation eventually proved incorrect but it will be appreciated that it was the first experience which the shipyard had of the construction of the new type of ship. No ship of this type had been built previously in India and therefore it was not possible for the Yard to have compiled the required data from actual experience. The French experts knew how much time such jobs should ordinarily take in the French shipyards but the shipyard's estimates made on this basis proved to be inaccurate because of the optimistic view initially taken that two Indian workmen were equivalent to 1 French worker whereas in fact, on this new non repetitive work the average ratio appears so far to be 3.35 : 1. As regards the failure to introduce a 'red light system' the management of the Yard, the Board of Directors and the Government of India were throughout aware as a result of the watch that the management was keeping, that the performance of the shipyard was falling behind the schedule. In order to deal with this situation the chairman of the H.S.L. sent for a Director of the A.C.L. as early as March, 1954 and the Board had detailed discussions with him in April, 1957. Six months later, finding that even

the new schedules were not being kept up, the Managing Director had renewed discussions in Paris with the representatives of the A.C.L., as a result of which a Technical Manager of one of the A.C.L.'s shipyards in France—Mon. Bourrelly—came over from France and after a careful study prepared the present schedule which is being maintained, more or less, fully. An organisation has also now been set up by the shipyard which will enable the work of fabrication and erection to proceed in proper sequence and which will bring to light any factors which may cause delay. Various returns and statements to be made monthly have been devised so that the progress may be watched closely. The discussions being held by the management with the A.C.L. have been mentioned earlier which are directed to getting the latter to devise and implement certain measures which would not merely rectify but partly atone for past mistakes. The Committee have suggested that Government should consider the question of alternative methods of getting such advice at the cost of the A.C.L. as a penalty for breach of the terms of their contract. This question has two aspects—firstly it has to be considered whether it is possible to extract a penalty from A.C.L. by proving any breach of the terms of the contract and secondly whether it is desirable to obtain advice from any other party. These two aspects are in a sense inter-related. The final views of Government on the former aspect will be reported to the Committee along with their conclusion on the recommendation at Sl. 6. What can certainly be established against the French experts is that

they were over-optimistic in estimating that Indian workmen could do the same job as French workmen in twice the time whereas experience gained on the first ship showed that the capacity of the Indian workmen did not come up to this expectation. The experience gained on the first ship has been fully utilised in drawing up the schedules of all similar ships and other ships involving similar types of work. With regard to the second aspect of the question it is felt that no advantage would accrue at this stage by superseding the French consultants who have now gained over two years experience in working with and training Indian workmen under the prevailing circumstances at the Vizag shipyard at this stage, of the 5 year agreement. The development programme planned, designed and initiated by the French consultants which is considered by all qualified persons to be quite satisfactory has gone more than half way through and is likely to be completed within the period of the present agreement ending in the middle of 1957. Whether the present technical consultants should be replaced or not at the end of the agreement period is a different issue and would be considered when the present agreement is more near its termination.

To sum up, Government do not consider it desirable to change the consultants at this stage but the question of getting the maximum possible assistance

from them in order to make up as much as possible, for the time lost is under discussion with the French firm. To this extent the recommendation of the Committee is accepted.

[Ministry of Production letter No. P-12(10)/55, dated 29th March, 1956].

For facility of practical training the institutions in which courses of Naval Architecture for a part of study could more suitably be located near the Shipyard. The question of transferring Colleges to Visakhapatnam or of setting up of a new Institution of this kind near the yard with provisions for training in Naval Architecture and designing should be considered. The schemes drawn up by the H.S.L. in this connection should be given due consideration by Government and implemented early, if found feasible.

[Comments of the Sub-Committee (1956-57) on the reply].

The results of the consideration in the matter may be called for.

[L.S.S. O.M. No. 109-EC-1/56, dated the 24th September, 1956].

At para 71 of their Report the Committee have examined the facilities at present available in the various educational institutions in the country for the training of young men in naval architecture and have recommended that institution in which courses of naval architecture form a part could more suitably be located near the shipyard. This matter is under consideration in the Ministry of Education whose observations have been received and are being processed in consultation with the management of the shipyard

[Ministry of Production letter No. P-12(10)/55, dated 29th March, 1956].

The question of transferring one of the existing engineering colleges of Vizag has been examined in consultation with the Ministry of Education. They are of the view that though practical training is an important aspect of higher technical education, the availability of facilities for such training cannot be regarded as the sole criterion in determining how and where different courses should be organised. They further feel that a separate isolated course in Naval architecture at the shipyard will only tend to produce narrow specialists. The students will



lose the benefit of contact with the students of other disciplines and there will be no cross fertilization of ideas.

As regards the setting up of a new institution of this kind at Vizag, it is found from the enquiry made by the Engineering Personnel Committee set up by the Planning Commission that there is not such a demand for Naval Architects as would justify the creation of another centre of training. The facilities provided at Kharagpur would be quite adequate to meet the requirements at least for some time to come. The question of opening up Naval Architectural classes at Vizag may be reviewed at the end of 1959 or 1960.

[Comments of the Sub-Committee (1957-58)  
on the reply].

The Ministry may be asked to state :

(i) Whether the requirements for the Second Shipyard have been kept in view in ascertaining the demand for training in Naval Architecture and whether the facilities at Kharagpur would be sufficient to build up technical skill in this branch required for further expansion of the ship building industry.

[Ministry of Transport and Communications O.M. No. SY/12 (10)/55, dated 20th May, 1957].

(i) No. The requirements of the second shipyard, which is a Third Plan project, are unlikely to materialise before 1964 as it will take about 3 to 4 years before the new shipyard starts ship building. As it is proposed to review the whole position at the end of 1959, the requirements of the second shipyard can be taken into consideration at that time. The present intake of the Indian Institute of Technology at Kharagpur is 12 candidates per annum.

It can, however, easily increase this number to 16 provided it can be assured of the demand.

(ii) What practical facilities have been provided at the shipyard to students from Kharagpur, and the extent to which such facilities have been utilised.

(ii) The Shipyard provides facilities for practical training in the yard and the drawing office to students of the Institute, when requested.

[L.S.S. O.M. No. 109-EC.I/56, dated the 5th December, 1957].

[Ministry of Transport and Communications O.M. No. SY-12(5)/57, dated the 14th January, 1958].

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73

A system of "Time and Motion study" should be introduced in the yard. The need for putting full scheduled hours of work should be impressed upon the workmen.

Sl. Nos. 12, 14 and 16. Paras 73, 75 and 77.

For the sake of convenience these three recommendations are dealt with together. There is no difficulty in accepting the recommendation that "the need for putting in full scheduled hours of work should be impressed upon the workmen." The Shipyard is fully conscious of the necessity for implementing this recommendation and is taking all the measures possible towards achieving this end. Progress is, however, necessarily somewhat slow; and this is a matter which involves relations with labour.

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Payments of wages by results should be introduced as early as possible.

The Estimates Committee have recommended that a system of "Time and Motion Study" should be introduced in the yard. It is not clear what the intention of the "Time and Motion Study" recommended by the Committee is. Such a study is only useful where repetitive jobs or single line production jobs are concerned. "Time and Motion Study" in the strictest sense aims not only at making a scientific study of the time taken in doing a job but also in eliminating wasteful move-

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A cost control or cost accounting procedure as obtaining in some foreign countries should be set up at Hindustan Shipyard Ltd. The Committee hope that before long it would be possible for the Hindustan Shipyard to introduce the system of "Time and Motion" study in the yard in

order to tighten up control over construction costs. Meanwhile time and motion charts, for particular jobs should be drawn up and constant effort made to increase efficiency and secure economy in cost.

ment of bodies and limbs of the workers. Such studies have necessarily been resorted to in countries, where there is a shortage of man power and where the wages and standards of living are high. Under the circumstances, it would not perhaps be appropriate in the context of the conditions in our country to adopt "Motion studies" as a device to promote efficiency among the workers. On the other hand, it is accepted that time allocation based on a proper "time study" of a particular job helps not only in evolving a system of payment of wages by results but also in making correct estimates for jobs to be undertaken in future. With this end in view, the Shipyard have already taken steps to introduce a system of time allocation for different jobs on the basis of modern methods of pre-fabrication work piece by piece and of the actual experience that is being gathered now, on the new types of ships with the new methods of construction.

At para 75 of their report, the Committee have recommended that the system of 'payment of wages by results' should be introduced as early as possible. Payment of wages by results is a system which the Shipyard are anxious to introduce, but it would be premature to do so at the present stage in the absence of adequate data. It will be appreciated that the introduction of such scheme would require the

agreement of the workers and unless the workers can be convinced of its advantages by adequate data based on their own output, it is not possible to introduce the 'system of payment of wages by results' for all the jobs in the Shipyard, an attempt will be made to introduce it on the basis of 'time study' in the case of such jobs as are of a repetitive nature. An effort will also be made to collect necessary data for determining time allocation for other jobs of a non-repetitive nature also. The collection of such data will, however, take considerable time due to the fact that in the shipbuilding industry, the processes repeat themselves very slowly and after a very long interval of time. The time allocation study referred to above will be useful for making correct estimates, for checking actual performance and for proper cost control and cost accounting which the Estimates Committee have in view.

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[Comments of the Sub-Committee (1956-57) on the reply].

The progress made by H.S.L. in the direction of time studies and introduction of the system of wages by results may be asked for.

[L.S.S. O.M. No. 109-EC.I/56, dated 24th September, 1956].

[Ministry of Production letter No. P-12 (10)/55, dated the 29th March, 1956].

Generally speaking the various jobs involved in the construction of a ship are not repetitive and thus do not lend themselves to time and motion studies as normally understood. Data is, however, being collected about the allocation of time for particular jobs with a view to using such data in the introduction of a suitable system of 'Payment by results'.

[Ministry of Transport and Communications O.M. No. SY (10)/55, dated the 20th May, 1956].

[*Comments of the Sub-Committee (1957-58) on the reply*].

The Ministry may be asked to give particulars about the steps taken for introducing cost accounting and the details of the organisation therefor, showing the qualifications of the staff employed on Cost accounting.

[*L.S.S. O.M. No. 109-EC.1/56, dated the 5th December, 1957*].

The shipyard has a detailed cost accounting organisation. The set up of that organisation, together with a note indicating how it works, is attached. (Appendix III) The Chief Accounts Officer is Shri M.P. Gupta, an officer of the Indian Audit and Accounts Service. Before he joined the Hindustan Shipyard in March, 1957, he was working as Deputy Accountant General in the office of the Accountant General, Bihar. Besides, there is also a qualified Cost Accountant who is a Fellow of the Institute of Cost Accountants, England.

[*Ministry of Transport and Communications O.M. No. SY-12(5)/57, dated the 14th January, 1958*].

74 Negotiations with the Railways regarding the undertaking of the work of assembling wagons of the Railway imported from abroad in a "Knock down" condition should be completed early to utilise idle capacity found in plenty in almost all the machines in the yard. If this is not possible, other ways of utilising idle capacity should be explored.

The question of utilising the present idle capacity of almost all the machines in the Shipyard for alternative uses such as the undertaking of work of assembling railway wagons imported from abroad in "knock down" condition was referred for advice to a senior technical expert of the Shipyard's French consultants. His definite opinion was that except in the case of completely independent shops such as the foundry, it was not possible or desirable to mix up with the shipbuilding work any other work which the machines may be capable of doing. In his view, in every heavy industry machine capacity to some degree must needs lie idle because machines were installed not with a view to their maximum

utilisation but for the primary purpose of facilitating the handling of heavy materials. The Shipyard had been strongly advised against taking up other work as such work which is likely to interfere very seriously with the shipbuilding schedule. The Board of Directors of the Shipyard have agreed with this view and the Government agree that it would be against the interests of the Shipyard to take up subsidiary lines of work which would cut across the present organisation and probably make it less efficient.

The Shipyard, is, however, taking up all the ship repair work that it can get. In fact it is attracting such repair work by charging only limited and not full overheads. As a result it is already doing a good deal of ship repair work on a moderate profit thereby utilising a part of the idle capacity of the installed machinery and consequently reducing the burden of subsidy. When the dry-dock is completed towards the end of 1959, the Shipyard will secure a substantially greater proportion of repair work so that the existing idle capacity of the machines will be further reduced.

[Ministry of Production letter No. P-12 (10)/55, dated 29th March, 1956].

86 Question of manufacturing standard ships should be re-examined and a conference between the representatives of Government, the Shipowners and the Shipbuilding Industry in general should be

In para 86 of their report, the Committee have emphasised the need for standardisation in the manufacture of ships. The Government are alive to the necessity of introducing standardisation at the Shipyard in the interest of quicker delivery, greater

held to examine how far it would be advantageous to adopt a policy of manufacturing only standard vessels at least for some years to come.

efficiency and reduction in cost. The question was discussed at a Conference convened by the Ministry of Production at which all the principal shipowners were present. The Shipowners have accepted in principle the desirability of standardising certain types of ships. The Conference decided to set up a Committee consisting of the D. G. Shipping, representatives of the 6 leading Shipping Companies and representative of the Hindustan Shipyard for going into the question of evolving standard type of ships that would be built by the Shipyard during the second Five Year Plan. This Committee has met and has decided to standardise two types, one for coastal and one for overseas trade. Work to decide all the leading particulars of these types is going on.

[Ministry of Production letter No. P-12(10)/55, dated 29th March, 1956].

94 The problem of shortfall in manufacture of ships should be gone into if self-sufficiency is to be attained in the Second Five Year Plan. The objective in Planning should not merely be to build the ships required for mercantile purpose on the High seas, and for the

These matters are under consideration in consultation with the Ministry of Commerce and Industry and the Planning Commission.

[Ministry of Production letter No. P-12(10)/55, dated 29th March, 1956].

coastal traffic, but also the ships required for our Navy. The ultimate Plan should provide for building ships for other countries in South East Asia in competition with other suppliers.

[*Comments of the Sub-Committee (1956-57) on the reply*].

The Ministry may be requested to intimate the present position in respect of this recommendation.

(L. S. S. O.M. No. 109-EC.I/56, dated 24th September, 1956).

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The output of the Shipyard during the First Plan period could be placed at over 50,000 GRT, if ships actually delivered and others at various stages of construction were also taken into account. Although this is below the target (100,000 GRT) laid down for the First Plan period, an important adjustment must be made before comparing the actual production with the target. In the second half of the Plan period, the shipyard went over to new Maierform designed modern fast diesel vessels. There involved the use of auxiliary machinery, more elaborate plumbing electrical work, etc.,—in short 50 per cent more work per ship. Their cost and value also was approximately 50 per cent more, so that two ships of the new type equalled three of the old type. When allowance is made for this, the shortfall is actually smaller, for the target of 1,00,000 GRT was conceived in terms of the continuance of the old type of ships.

So far as the reasons for the shortfall in production are concerned, it has been admitted by the Government in



Parliament that the exact amount of work involved in the new types of ships had been under-estimated. The desired increased output required a larger number of fully trained skilled labour which could be achieved only slowly and is still going on. A factor which contributed to the under-estimation referred to above is that under the previous management, the shipyard had nothing in the way of a designing and drawing office, since the practice was for M/s. Scindias to build the same types of ships according to working plans obtained from the United Kingdom. With the help of a senior expert from the foreign consultants, a realistic time scheme for the delivery of ships has since been drawn up and so far 4 ships have been delivered in accordance with it. It is, therefore, anticipated that instances of shortfalls in production are not likely to recur in future.

The Government however, are alive to the necessity of augmenting indigenous capacity. Therefore besides providing funds for bringing up the Vizag Shipyard to its optimum capacity, the Second Plan provides some funds for the establishment of a second shipyard.

So far as ship building is concerned, it will be appreciated that an immediate and sudden increase in capacity is not possible as the building up of the necessary technical manpower and also the acquiring of the

essential 'know-how' have necessarily to be phased over a fairly extended period. Preparatory action to train the technical manpower for the second shipyard has already been initiated.

As regards construction of ships required for our Navy, the existing shipyard are already carrying out this policy as and when it is possible

The recommendation of the Estimates Committee for planning for the building of ships for other countries has been noted for future.

[*Ministry of Transport and Communications O. M. No. Sy-12(10)/55, dated 20th May, 1957*].

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## CHAPTER IV

*Replies of the Government that have not been finally accepted by the Committee and are being pursued.*

Serial No. of Recommendations	Ref. to Para No. of Report	Summary of Recommendations	Reply of the Government	Comments of the Committee
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1	2	3	4	5
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### Hindustan Shipyard Ltd.

18	81	The question of payment of subsidy should be re-examined with a view to place it, if such payment has to be continued, on a more rational basis.	The Committee have recommended that the question of payment of subsidy should be re-examined with the view to placing it on a more rational basis. The question of subsidy is an extremely complicated issue. At present the Government are subsidising the Shipyard to the extent of the difference	The Committee's recommendation that the payment of subsidy should be made on a more rational basis finds support in the speech delivered by the Chairman of the Board of Directors of the Hindustan Shipyard Ltd., at the 4th Annual General meeting of the Company on 25-1-1957. The
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between the actual cost of production and the sale price based on the U. K. parity price. By suggesting a re-examination of the present basis on which subsidy is being paid the Estimates Committee probably mean that the subsidy should be fixed at a proportion of the cost of production. A subsidy on this basis would mean that the Indian shipowners should agree to the principle that they would buy ships at a cost which is a fixed percentage of the actual costs of production. This suggestion is being explored and was discussed at a Conference convened recently by the Ministry of Production at which the principal shipowners in the country were present. The shipowners were anxious that further data should be furnished to them as to the subsidy that had been paid so far before agreeing to a change in the present formula. An analysis

Committee regret to note that though the recommendation was made nearly two years back, no concrete result has been achieved so far in the matter of revision of subsidy.

is being made of the circumstances in which what varying levels of subsidy had become necessary in the past on the basis of which it is proposed to work out a formula for fixing the subsidy at a percentage of the cost of production of the ships. A decision in the light of the discussions held at the Conference will, it is hoped, be taken shortly.

*(Ministry of Production letter No. P-12 (10)/55, dated 29th March, 1956)*

Certain proposals have been drafted in consultation with the M.D. H.S.L., As these proposals are closely inter-linked with the present method of pricing of the ships, it is proposed to discuss them with the shipowners at an early date.

*(Ministry of Transport and Communications O. M. No. Sy/12(10)/55, dated 20th May, 1957).*

*[Comments of the Sub-Committee (1956-57) on the reply]*

The Ministry may be asked to intimate the decision as soon as reached on the question of fixing the subsidy at a percentage of the cost of production of the ships. *(L. S. S. O. M. No. 109-EC/156, dated 24th September, 1956).*

. The question of fixing the basis of subsidy is closely linked with other issues like pricing of ships built at Vizag, payment of instalments by the ship-owners, etc. and it is therefore, not possible to take a decision on subsidy alone without deciding the basis on the other issues. These matters are still under the consideration of this Ministry in consultation with the Ministry of Finance and as soon as decisions are taken on these issues, the Estimates Committee will be informed accordingly.

*(Ministry of Transport and Communications O. M. No. Sy-12 (S) 57, dated the 12th December, 1957)*

83 The Shipyard should not depend on foreign imports for their timber requirements. Teak from Madhya Pradesh and Travancore

The recommendation of the Committee that the Shipyard should not depend on foreign imports for their timber requirements is accepted.

Cochin could easily replace Burma teak; chir wood of Indian forest would be satisfactory substitute for Oregon pine. Commercial bodies and organisations should also be consulted besides the Indian Forest Research Institute wherever difficulties are encountered in the matter of exploitation of the forests and cutting of wood according to the required specifications.

From the very beginning, the Shipyard has been anxious to use Indian substitute woods in place of Burma teak and Oregon pine and have been working in close consultation with the Indian Forest Research Institute towards this end. The matter has also been taken up with the Ministry of Food and Agriculture with a view to devise ways and means to enable the Shipyard to procure its requirements of timber from Indian sources.

*(Ministry of Production letter No. P-12 (10)/55, dated 29th March, 1956).*

*[Comments of the sub-Committee (1956-57) on the reply]*

The latest position in the matter may be called for.

*(L.S.S. O. M. No. 109-EC/1/56, dated 24th September, 1956)*

The recommendation of the Estimates Committee was further considered in consultation with the Ministry of Food and Agriculture. The question of supply of timber to HSL was also considered by a Standing Committee of the Central Board of Forestry. It was recommended

The Committee feel that action in this matter has not been taken with sufficient urgency and hope that the Indian Forest Research Institute will also be closely associated in the trials so that they may be able to suggest methods of overcoming any difficulty that may be met with.

by that Committee that in view of the small quantity required by the Shipyard annually, the State Forest Department should endeavour to meet the requirements as far as possible and that no special efforts to replace imports need be made. The matter has now been taken up with the Andhra Pradesh Forest Department with a view to see whether they can make a special effort to supply some of the requirements. The results thereof will be communicated in due course.

*(Ministry of Transport and Communications O. M. No. Sy/12 (10)/55, dated 20th May, 1957).*

**[Comments of Sub-Committee (1957-58) on the reply]**

The Ministry may be asked to intimate the results of the efforts made with the Andhra Pradesh Government for supply of some of the

As a result of the discussions held with the officers of the Andhra Pradesh Forest Department a trial order of 20 tons for Andhra Teak logs was placed with them in July, 1957. Since then, some quantities of this timber have been



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		requirements of timber for the Shipyard.	received by the Shipyard and their suitability for use in Shipbuilding is being tried out.	
		(L. S. S. O. M. No. 109-EC. I/56 dated the 5th December, 1957)	Generally speaking Shipyard's efforts so far to replace the types of timber by indigenous varieties have not proved very encouraging.	
			[Ministry of Transport and Communications O. M. No. Sy-12(5)/57, dated the 14th January, 1958].	
22	87	A survey of the establishments in Western India which manufactures propelling machinery and shipping fittings in a small way should be undertaken with a view to see to what extent those activities could be co-ordinated with those of the Shipbuilding industry in the country.	Sl. Nos. 22—24 para Nos. 87-90. These matters are under consideration in consultation with the Ministry of Commerce and Industry and the Planning Commission.	S. No. 22-44. The Ministry of Commerce and Industry have been asked to expedite reply.
23	189	The objectives in planning for the yard should include	(Ministry of Production letter No. P-12 (10)/55, dated 29th March, 1956).	

namely the setting up of subsidiary industries for the manufacture of standardised parts of fittings, equipment etc. around the yard.

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Government should see that certain subsidiary industries are organised as cottage industries located in the vicinity of the Shipyard and at the various ports where work of major repairs is being undertaken. Initially, a survey may be made to gather statistical data of the spare parts and fittings required and the possibilities of setting up such cottage industries explored

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[*Comments of the Sub-Committee (1956-57) on the reply.*]

The Ministry may be requested to intimate the present position in respect of each of these recommendations.

(L.S.S. O. M. No. 109-EC.1/56,  
dated 24th September, 1956)

The implementation of these recommendations is the responsibility of the Ministry of Commerce and Industry. The recommendations have therefore been referred to them for necessary action. The Shipyard will be willing to give such technical help as may be necessary.

[*Ministry of Transport and Communications O.M. No. Syl 12 (10)/55, dated 20th May, 1957.*]

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The question of manufacture of engines and of the preference to be given to the use of diesel engines etc. should be gone into in consultation with the ship-owners and Defence (Naval) Authorities. These matters should receive due attention in the Second Five Year Plan.

These matters are under consideration in consultation with the Ministry of Commerce and Industry and the Planning Commission.

*[Ministry of Production letter No. P-12(10)55, dated 29th March, 1956].*

*[Comments of the Sub-Committee (1956-57) on the reply.]*

The Ministry may be requested to intimate the present position in respect of this recommendation.

*(L.S.S. O.M. No. 109-EC.1/56, dated 24th September, 1956).*

At present, ship's propelling machinery and important accessories for Vizag built ships have to be imported. In view of the desirability of achieving self-sufficiency in this respect, it has been decided in principle, in consultation with the Planning Commission and the late Ministry of Heavy Industry, that a factory for the manufacture of propelling machinery for ships should be established in the public sector. The matter has been proceeded further by reference to the ship-owners and it has been

The Committee feel that action in this matter has been slow and recommend that final conclusions may be reached without undue delay.

decided to go ahead with the establishment of a factory for manufacturing diesel marine engines, as sufficient off-take is expected from such a factory. The project has been included in the Second Five Year Plan. An inter-Ministerial Negotiating Committee has been constituted consisting of representatives of the Ministries of Defence, Heavy Industries (now Commerce and Industry) and Finance with the Secretary-General as Chairman, to consider this question in detail further. The above Committee has decided to invite detailed proposals for a licence as well as technical assistance from six firms with a world wide reputation in this field. Thereafter the Committee would submit their recommendations to the Government on the selection of Consultants for their projects.

[Ministry of Transport and Communications O.M. No. Syl 12 (20)/55, dated 20th May, 1957]

*[Comments of the Sub-Committee  
(1957-58) on the reply.]*

The Ministry may be requested to state the reason for the slow progress in implementing this recommendation.

*(L.S.S. O.M. No. 109-EC.1/56,  
dated 25th September, 1957).*

This Ministry has, in its O.M. No. 19 (16) NIDC/57, dated the 12th October, 1957, in connection with the recommendations of the Estimates Committee contained in 65th report relating to Ministry of Transport Shipping Part II, intimated already the action taken in this regard. It is learnt that out of the seven firms addressed, three have sent their proposals for the Marine Diesel Engine Project. A comparative study of the proposals received is now in progress. It is necessary to add that the ultimate decision will depend very largely on the implications, particularly in terms of foreign exchange and on the availability of resources, internal and external, during the Second Five Year Plan.

*[Ministry of Commerce and Industry O.M. No. 19 (16) NIDC/57, dated the 12th January, 1958.]*

Plans should be undertaken immediately for the expansion of the capacity of the Visakhapatnam Yard and for the setting up of one or two more shipyards on the Western Coast. The construction of smaller vessels should be left to be done by firms in the private sector.

These matters are under consideration in consultation with the Ministry of Commerce and Industry and the Planning Commission.  
[Ministry of Production letter No. P-12(10)/55, dated the 29th March, 1956]

[Comments of the Sub-Committee (1956-57) on the reply]

The Ministry may be requested to intimate the present position in reply to this recommendation.

[L.S.S.O.M. No. 109-BC.1/56, dated 24th September 1956]

The recommendation in respect of the expansion of the Hindustan Shipyard has been accepted and in pursuance of the above, the Shipyard are carrying out a development programme, at an estimated cost of Rs. 196 lakhs according to a plan prepared for the purpose. On the completion of this programme, it is expected that the capacity of 2 ships of modern type will increase to 4 such ships per year. The development includes the construction of two large berths, improvements to the cranes system,

installation of modern machinery, equipment, modernisation of machine shops, blacksmith shops, etc. In addition, the shipyard have undertaken the construction of a dry dock at a cost of Rs. 215 lakhs, which add to the facility of shipbuilding, in addition to other advantages. Pending the completion of this programme, proposals are under consideration for undertaking certain additional items of development at a cost of about Rs. 75 lakhs from the provision of Rs. 100 lakhs made in the Second Plan.

It has also been decided in principle by the Government that a second shipyard should be established in the country and that a beginning in this direction should be made during the Second Plan, including the selection of site and the provision of training facilities, for a

provision of a sum of Rs. 75 lakhs has been made in the Plan. The Hindustan Shipyard are undertaking the task of training a nucleus of skilled workmen and other technical personnel with a view eventually to making them available to the second shipyard. In this connection the Government of India have accepted the offer of the Government of the United Kingdom to send out to India, under the Colombo Plan, a team of British experts to advise the Government on the selection of a suitable site for the second shipyard and to draw up a preliminary project report. Meanwhile an inter-Ministerial Committee consisting of representatives of concerned Ministries and the Planning Commission has been appointed to make an estimate of the future requirements of ships to be built in India annually and to recommend the output and the types of ships for which the second shipyard should be planned.

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The question of location of the future shipyards will be decided by the Government only on the advice of the technical consultants. The question of having more than one shipyard will depend on the availability of funds, technical personnel and other factors vitally connected with the establishment of a new shipyard. It would be necessary to build up sufficient technical skill within the country before visualising further expansion of the shipbuilding industry.

With regard to the recommendation that the construction of smaller vessels should be left to be done by firms in the private sectors, the matter is under consideration in consultation with the Ministry of Commerce & Industry and a separate communica-

Latest position has been called for from the Ministry.

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Government should canalise the expert knowledge and skill of the craftsmen in the country in building small vessels.

tion regarding this will follow in due course.

(Ministry of Transport and Communications O.M. No. Sy/12(10)/55, dated 20th May, 1957).

The matters are under consideration in consultation with the Ministry of Commerce and Industry and the Planning Commission.

(Ministry of Production Letter No. P. 12(10)/55, dated 29th March, 1956).

[Comments of the Sub-Committee (1956-57) on the reply.]

The Ministry may be requested to intimate the present position in respect of this recommendation.

(L.S.S. O.M. No. 109-EC/1/56, dated 24th September, 1956)

Ministry have been requested to indicate further progress.

[Ministry of Transport and Communications O.M. No. Sy/12(10)/55, dated 20th May, 1957].

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## APPENDIX I

(Vide Serial No. 7, Chapter III )

*Comments on Mr. Scaife's Report on Hindustan Machine Tools Limited  
and Report of the Machine Tools Panel of the Engineering Capacity  
Survey Committee.*

The following are the circumstances in which Mr. Scaife happened to see the Bangalore Factory and make a report on it.

2. In January 1953, the Ministry of Commerce & Industry set up a Committee to undertake a survey of idle capacity in the engineering industry. The objective was that such idle capacity should be put to use by coordination and rationalisation in the manufacture of items, both machinery and spare parts, which were still being imported. This Ministry was not consulted before the Committee was constituted. However, the Committee constituted five panels, one of them being for the Machine Tools Sector of the engineering industries, and at the request of the Commerce and Industry Ministry Mr. S. S. Iyengar, General Technical Manager of the Hindustan Machine Tools was nominated a member on this panel. The Commerce & Industry Ministry obtained the services of Mr. Scaife from U. K. under the Colombo Plan to assist in the work of the Machine Tools panel. It seems that no curriculum vitae concerning Mr. Scaife was received either by the Ministry of Finance (Economic Affairs Department) or by the Commerce and Industry, before it was decided to accept him under the Colombo Plan. The U. K. High Commissioner's Office in Delhi, however, sent to the Commerce & Industry Ministry a brief statement of Mr. Scaife's qualifications. This did not make mention that Mr. Scaife had already been in India before and of course, there was no suggestion that he had actually expressed certain opinions about the Government Machine Tool Project. This Ministry was also completely unaware of Mr. Scaife's antecedents and background.

At a meeting in the Commerce & Industry Ministry held in January, 1954, Mr. Moolgokar, the Chairman of the Engineering Survey Committee suggested, when the question of manufacturing the machine tools required by the Railways was under consideration, that it would be desirable to review the machine tools industry not in terms of units but as a whole and that for this purpose the Bangalore Factory should also be included in the scope of the review of the industry which Mr. Scaife as the expert on the Machine Tool Panel would be carrying out. The Commerce & Industry Minister thereupon enquired whether there would be any objection to this proposal to include the Bangalore Factory also in the review. This Ministry agreed to give all facilities to Mr. Scaife in this connection. As stated above this Ministry did not have the slightest inkling at that time that Mr. Scaife already had very strong pre-conceived notions in regard to the Bangalore Factory and in regard to Government entering the Machine tool field generally.

The following are the terms of reference set to Mr. Scaife by the Machine Tool Panel:

- (1) to assess the capacity of the private sector of the machine tool industry ;
- (2) to assess available capacity in existing Government factories for the manufacture of machine tools ;
- (3) to examine Jalahalli Machine Tool Project and also its potentiality ;

Mr. Scaife paid a brief visit to the Bangalore Factory; he did not spend more than an hour there. A remark made by him at the time of his visit gives some clue to the character of the gentleman. Addressing Shri S. S. Iyengar, the General Technical Manager of the Factory, he stated : "I was making machine tools before you were born."

Shorn of the insinuations, inaccuracies and exaggerations with which it is replete, Mr. Scaife's criticism of the Jalahalli Machine Tool Project falls under the following heads :

- (1) A great deal of equipment has been acquired for the factory, but the building up of a sound indigenous machine tool organisation has been made a secondary and minor consideration. This weakness in the personnel side will make it impossible for the organisation to function in a self-contained manner.
- (2) After a great deal of planning it is proposed by way of production merely to assemble 8½" centre lathes from parts to be imported from Switzerland; thus the only Indian experience will be in assembly and painting.
- (3) The Technical competence of our Consultants for the manufacture of machine tools is seriously in question. In any case, the Swiss technicians suffer from a psychological inability to transfer skill to Indian minds. The Technical Consultants are outside India and outside the control of the Indian Management.
- (4) The proposal to concentrate on 8½" centre lathes represents the "line of least resistance". It will mean a severe blow to Mysore Kirloskars and other indigenous manufacturers who are already in a position to manufacture a first class lathe.
- (5) Government's policy which will ultimately put Kirloskars and other public machine tool firms out of business is in direct conflict with the undertaking given by the Government that there would be no over-lapping and conflict between the State Machine Tool Organisation and the private manufacturers.

It is convenient to deal with the last point first. Mr. Scaife betrays a total ignorance of facts or worse when he alleges that the undertaking given by the Government to the private sector has been given the go-by. As a matter of fact the very conception of this project and its planning and development has proceeded in close co-ordination and consultation with the private manufacturers. When the project was first mooted in 1949 it was welcomed by the Indian Machine Tool Manufacturers' Association, its Chairman remarking :—

"Coming to the reactions of the Association to the establishment of this factory, I might frankly state that we welcome the proposal from the national point of view. An up-to-date

machine tools industry manufacturing a variety of automatic precision machine tools is the nucleus of the modern industrial State. Its importance in War and Peace is supreme. As I have always believed, it is only a national Government that can truly appreciate the importance of the machine tool industry."

In July 1950, Mr. Kirloskar of Mysore Kirloskar Limited stated:

"They were not against the setting up of a modern machine tool factory—on the other hand they unanimously welcomed the proposal. They were at one with the Government in seeing that the imports of these tools which averaged about Rs. 6 crores a year were reduced to the barest minimum, if not eliminated altogether. Their only anxiety was that the Government factory should not conflict with them and oust them from the market."

The Government were fully alive to the task of coordinating the production programme of the Bangalore factory with the production programmes of the private industry, and for the purpose at least two full-scale meetings with the representatives of the industry were held. The broad objectives of the Government factory and the line of demarcation between its production programme and that of the private industry were explained at the first meeting held in September, 1950; the following is an extract from the minutes of this meeting:—

"At the outset, Mr. Venkataraman reiterated the Government's intention that the Government factory would be complementary and not competitive with private industry and that the latter could expect from Oerlikons all possible technical assistance in improving the quality of machines they are now manufacturing. The representatives of the industry recognised that Oerlikons were one of the foremost high precision tool manufacturers in the world and that their assistance to private Indian Industry would be most welcome. It was agreed that the line of demarcation between the Government factory and private industry will be that the former will not undertake the manufacture of those types and sizes of machine tools which were already being manufactured in India or which were in the process of manufacture, i.e. where the patterns etc. were ready. On this basis, it was considered that the following types and sizes of machine tools should be left to private enterprise.

(1) *High Speed gear head lathes* : 7" manufactured by Mysore Kirloskar Limited. (If after meeting the entire demand of the country for 7" lathes, Kirloskars are ready within two years, to produce 8½" lathes which the Government factory intended to produce, Government will consider reducing its production of this size of lathes to enable Kirloskars to produce a reasonable number)."

It must be here stated that the original intention of the Government was to make a beginning with a 7" centre lathe; this however was given up in recognition of the fact that Kirloskars were already producing a lathe of this size. As regards the 8½" centre lathe, an offer was made to reduce Government's programme of manufacture if Kirloskars had in the meantime set up its manufacture (they were working on it at the time)

Thus the Government went to the utmost possible limit to accommodate the private industry; the Government's programme was drawn up not only in consultation with the industry, but it carried the full agreement on the latter's part.

There was another meeting in February 1952 at which the line of demarcation accepted at the previous meeting was restated. The fact that Kirloskars were in a position to produce the 8½" lathe was noted and it was decided, in implementation of the offer already made, to reduce Government's programme of manufacture of 8½" lathes from 600 to 400 per annum. The Government considered—and a subsequent survey carried out by them confirmed the conclusion—that this would leave sufficient room for the private sector so far as lathes of this size were concerned.

Thus, a more unfounded and irresponsible statement than that the Government's policy is in direct conflict with the undertaking given to the private industry cannot be imagined.

From the above it will also be seen how equally unfounded is Mr. Scaife's statement that the Government have concentrated on the manufacture of 8½" centre lathes as "the line of least resistance" and with the object of strangling the "enterprise, skill and courage" of Mysore Kirloskars. That the Government factory would make a beginning with the manufacture of lathes had been known from the time the project had been conceived, and certainly the indigenous manufacturers cannot plead ignorance of this fact. They must have equally known, what Mr. Scaife, though obviously aware, has chosen to forget, that the Bangalore factory would not concentrate on lathes, but would pass on, as soon as the organisation acquired the necessary technical experience, to the manufacture of other machines. *It is entirely in accordance with rational planning—which Mr. Scaife is at pains to emphasise—to make a beginning with simpler products and then attempt the more difficult ones.* It is not merely a question of the foreign consultants providing the "know-how" for the latter category of machine tools; the Indian technicians have also to be trained for it. Apart from these considerations, the Government's survey showed that there was a big enough market for these lathes which was not satisfied, and which could not be satisfied by the private sector. It was necessary to fill this gap; at the same time the manufacture of this item would provide the factory with what may be described as a "bread and butter" line, and it must be stated here that it was Government's intention from the very beginning, to run the factory as a fully commercial and profit-making enterprise.

The present position is that the factory is fully geared to the production of 8½" lathes, and expects to reach its full capacity of 400 lathes per annum by the year 1958-59. (The period needed to reach the full capacity may seem to be rather long, but it must be remembered that it is conditioned by the time taken to train a fully qualified and experienced corps of Indian technicians; the objective is to have a production unit self-reliant and fully manned by Indians, as early as possible). In the meantime the factory has also in hand proposals and plans for taking up the manufacture of other machine tools besides lathes by 1958-59 will be suitably scaled down, if necessary, in the light of the demand for this lathe and for other machine tools.

An observation quite characteristic of Mr. Scaife is that "after some three and a half years of indecision the final plan is to build twelve 8½" centre lathes from parts made in Switzerland, one equipment designed and made in Switzerland and the only Indian experience will be assembly and painting." Mr. Scaife would have one draw the conclusion that all that the Bangalore factory will attempt is to assemble lathes from imported components. A beginning no doubt was made by assembling 12 lathes from imported components; this was considered a useful and essential piece of initial training to our technicians. The factory, however, has already passed beyond this stage and is manufacturing components itself and lathes which are fully Indian, in the sense that the parts were both manufactured and assembled in the factory, will soon be produced. Besides, as has been stated above, plans for the manufacture of other machine tools are already under consideration.

Mr. Scaife has had several hard things to say about the Swiss firm of Messrs. Oerlikons who are the technical consultants on the project. In the first place he doubts their very competence as machine tool manufacturers. The international reputation of Oerlikons as manufacturers of first class precision machine tools is well-known; even Mr. Scaife could not be completely unaware of it. If he has chosen to throw doubt on this point, the reason is perhaps not far to seek. The tools made by Oerlikons are in demand not only in Europe, but in the United States of America and are considered the foremost of their class. Mr. Scaife, however, proceeds to refer to a more serious and almost fatal disability attaching to the Swiss technical consultants; their "psychological inability to transfer the skills to Indians". It is not clear from this expression whether Mr. Scaife is thinking of Swiss inability to impart or of Indian inability to receive the skills; possibly he is thinking of both. If it is the Swiss inability to impart, it would be interesting to know whether it is only the Swiss who suffer from it among all the European nations. As regards Indian inability to receive, we have enough proof of our competence in various technical and technological spheres not to take this observation seriously. If however, only Mr. Scaife's certificate of Indian ability will do, we have that too. He has volunteered about Kirloskars :—

"Here we have an Indian firm which from its own resources has built up in ten years one of the finest machine tool organisation I have known and which is making a product of the first quality".

Kirloskars Indian can do excellently within 10 years. Is there a psychological disability specially for Indians recruited by Government even aided by a really expert European firm? It would be prudent to judge in five years' time, we need not wait for ten years. Suffice it to say, that during the last more than one year, Swiss technicians in Bangalore have been helping to train Indians and the factory management is fully satisfied about the results achieved and entertains no doubt that in due course the factory will be able to stand, technically speaking, on its own legs. It is interesting to note that during the brief one hour that he was at the Bangalore factory, Mr. Scaife made no attempt to speak to any of the Indian technicians or to get information about the training they were receiving.

Mr. Scaife has stated that "the heart and brain of the organisation is outside India and outside the control of the Indian management". It is

not clear if the former part of this observation is to be construed as an argument against engaging *foreign* technical consultants at all on this project. It is obvious that we could not have done without initial supply of technical "know-how" from abroad. The most important items of planning work for a project of this magnitude had of necessity to be done in Switzerland unless all the specialists were imported into India at prohibitive cost. With the acquisition of experience, this planning work will be gradually transferred to Indian hands; to attempt a hasty short-cut in these matters would be to run the risk of serious technical break-down and failure. Mr. Scaife himself is free with prognostications of disaster "if there is any attempt to short circuit the natural development". Mr. Scaife's observation that the organisation is completely outside the control of the Indian management is completely contrary to the facts. The project is managed by a Board of Directors consisting of eight members of whom only two are representatives of Oerlikons. While Oerlikons as technical consultants have certain responsibilities for setting up production in accordance with schedules, they are under the control of the Board of Directors and are answerable to them. It may be mentioned here that in addition to being technical consultants, Oerlikons are also participants in the project having subscribed to ten per cent of the shares.

Mr. Scaife has quite rightly emphasised the importance of building up a sound technical organisation to support the project. His criticism, however, is that we have treated this as a secondary and minor matter and that without building up such an organisation we have purchased a great deal of plant and equipment for the factory what he has characteristically described as a machine tools salesman's "El Dorado". It may be stated here that the purchase of equipment for the factory has been made after a careful consideration of the capacity of the factory and of the lines of manufacture proposed to be taken up, initially as well as in the near future. There seems to be scarcely any foundation for Mr. Scaife's implied insinuation that a great deal of unwanted equipment has been acquired by the Government. It is significant that neither before nor during nor after his brief visit to the Factory did Mr. Scaife make the slightest attempt to ascertain essential particulars such as production schedules, operation schedules, machine lay-out charts etc.

As regards Mr. Scaife's complaint that sufficient Indian expert technical staff was not in position before the plant and machinery arrived, the answer is that a technologically backward country like India cannot always wait for fully trained men before embarking on projects of this character and that the training of men as well as the obtaining of machinery must in certain cases go hand in hand. In practice there are two ways of setting up a factory for the production of machine tools where skilled labour plays a vital role. The first is to start on a small scale, undertake training of labour and production also on a small scale, and then as time passes undertake expansion of the unit. Unless the machines were installed, there could have been no training in this case. The other alternative is to establish a large scale factory with all machineries so that a large number of workers can be trained in a much shorter time than would be possible in the other case. Under the first alternative the process would be a slow one and most of the machineries installed would be utilised for production. Under the second alternative, however, considerable numbers of the machineries in the first few years may not be utilised for actual production but only for training. In the second case, therefore, in the first few years there would be development



expenditure on training on a considerable scale, but as soon as initial shorter period is over it might be possible to make good the initial loss. What has been adopted here is the second alternative.

The Government have never sought to minimize the importance of an adequate and efficient training system. Six of the higher supervisory staff of the factory were deputed to Switzerland where they were intimately associated with the work on the planning of the project. The required number of Swiss technicians have also been employed in the factory to assist in the production operations and no less to train Indian understudies. As a matter of fact, in the period January 1954 to 15-8-55 as many as 238 Indian technical personnel have been trained by Swiss experts and 61 were under training on 15-8-55. The training centre is now working in two shifts. The European technicians have been entertained largely on short-term contracts ranging between two and three years, and the Managing Director anticipates that except in a small number of cases it will not be necessary to renew or extend these contracts. Thus every possible attempt is being made to put the organisation, technically speaking, on its own legs as early as possible by adopting a quickened pace of training.

By his terms of reference Mr. Scaife was required to recommend a programme of rational manufacture so as to co-ordinate the manufacturing capacity of the private and public sectors. The effect of the only suggestion made by Mr. Scaife in this line would be to wipe out the Bangalore factory completely as a manufacturing and production unit. The only function he can conceive for this factory as well as for the Ambarnath Prototype Factory is that "it might occupy itself with the development of prototype of such machine tools as are at present outside the scope, technically and financially, of the private industry. As each of such prototype is developed ways and means should be found through the Indian Machine Tool Manufacturers' Association to develop its manufacture and further development with some selected private firms."

The only recommendation of the Machine Tools Panel on the Bangalore Factory directly echoes the views of Mr. Scaife. (The Chairman of the Panel was Mr. Jambhekar of the Indian Machine Tools Manufacturers' Association, which for the last two years has been charging the Government with breaking faith with the private sector). The Panel has recommended that in addition to aiding the private industry by way of manufacture of gears, jigs, fixtures etc. the Bangalore factory should set up a separate department where private industry could be helped to manufacture prototypes and thereafter all the jigs, fixtures, special components etc. required for the normal production."

The effect of the recommendations made by the Machine Tools Panel of the Engineering Capacity Survey Committee should be carefully considered. The Machine Tools Panel visualises a role for the Bangalore factory which will reduce it to a prototype factory, engaged in developing prototypes which when perfected will be passed on to the private sector for commercial exploitation. This will no doubt suit the private sector but a factory can never be run economically purely as prototype undertaking. If it is to pay its way it must have a production side which in the initial stages must naturally receive more emphasis not only from the point of view of settling a sound foundation for the project, but even more because of technical considerations. Work on prototypes cannot be successfully

tackled until we have built a technical corps fully conversant with the production of machine tools.

The Estimates Committee's recommendation that the State Factory should be complementary to the private sector, should be viewed in the light of the attempts made by the Government to secure co-ordination with the private sector. The point will not be missed that it is not the Government but the private sector which has shown disregard for agreed decisions reached after detailed mutual consultation and discussion. The line of demarcation between the two sectors in regard to lathes was clearly drawn up only to be given up by the private sector when it suited them to do so; they then started an agitation that the State was "stepping on their toes" and that the Bangalore factory should spell ruin to them. The basis of the tactics employed is clear enough: it is to ensure to Kirloskars a monopoly in the manufacture of lathes of all sizes. In other words, "co-ordination" will be regulated on the terms laid down by the private sector and as that sector keeps on extending its field of manufacture, the area left to the State factory will be reduced to mere prototype and development work.

## APPENDIX II

(Vide Serial No. I, Chapter III)

*Statement showing the particulars of ships constructed in the Shipyard after it was taken over by Government*

Name and description of vessel with dead weight tonnage	Date of confirmation of order	Date of commencement of work	Schedule of construction of April 1954		Revised schedule of construction of March 1955			Actuals			
			Keel laying	Launching Delivery	Keel laying	Launching Delivery	Keel laying	Launching Delivery			
I	2	3	4	5	6	7	8	9	10	11	12
00 Tonner Standard Steamships "Jalauha" type.											
1 V.C. 108 "Jagrani"	29-8-51	May, 51	May, 51	Dec. 51	June 52	..	..	..	9-5-51	15-12-51	9-6-52
2. V.C. 111 "Jalaputrapur"	29-8-51	May, 51	May, 51	Feb. 52	Aug. 52	..	..	..	9-5-51	27-2-52	9-8-52
3 V.C. 112 "Jalaputrapur"	29-8-51	Jan. 52	July, 52	July, 53	Oct. 52	..	..	..	26-12-51	9-7-52	17-10-52
4. V.C. 114 "Bharapara"	Sept. 51	July, 52	July, 52	Jan. 53	March 54	July, 52	Aug. 53	July 54	22-7-52	26-8-53	15-7-54
5. V.C. 115 "Jalaputtra"	Sept. 51	July 52	July 52	April 53	June 54	July 52	Nov. 53	Aug. 54	22-7-52	9-11-53	19-8-54

oo *Tonner Maier*  
*form sel Vessels.*

6 V.C. 116 "Jalavihar"	March 52	Aug. 53	Aug. 53	June 54	Jan. 55	Aug. 53	Aug. 54	June 55	1-8-53	16-8-54 ]	22-6-55
7 V.C. 117 "Jalavi-jaya"	March 52	Sept. 53	Sept. 53	Sept. 54	Feb. 55	Sept. 53	March 55	Dec. 55	30-9-53	26-3-55	29-12-55
8 V.C. 119 "Jalavishnu"	March 52	Dec. 53	Dec. 53	Dec. 54	May, 55	Dec. 53	Sept. 55	May, 56	16-12-53	2-11-55 ]	23-5-56
9 V.C. 121 "Jalavik-rum"	March 52	Apr. 56	Aug. 55	Feb. 56	July 56	Apr. 56	Dec. 56	Aug. 57	6-4-56 ]	29-7-57	..
10 V.C. 122 "Jalaveera"	March 52	Aug. 56	Feb. 56	Aug. 56	Jan. 57	Aug. 56 ]	Apr. 57	Dec. 57	4-8-56 ]	22-11-57 ]	..

oo *Tonner Maier*  
*form Diesel sels.*

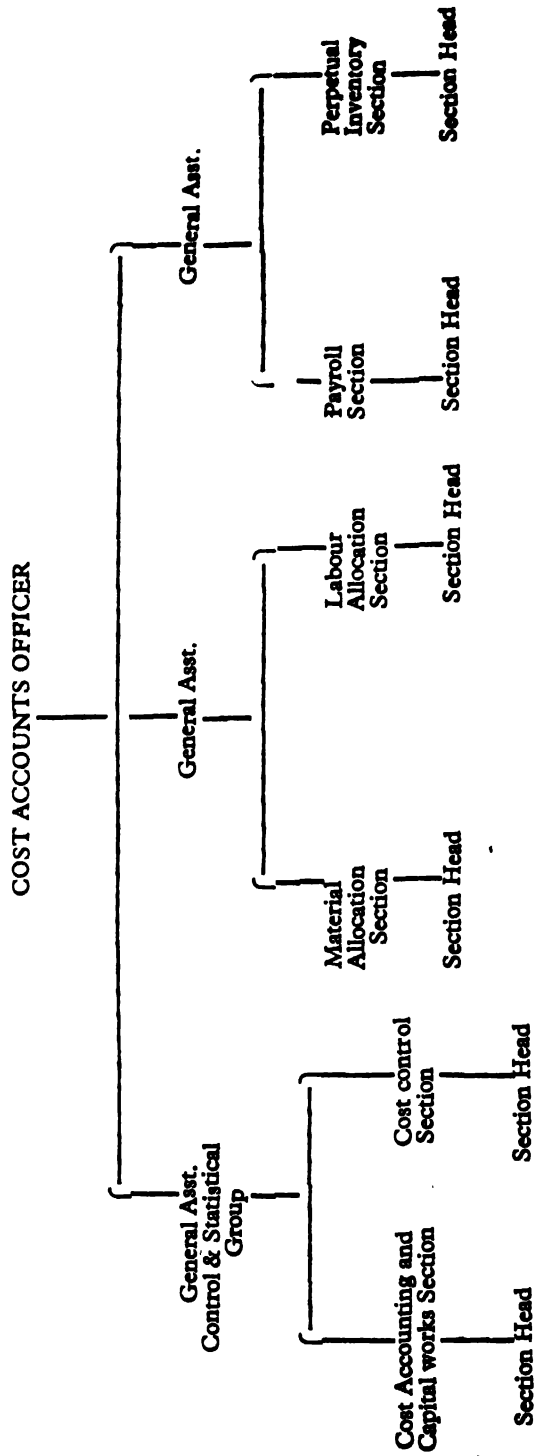
11. V.C. 118 "State of Kutch"	March 52	Sept. 54	July 54	Mar. 55	Sept. 55	Sept. 54	Dec. 55	Sept. 56	2-9-54	29-3-56	25-11-56
12. V.C. 120 "State of Orissa"	March 52	Dec. 55	Jan. 54	Aug. 55	Jan. 56	Dec. 55	Oct. 56	June 57	8-12-55	16-2-57	31-12-57
oo <i>Tonner Passenger</i> CUM- cargo sel ]	April 54	Aug. 55	Mar. 55	Sept. 55	May 56	Aug. 55	May 56	Jan. 57	10-8-55	25-7-56	4-12-57
13 V.C. 135 "Andamans"											

*Key Vessels for Indian Navy.*

14 V.C. 136	..	Apr. 57	Feb. 56	Aug. 56	Jan. 57	Aug. 56	June 57	Apr. 56 ]	..	..	..
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## APPENDIX III

(Vide Serial No. 16, Chapter III)

**Hindustan Shipyard Private Limited Visakhapatnam-5***Set up of the Cost Accounts Department*

## **HINDUSTAN SHIPYARD LIMITED, VISAKHAPATNAM**

The cost Accounts Department consists of the following sections :

- (a) Labour Allocation Section
- (b) Materials Allocation Section
- (c) Costing Section
- (d) Pay-roll Section
- (e) Perpetual Inventory Section

The system of Cost Accounting in the Shipyard is of the Job Costing type. Every work in the Shipyard is done under a Works Order. Every Works Order is further sub-divided into several jobs depending upon the nature of the work to be done.

### **Labour Allocation**

1. All labour engaged is allocated against the various works order numbers on which the same is engaged during the course of the day on the "Daily Allocation of Day/Night labour engaged on....." This report gives the time for which each workman is engaged on each job during the day.
2. A "Time Report" is received in the Cost Accounts Department daily which shows absenteeism, late arrivals etc. With the help of these reports, the cost Accounts Department check up the daily allocation sheets with a view to see whether allocations have been given to all the workmen present.
3. The Sectional Reports which give the allocation for workmen under each Chargeman will be sent directly to the Cost Accounts Office and the Labour Allocation section will mark the trade or category of workman against each ticket number and enter the man-days worked for that day in the respective job sheets. Thus in each job sheet, we will be getting information of man-days by categories for that job, instead of valuing each ticket number at his actual wages a category rate will be applied. This category rate will include the tradesmen and assistants and will be an average rate for the category. This will eliminate variations in labour cost of similar jobs, resulting from the employment of workmen with different rates of pay in the same category.
4. From these figures, a monthly statement showing the cost of each job during the month and the progressive labour cost of the same during the financial year is prepared.
5. A reconciliation between the total labour allocated to the various jobs and the wages paid, is prepared every month and attached to the monthly labour allocation statement. A certain amount of difference between these two figures is inevitable, having regard to the method of calculation of dearness allowance payable to the workmen and this difference is finally carried over to the overheads as unallocated labour.

### **Materials Allocation**

1. All materials bought are accounted under the heads "Stores, Timber and Steel".

2. *Receipt of materials* : On receipt of the materials, the Stores Department prepare a "Daily Materials Received Report", which is sent to the Cost Accounts Department and all the items as per these receipt reports, are duly entered in a Materials Received Register maintained by the Cost Accounts Department. The Total Cost of each item is worked out in this register by adding freight, insurance etc., to the invoice cost of the materials and the total cost of each individual item together with the quantity is then posted on the receipt side of the respective stores cost loder (a ledger card is maintained for each item of material) and then an weighted average rate for unit is worked out. All subsequent issued are valued at these average rates.

3. *Issue of materials* : All the materials are issued on the basis of "Material Requisitions" duly signed by the Foreman or the Chief Shipyard Manager as the case may be and all surplus materials are returned to the Stores on "Material Return Notes".

4. After each receipt or issue in the Stores, the same is posted in the bin cards hung in the respective bins and the balances are struck after each receipt or issue by the Stores.

5. All the material requisitions and the material return notes are sent to the Cost Accounts Department the next day for posting in the ledgers and pricing the same. As soon as they are received in the Cost Accounts Department each item of issue on return is posted in the respective stores cost ledger and then priced at the ledger average rate (stated above) prevailing at the time of issue of the materials.

6. After pricing, all the issues are allocated to jobs against which they are drawn and a daily summary showing the total materials cost for each job for that day is prepared.

7. From these daily summaries, the figures are posted in the "Register of Materials Allocations", wherein the postings are shown day by day. The columns are then totalled up and the monthly material cost of each of job is then arrived at.

8. A monthly material abstract showing the cost of materials issued to the jobs during the month under the various heads-ship construction, ship repairs, capital works, revenue etc.—is prepared and the progressive figures for each job also are shown. This abstract also gives a summary showing the total value of stocks at the beginning of the year the value of materials received and issued during the period and the stock position at the end of the period.

9. *Perpetual Inventory* : A continuous check of all the items stacked in the Stores is carried throughout the year and any differences between the physical balance and book balance is adjusted through a "Stock Adjustment Account" after the investigation into the causes of difference.

### Costing Section

1. The method adopted for costing is the "Job Costing system" and each vessel is denoted by a separate works order number and each works order is subdivided further into jobs. For ships construction, we have about 250 jobs for each vessel and in the case of ship repairs, the jobs will be determined when the work is taken up or when the estimate is given.

Previous to Jalavihar (V.C. 116) the jobs allocated for each ship was more than 900 and this was found to be unweildy and resulted in unsatisfactory

allocation of labour and materials between jobs especially when more than one vessel was under construction. Moreover, the jobs could not serve any useful purpose from the point of view of estimates and control. The 250 jobs for each ship which are allocated at present are based on a rational basis to arrive at a rate, per ton, sq. foot, length, unit, etc., which help estimating for future vessels.

2. *Materials cost* : The material job cost sheets are maintained for each job separately. The monthly material cost for each job is arrived at directly from the material requisitions and return notes, and the same is further analysed into the various items of materials together with its quantity and the cost thereof.

3. As the material cost for each job is arrived directly from the requisitions and return notes, a check on the accuracy of the same is effected by reconciling the material cost as per job sheet and the material cost as per materials allocation statement. (See para 6 under Materials Allocation).

4. The various materials for each job are now being analysed and the total quantity of each material is struck for the job. As we have no previous data to fall back upon this will serve as a Bill of Materials for each job and will facilitate control of issue of materials to similar vessels in the future and to help estimating in future.

Previous to Jalavihar, this method was not in practice.

5. *Labour Cost* : As in the case of materials, the labour job cost sheets are maintained for each job separately showing the number of man-days spent on each job and the labour cost thereof—departmentwise and monthwise. As soon as the job is completed, each job sheet gives the total number of man-days—departmentwise and the Labour cost thereof. The man-days spent on each job will enable us to control the labour cost of a similar job in future. The man-days spent by each department every week for guidance. A similar statement of man-days spent on each construction works order daily by departments is sent to the Chief Shipyard Manager for his guidance.

6. *Cost Sheet* : The cost of a ship is arrived at by grouping together the labour and materials allocated and direct debits. The form of the Final Cost Sheet is given below :

1. Materials	Steel	Timber	Stores				Rs.	As.



### **Overheads**

7. The collection and distribution of the overheads to the various jobs is done at the end of the financial year on the basis of actuals. The method adopted for distribution of the overheads is the "Percentage on Direct Labour", method i.e. the total overheads are related to the total direct productive labour on ship construction, ship repairs and capital jobs.

We have a comprehensive scheme of departmentalisation of overheads under consideration. By this method, overheads will be split up into the following groups (a) Labour Overheads (2) Materials Overheads (3) Departmental Overheads (for each department) and (4) Administrative Overheads and will be charged on a percentage basis on productive labour, materials, percentage of productive labour in each department and No. 4 on turnover basis.

### **Pay-roll**

The Cost Accounts Department also attend to work in connection with payment of Wages for Workmen in the Yard and keeps workmen's leave accounts.

## APPENDIX IV

*Analysis of the action taken by Government on the recommendations contained in 14th Report of the Estimates Committee (First Lok Sabha).*

1.	Total number of recommendations made	40
2.	Recommendations accepted fully by the Government—	
	No.	9
	Percentage to total	22.5%
2.	Recommendations accepted by the Government partly or with some modifications	
	No.	9
	Percentage to total	22.5%
4.	Recommendations not accepted by the Government but replies in respect of which have been accepted by the Committee	
	No.	14
	Percentage to total	35%
5.	Recommendations not accepted by Government and pursued by Committee (including those which are still under consideration by Government)	
	No.	8
	Percentage to total	20%