

C O R R I G E N D A

SIXTY-SEVENTH REPORT OF THE ESTIMATES COMMITTEE
ON THE MINISTRY OF DEFENCE.

....

Page 4, para 12, line 5, after 'which' add 'is'.

Page 5, para 15, line 5, after 'should' add 'be'.

Page 5, para 16, line 10, for 'Directors' read 'Director'.

Page 8, para 26, line 1, for 'actual' read 'actuals'.

Page 11, para 40, line 5, delete 'should'.

Page 19, para 74, line 12, delete 'which'.

Page 21, para 79, line 2, for 'Kirts' read 'Kirts'.

Page 29, para 103, line 1, for 'Government' read 'Governments'.

Page 48, S.No.13, lines 5 & 6, for 'recomemend' read 'recommend'.

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Composition of the Estimates Committee—1956-57

1. Shri Balvantray Gopaljee Mehta—*Chairman*.
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3. Shrimati B. Khongmen
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SECRETARIAT

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

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

Shri C. S. Swaminathan—*Under Secretary*.

* Resigned with effect from the 20th November, 1956.

† Died on the 6th October, 1955.

‡ Ceased to be a member upon his election to Rajya Sabha on the 13th December, 1956.

Introduction

Shri Balvantray G. Mehta,
Chairman, Estimates Committee.
No. 79(a)|ECI|56.

Lok Sabha Secretariat,
New Delhi.

Dated the 29th March, 1957.

Dear Mr. Speaker,

I have pleasure in presenting to you herewith the Sixty-Seventh Report of the Estimates Committee on the Ministry of Defence—The Hindustan Aircraft (Private) Ltd. The Committee at the sitting held today, approved the report subject to factual verification by the Ministry of Defence. As the Lok Sabha has already adjourned *sine die* and will be dissolved shortly, the Committee have authorised me to present it to you.

The report is being sent to the Ministry of Defence for factual verification, and an inquiry is also being made whether they would prefer the report to be treated as secret. The Committee have resolved that if as a result any changes are necessitated in the Report, they may be made under your directions. They also desire that you may decide on the receipt of a reply from the Ministry, whether the report or any portions thereof should be treated as 'secret' or otherwise. In case it is decided not to treat it as secret, the Committee desire that you may kindly order the printing, publication and circulation of the report under Rule 379 of the Rules of Procedure and Conduct of Business.

With regards,

Yours sincerely,
Sd/- BALWANTRAY MEHTA.

Shri Ananthasayanam Ayyangar.
Speaker, Lok Sabha.

Corrections suggested by the Ministry of Defence may be made and the Report as amended laid on the Table of the House.

Sd/- M. ANANTHASAYANAM AYYANGAR,
30. 8. 57.

I

INTRODUCTORY

(a) Importance of aircraft industry.

1. Air Power is admittedly now the most powerful, and decisive constituent of a country's Military strength. The importance of the aircraft industry in a country's strategic economy, therefore, needs hardly to be specially emphasised, particularly in a vast country like India. Further, Civil Aviation which is believed to be an off-shoot of the military aircraft industry, has itself made tremendous progress annihilating time and distance. Apart from this, the aircraft industry has vast industrial and commercial potentialities in view of the extent of raw materials and components it needs in its working. Besides, in few industries can so little raw material be converted by the genius of designers and the skill of engineers into so valuable an end product.

2. Some idea of the importance of the aircraft industry can be had from its size in U.K., where it employs in the manufacture and repair of aircraft, over a quarter million of workers. Further, in the last ten years the value of aeronautical exports including spares and accessories from U.K. amounted to over £ 466 millions. No less impressive was the variety of types produced. These ranged from turbojet military and civil aircraft to light aeroplanes and helicopters. 53 types of British aircraft were delivered to 70 countries and territories over-seas during the same period after meeting the entire internal needs.

3. As regards the U.S.A., the aircraft industry there ranks as one of the foremost strategic engineering industries employing 80,000 men and with an annual (1955 figures) output of 12,900 aircraft valued at \$ 8.4 billion, while its record was 96,318 aircraft valued at \$ 15.7 billion in the year 1944.

4. In India, however, the industry is still in an embryonic stage and is confined only to one factory, which also under the Industrial Policy Resolution of 30.4.1956, is exclusively a Government responsibility.

(b) Historical background.

5. Hindustan Aircraft (Private) Limited was established in Bangalore on the 23rd December, 1940 as a Private Limited company with an authorised share capital of Rs. 4 crores and a paid up capital of Rs. 40 lakhs contributed equally by Messrs. Walchand Hirachand and the Government of Mysore. In March, 1941, the Government of India also joined and the capital was increased to Rs. 75 lakhs, each of the three shareholders holding shares worth Rs. 25 lakhs. In June, 1942, the Government of India purchased the interests of M/s Walchand Hirachand.

6. The object of the company was initially to manufacture aeroplanes for the Government of India. In July, 1942, the policy was altered and it was decided to utilise the facilities for the overhaul and repair of tactical aircraft, engines and related accessories. The U.S. Army Air Force in India were appointed to act as advisers to the Chairman of the Board of Directors. They had also to provide the equipment and additional personnel and supplies required for the repair and overhaul programme. In September, 1943, the Commanding General, China, Burma, India Air Service Command was appointed the Managing Agent of the Company for the duration of the war. During the period 1943-45, the H.A.L. overhauled or repaired about 1,200 aircraft and 3,800 engines of different types in addition to several thousand instruments and accessories. However, after the war, the Managing Agency Agreement with the U.S.A.A.F. was terminated with effect from the 16th December, 1945.

7. The company then resumed its operations as a commercial concern. The main work done during the initial period related to the overhaul and conversion of the war surplus Dakota aircraft left behind by the U.S.A. Due to the fall in work load, the labour force was sharply reduced from about 14,000 at the peak period to about 4,000 in January, 1946. Of about 100 American personnel, only about a dozen were retained.

8. A Technical Mission from U.K. visited India in 1946 to advise the Government of India on the establishment of the aircraft industry in the country. The Mission recommended the H.A.L. as the most suitable centre for the development of the industry, and as a foundation investment on which to build for the future, since it might not be able to supply a major portion of the country's requirements for some time. It suggested that aircraft manufacturing should be undertaken under licence from a foreign firm of repute. The Mission also recommended that the H.A.L. should undertake the manufacture of specialised types of Railcoaches and Road Transport Coaches as a subsidiary 'bread and butter' industry.

9. The report submitted by the Aircraft Mission was a secret document and consequently, the action taken by the Government on the recommendations contained therein was never made public. It was however pointed out to the Committee that the main idea underlying the report was that the design and development of aircraft should be done in U.K. and that the H.A.L. should do only the assembly and gradually undertake manufacture under licence. This was but natural, as the report was submitted in pre-independence days. However, after India became independent, it was decided not to restrict the functions of the H.A.L. only to assembly but to develop it as any aircraft industry would in its early stages.

10. Since then the H.A.L. has made progress in a number of directions, particularly in the matters of the manufacture and overhaul of aircraft for the I.A.F. and of the construction of Rail Coach

bodies for the Railway Board. The H.A.L. has been producing Jet aircraft since 1951. Recently action has also been initiated, for the manufacture of jet engines for the I. A. F.

11. The present report is confined to a general survey of various matters concerning the H.A.L. However, there are certain matters on which the Committee do not consider it desirable to express an opinion on the basis of the examination undertaken by them. For instance, they do not propose to express any view on the question whether the H.A.L. has, even after the attainment of independence developed its activities in the manner in which it should have, nor on the progress of production programmes or the adequacy of future programmes. Further, the Committee did not have detailed figures of the cost of production of aircraft, and, therefore, was not in a position to examine the question of efficiency of production, economy, etc. A detailed examination of all these matters would involve study of confidential and secret data. At the same time, the Committee feel that it is necessary that these matters should be carefully examined by an agency outside the H.A.L. They observe that while several teams of experts have visited the factory to advise Government on the development of the H.A.L. and other industries in India, there has been no specific examination of the efficiency, economy, production programme, short term and long term planning from the point of view of the growing needs of the air power and civil aviation of this country. The Committee would, therefore, recommend that a high level committee should be appointed to examine all these matters in detail and to make specific recommendations thereon.

II ORGANISATION

(a) Board of Directors.

12. The H.A.L. is managed by a Board of Directors, who are to be appointed under the Articles of Association of the Company, by the two shareholders *viz.* the Governments of India and Mysore, in proportion to their investment in the share capital of the Company, which it at present 5 : 1. The present Board of Directors consists of:

1. Shri M. K. Vellodi, I.C.S., Secretary, Ministry of Defence—*Chairman.*
2. Shri S. Jayasankar, Financial Adviser, (Defence) Ministry of Finance—*Director.*
3. Air Marshall S. Mukerjee, Chief of the Air Staff—*Director.*
4. Shri J. R. D. Tata—*Director.*
5. Shri K. Narayanaswamy, Director of Industries and Commerce, Government of Mysore—*Director.*
6. Shri J. M. Shrinagesh, I.C.S.—*Managing Director.*

13. Of the five nominees of the Government of India, as many as four are Government officials. This position was stated to be mainly due to three reasons. In the first place, the H.A.L. as a new industry in India was still in its constructional and evolutionary stage, when foreign collaboration, employment of foreigners etc. were quite essential and Government authority was necessary if negotiations for these things were to be carried on fruitfully and quickly. Secondly, the H.A.L. as an aircraft-manufacturing industry was not as yet financially self-sufficient and until it became so, it was considered convenient to have Secretariat officials, who had a hand in negotiations with foreign collaborators etc. associated with the Board of Directors. Thirdly, the I. A. F. was the most important customer of the H.A.L. products. The Defence Ministry as the co-ordinating authority between the I.A.F. and the H.A.L., was therefore, represented on the Board by the Defence Secretary, the Chief of the Air Staff and the Financial Adviser (Defence) so as to help in speedier execution of work.

14. While the Committee agree that the I.A.F. as the principal user department should be represented on the Board of Directors, they do not consider it desirable that the Board should include many officers of the Secretariat. In paras 47 to 49 of their Thirty-Ninth Report the Committee had discussed the question of the desirability

or otherwise of appointing Secretariat officials as Chairman and members of the Board of Directors of Companies set up by Government. They recommend that the composition of the Board of H.A.L. should be reconsidered in the light of those observations of the Committee.

15. In this connection, the Committee feel that it would also be advisable to appoint persons with wide experience in aviation and/or steel, and/or aluminium industry to the Board of Directors. The present Board of Directors of the H.A.L. has only one such person as Member. The Committee consider that the Board should be made broad-based by the inclusion of more such persons. They feel that it should then also be possible to appoint one of them as the Chairman of the Board.

(b) Relations with Government.

16. The Defence Ministry is the administrative Ministry in respect of the H.A.L. All major policy decisions e.g. expansion programmes, new projects, delivery schedules, foreign collaboration, employment of foreigners etc. are being referred to that Ministry by the H.A.L. for the concurrence of the Government of India after approval by the Board of Directors. Questions on technical matters concerning I.A.F. works orders, Modifications etc. are referred for decision to a Technical Liaison Committee which consists of the representatives of the I.A.F., and the H.A.L. Liaison with the Mysore Government is maintained through their Directors of Commerce and Industry who has always been on the Board of Directors of the H.A.L.

17. Unlike that of the Bharat Electronics (Private) Ltd., the Board of Directors of the H.A.L. have been delegated very wide powers concerning the various affairs of the company, which they may exercise without reference to the Government of India or the Government of Mysore. Examples of some such powers are given below:

1. To borrow money for the purposes of the company;
2. To fix remuneration of Directors either for attending meetings of the Board or for performing extra services;
3. To purchase, take on lease or otherwise acquire property for the company;
4. To pay in debentures for property acquired;
5. To secure the fulfilment of contracts by mortgage;
6. To appoint, remove or suspend officers and others and to fix their salaries and emoluments, including bonus, pension, gratuity;
7. To appoint Trustees;
8. To invest money.
9. To give security by way of indemnity;
10. To create Provident Fund etc.

18. The Committee welcome the delegation of powers to the Board since business enterprise of the size and importance of H.A.L. cannot progress and yield results unless it functions on business principles. Therefore, besides giving large powers to the Board, it is also necessary to see that the climate for the full exercise of such powers is provided. The Committee would in this connection refer to an instance when the Board of Directors after considering the possibility of slackness of work during a certain period decided that the Board of Management might seek additional work for that period but accept it only with the approval of the Defence Ministry. The Committee feel that while necessary safeguards might be provided by requiring in matters which might concern the I.A.F., approval of the Board of Directors of which the Chief of Air Staff is also a member, procedures which would add to delays and remoteness of control should be avoided.

(c) Board of Management.

19. A Board of Management has been appointed for the more direct and convenient management of the affairs and work of the company and consists of the Heads of Departments and the Finance Manager to which specific powers covering a wide range have been delegated. The Committee feel that such delegation is necessary for the smooth and expeditious running of the affairs of industrial undertakings.

20. The Committee also welcome the special position given to the Finance Manager, who has an important and to some extent independent role to play. This has been ensured in three ways. Firstly, the presence of the Finance Manager is necessary for holding any valid meeting of the Board of Management. Secondly, all questions affecting finance and accounts have to be decided after consultation with the Finance Manager. Thirdly, he has the right to require any resolution passed at a meeting of the Board of Management to be kept in abeyance pending a reference to the Board of Directors and their decision thereon.

(d) Organisational Set-Up.

21. The charts showing the present organisational set-up of the H.A.L. are given at appendices I, II, III, and IV. The Organisation consists of four important divisions, namely, the aircraft division, the engine division the railcoach division and division dealing with the common services each of which has been placed under a Deputy General Manager. Further three of the four divisions have functional heads within them while the Deputy General Managers are more or less coordinating links between the functional heads and the General Manager. The Committee feel that since the functional heads are expected to advise the General Manager on all important questions technical or otherwise, the necessity of placing additional functionaries in the form of the Deputy General Managers requires to be examined afresh.

III

FINANCE, ACCOUNTS AND AUDIT

(a) Capital

22. The authorised capital of the H.A.L. is Rs. 4 crores while the paid up capital is Rs. 3,80,24,900 of which the share of the Mysore Government is Rs. 60,08,300. The Committee understand that the paid up capital of the company is being increased to Rs. 7 crores, all of which will be provided by the Government of India, since the Mysore Government have expressed their inability to contribute further to the capital.

23. The H.A.L. is, at present, one of the very few industrial undertakings (excluding, the River Valley Projects) under the Government of India, in which a State Government has invested capital. The Committee consider it a healthy feature to associate State Governments in Central enterprises especially those constituted under the Companies Act, since such association would enable the State Government concerned to take greater interest in the enterprises located within its territory.

(b) Expenditure

24. The budget estimates and actuals of expenditure for the three years ending March, 1956 are given below:—

	(In lakhs of rupees)		
	1953-54	1954-55	1955-56
Budget estimates	602.86	651.26	568.50
Actuals	500.51	544.07	528.43
Shortfall	102.35	107.19	40.07

25. The break-up of the total shortfall of expenditure to the extent of Rs 249.61 lakhs over the 3 years period from 1953-54 is as follows:—

	(In lakhs of rupees)		
	1953-54	1954-55	1955-56
Operating & other expenses	(+)15.78	(+)12.52	(—)5.19
Sundry direct charges.	(—)6.16	(—)4.79	(—)7.04
Direct materials	(—)111.97	(—)114.92	(—)27.84
Net shortfall:	102.35	107.19	40.07

26. Thus, the variation between budget estimates and actual so far as it relates to Direct Materials has been very large, and was stated to be due to reduction in the production and the 'Sales' programme. The I.A.F. is the principal customer of the H.A.L. and any revision in the I.A.F. programme after it has been indicated to the H.A.L. naturally upsets budget estimates of the latter. The Committee, therefore, feel that it is necessary that the I.A.F. should plan their programme of repair, overhaul and purchase, affecting the H.A.L., in a realistic manner so as to obviate the necessity of major revisions subsequently.

27. Although there has been an overall decrease in the shortfall of the actual expenditure as compared to estimates in all the three years commencing from 1953-54, there has been an increase under Operating and other expenses in 1953-54 and 1954-55. This, it was explained, was mainly due to adjustment relating to gratuity and enhancement of the rates of dearness allowance.

(c) Income

28. The budget estimates, actuals and the variation in the income of the H.A.L. for the last three years are as below:—

	<i>(In lakhs of rupees)</i>		
	1953-54	1954-55	1955-56
Budget estimates	552·65	663·31	575·33
Actuals	472·21	521·78	513·33
Shortfall	80·44	141·53	62·00

29. The break-up of the shortfall is as follows:

L.A.F.	<i>(In lakhs of rupees)</i>		
	1953-54	1954-55	1955-56
Aircraft and engine overhaul	(—)4·39	(—)25·67	(+)17·13
Aircraft assembly/ manufacture	(—)80·58	(—)128·66	(—)61·00
Army and Navy	(+)0·48	(+)2·12	(—)3·80
Railway Board	(—)9·21	(—)10·24	(—)14·67
Airlines and other customers			
Aircraft and engine overhaul	(+)24·90	(+)10·84	(+)3·01
Bus bodies and kits	(—)10·62	(+)10·39	(—)1·45
Loco. spares and miscellaneous	(—)1·02	(—)0·31	(—)1·22
TOTAL:	80·44	141·53	62·00

30. The figures given above show that in respect of income also, work relating to the I.A.F. largely accounts for the wide variations between estimates and actuals in all the three years.

31. The Committee understand that the shortfall under Railway Board is mainly due to short delivery of under-frames for railway coaches and the shortage of steel sheets and rolled sections. They suggest that the Railway Board should be approached to introduce a machinery to ensure timely delivery of under-frames since any delay in delivery causes idle labour with consequent loss to the company.

(d) Analysis of important items of Income and Expenditure

32. It will be observed from the statements in paras 24 and 28 that the shortfall in actual expenditure as compared to the budget estimates was on a lower scale than the shortfall in income. Shortfall in expenditure during the last three years came to a total of Rs. 249.61 lakhs. Further, shortfall of expenditure under Direct Materials has consistently been much higher than that under other main heads of expenditure including labour as may be seen from the figures given in para 25. This indicates that expenditure on Direct Labour is disproportionate to that on Direct Materials. The representatives of the Ministry admitted the fact which they stated was due to idle labour in the H.A.L., but explained that in the nature of things existing in an aircraft industry, this was to some extent inevitable. The Committee will have occasion to discuss at length this matter in a subsequent chapter of this Report, but would like to emphasise here that every effort should be made to minimise such unremunerative expenditure.

33. The ratio of certain items of expenditure to total expenditure over a period of three years from 1953-54 is shown below:—

	<u>1953-54</u>	<u>1954-55</u>	<u>1955-56</u>
1. Salary and Wages	27.5	27.4	30.1
2. Repairs & Maintenance . . . . .	.99	1.0	1.3
3. Travelling . . . . .	.38	.44	.71
4. Miscellaneous Operating Ex- penses	3.6	5.4	5.8
5. Shop supplies . . . . .	.9	.89	.9
6. Materials used	61.7	42.9	42.1

34. It will be seen that except for the year 1953-54, the expenditure on materials has been as low as 42% of the total expenditure. The Committee understand that the reason for the low percentage lies in the fact that for overhaul work, the materials form only 25%, whereas for manufacture, they form 50%. As the overhaul work handled by

the H.A.L. is quite substantial, the percentage of expenditure on materials was stated to be rather low, as compared to the total expenditure.

(e) Outstanding receipts

35. The Committee notice from the balance sheet as on 31st March, 1956, that a sum exceeding Rs. 1½ crores was owed to the H.A.L. by its various customers. They also understood that there used to be considerable delays in receiving payment even from the Indian Air Force, Indian Airlines Corporation and others. They were, however, told that recently there had been frequent consultations between the finance officers of the different departments as well as of the undertakings concerned and that the position had considerably improved. However, the Committee find that as on 31st December, 1956, bills to the tune of Rs. 80 lakhs were still outstanding against the Indian Air Force and about Rs. 21 lakhs against the Indian Airlines Corporation. They further notice that the outstandings against the Indian Air Force constituted over 30 per cent of the estimated receipts from the Indian Air Force for 1956-57 while the outstandings against the Indian Airlines Corporation worked up to nearly 40 per cent of the estimated receipts from the airlines and other customers for the same year. However, the Committee, consider that the outstandings are still very heavy. They understand that the H.A.L. has a cash credit account with the State Bank of India and draws upon it on occasions when the ways and means position becomes difficult. The Committee, therefore, consider that it is very necessary that the H.A.L. should obtain prompt payments from its customers. They, therefore, recommend that the H.A.L. in consultation with the I.A.F. and the Indian Airlines Corporation should draw up a procedure for obtaining quick payments for the work done.

(f) Provision for bad and doubtful debts

36. The provision for bad and doubtful debts amounts to Rs. 10,78,406 at the end of the year 1955-56. The doubtful accounts may be broadly classified as follows:—

A. Airlines in liquidation as per detailed below: Rs. 9.89 lakhs

(i) Ambica Airlines Ltd.	Rs. 5.40 lakhs
(ii) Indian Overseas Airlines Ltd.	Rs. 2.51 lakhs
(iii) Jupiter Airways Ltd.	Rs. 1.98 lakhs

37. The Committee understand that these outstandings pertain to the immediate post-war years. When the war ended, the H.A.L. was left without any scheme or programme of work. There was not enough work even for the reduced labour strength of 3,000. The morale of the workers became low and idle time was considerable. Work was, therefore, sought and accepted from the newly-formed airlines without insisting on advance payments or "cash against delivery"

terms. The three airlines in question subsequently suspended operations and the dues from them, became doubtful. It was explained to the Committee that the total dues from these three airlines initially amounted to Rs. 59·97 lakhs (Ambica: Rs. 15·86 lakhs, Indian Overseas: Rs. 27·15 lakhs and Jupiter Rs. 16·96 lakhs) of which Rs. 9·89 lakhs now remain outstanding and that there is every prospect of the balance of Rs. 1·98 lakhs due from the Jupiter Airways Ltd. being substantially realised. As regards the other two airlines, however, there have been no hopeful indications.

As regards remedial action to prevent such cases, the Committee were informed that the system of accepting orders only against advances had been introduced.

B. Foreign Debtors: Rs. 70,538/-

38. (I) N.W. Railway, Pakistan Rs. 1,431/-
 (II) Air Union Inc. U.S.A. Rs. 69,107/-

The dues from the N. W. Railway, Pakistan relate to prepartition period and have been registered with the Central Claims Organisation, Government of India. The claim against Air Union Inc., U.S.A. is in respect of supply of defective aero-engine bearings. India Supply Mission, Washington, to whom the matter was referred for appropriate action advised that the party was practically insolvent and its legal advisers were of the opinion that it would be fruitless to initiate legal proceedings.

C. Court Cases: Rs. 12,803/-

39. Decrees were obtained in 9 Court Cases and outstandings partially realised in some cases. In 4 of these cases involving Rs. 8,899 the judgment debtors have been absconding. In regard to the other execution proceedings are stated to be continuing.

D. H.A.L. Employees' Association Rs. 5,087/-

40. These dues pertain to bus and van services obtained by the Employees' Association between 1949 and 1951. The Association has maintained that these services should be free to which the management have not agreed.

The Committee should suggest that active steps should be taken to reach a finality in respect of these transactions.

(g) Audit

41. The H.A.L. is a limited company formed under the Companies Act. Accordingly, their accounts are audited by Auditors appointed by the Government of India on the advice of the Comptroller and Auditor General of India. Under the Provisions of the Companies Act, results of audit conducted by the company's Auditors are made

available to the Comptroller and Auditor General who does what might be called propriety audit. The functions of the company's auditors and the Comptroller and Auditor General are statutory and are also complementary to each other.

42. There is a combined Finance and Audit Section under the charge of a Dy. Controller of Defence Accounts attached to the H.A.L. for the purpose of scrutinising the claims preferred by them in respect of services rendered to the Defence Services. This Section plays a dual role of carrying out the audit checks which normally devolve on the Defence Accounts Department, as well as certain financial and cost checks on behalf of the Ministry of Finance (Defence). As mentioned earlier, the accounts of the H.A.L. are subject to statutory audit by professional auditors and the Comptroller and Auditor General of India. The checks carried out by the Defence Accounts Department are, it is understood, essentially through the "Courtesy" and explicit permission of the H.A.L. It may be stated in this connection that payments to the H.A.L. for the various jobs handled by them for the Defence Services are made either on a 'Cost plus' basis or at a specified all inclusive rate agreed to in the contract.

43. The Railways are one of the important customers of the H.A.L. In respect of orders for the building of railway coaches, the final price is fixed by negotiation. This is preceded by a cost audit of the escalator claims from the H.A.L. The Chief Administrative Officer, Integral Coach Factory and his Dy. F.A. and C.A.O. are entrusted with the responsibility of audit in this respect. As, however, the last cost audit was conducted in 1952 and as no further escalator claims have since been preferred by the H.A.L., the necessity for posting Railway Accounts staff to the H.A.L. during the last few years has not arisen.

44. Thus, in addition to statutory audit by the company auditors and the Comptroller and Auditor General, the claims preferred by the H.A.L. against the Defence Services and the Railways are also scrutinised by their respective Accounts Departments. The H.A.L. may, therefore, be said to have four different audits or checks of accounts imposed on them, two statutory and two non-statutory. In justification of the audit by the Defence and Railway Accounts Departments, it was explained that such procedure was nothing unusual, because the purchaser had always the right to check the cost before he paid the final bill, where the system of payment was on a cost plus basis.

45. The Committee feel, however, that in respect of transactions between different departments or undertakings of Government, it is not necessary to multiply these checks and that it should be possible for the different departments or undertakings to accept a certificate from one agency. They would, therefore, suggest that the matter should be examined by the Ministry of Defence in consultation with the Ministry of Finance, Ministry of Railways and the Comptroller and Auditor General.

46. As regards the payment for coaches manufactured for the Railways, the Committee understand that final payment for the first 123 coaches (against 1950-51 order) only has so far been made. The basic price for the next 657 coaches had been fixed at a certain figure with wages and material escalator clause, the base date being the 1st January, 1952. The Committee understand that, provisional payment for these 657 coaches as well as for the subsequent ones has not yet been finalised, in the absence of any claim from the H.A.L. under the escalator clause. As the finalisation of payment is essential for a true picture of the accounts, the Committee recommend that immediate steps should be taken towards that end.

(h) Costing

47. It is understood that a comprehensive system of costing is in force in the H.A.L. A note describing that system will be found at Appendix V. The Committee learn that the present system of costing was introduced after a study of the costing systems obtaining in similar factories abroad. It was also examined by the Chief Cost Accounts Officer, Ministry of Finance at the instance of the management of the H.A.L. Under the system in operation, progressive and final costs are available separately for each order or job under the heads, labour, materials, overheads and other charges during the following month. Actual costs, after they are available, are compared with the estimates and variations investigated.

48. The H.A.L. being practically a monopolistic concern especially in the aircraft division, advantages of comparison of costs with other concerns are not available. The Committee, therefore, consider it all the more necessary that the costs should be carefully analysed and kept under check so that maximum efficiency could be attained.

IV

AIRCRAFT PRODUCTION

A. Manufacture

(a) *War-time position*

49. When the H.A.L. was founded, its original programme was for the assembly of Harlow Trainers, Curtiss Hawk Fighters and Vultee Bombers. The first plane to be assembled was a Harlow PC-5, which made its maiden flight in August, 1941. Soon after the start of the Harlow programme, work on the Curtiss Hawk Fighters was also taken in hand and a production line was established. Initial flight of the first Curtiss Hawk was successfully made in July, 1942. The first complete design and manufacture by the H.A.L. was that of 10-place Glider, using indigenous materials. The maiden flight was in August, 1942. As the Second World War spread to Middle East countries, the U.S. Army Air Force took over the factory and transformed it into the largest repair/overhaul base in the East known as the 84th Air Depot. Consequently on this transformation, the assembly and manufacture of aircraft taken up earlier were suspended for the time being.

(b) *HT-2 Aircraft*

50. In 1948, the H.A.L. undertook the design and development of a modern all metal basic trainer aircraft, HT-2, the specifications of which incorporated many new features. The prototype made its first maiden flight on the 13th August, 1951. The first Type Certificate ever to be granted in India was awarded to this aircraft on the 3rd January, 1953.

51. The HT-2 is a primary two-seater trainer used by the Indian Air Force and the civilian flying clubs. The I.A.F. have accepted the HT-2 as the basic trainer aircraft for their pilots and are the most important customers of the H.A.L. in this respect.

52. The Committee understand that so far orders for a few HT-2s have been received from the D.G.C.A. for use as trainers in the civil aviation training centres. The Committee suggest that active steps should be taken to induce the civil aviation authorities as well as the Flying Clubs to go in for these trainers, designed and made entirely in India.

53. A demonstration tour of HT-2 in the South East Asian countries has indicated that this aircraft may have a market outside India. It is understood that it has recently been agreed under the terms of the Colombo Plan to send an HT-2 to Singapore. The aircraft would

spend about a year there to enable Singapore and Malayan flying clubs to get accustomed to it. Flying training and engineering assistance would be extended to the clubs and for this purpose a flying instructor and an engineer would accompany the plane. It is significant that this is the first time that India will be giving aircraft engineering assistance to a foreign country.

54. The Committee feel that energetic steps should be taken to popularise the HT-2 trainer aircraft and to expand the market for it. There is a great advantage in building such aircraft because whatever the type, a trainer aircraft can continue in service for several years. A production line of such aircraft would, therefore, mean continuous work over a very long period, and any change to a more modern type could be planned at convenience.

55. However, while for civil training a piston-engine aircraft might be suitable for the present, the Air Force might have to think in the near future of switching over to jet training right from the start. The Committee suggest there should be full co-ordination between the H.A.L. and the I.A.F. in deciding the future policies.

(c) Other Projects

56. Among the projects carried out so far by the H.A.L. are the assembly and manufacture under licence of Prentice trainer aircraft, and Vampire jet fighters, the engines having been imported from abroad. Recently, it has also been decided to manufacture under licence the Gnat fighter Aircraft and the Orpheus jet Engine. The Committee hope that the project will be executed expeditiously.

57. The Committee observe in connection with certain projects that there has been some delay in taking decisions. Aircraft production requires that the projects should be prepared well in advance so that when one assembly line is exhausted another may be taken up without a gap and consequent idle time. It was explained that great care had to be exercised in selecting new aircraft. Further it was stated that the gaps in the line of aircraft production, whatever their duration, were a common feature in the aircraft industries even in advanced countries. The Committee recommend that in future care should be taken to plan the requirements sufficiently in advance, so as to avoid causing idle capacity and idle labour in the H.A.L. for considerable periods and consequent loss.

58. The Committee would in this connection also refer to para 73 of their Forty-third report and recommend that an early decision should be reached about the manufacture of a medium sized transport aircraft which would be useful for both Civil Aviation and the Air Force. They feel that in such a matter it might be preferable to start manufacture under licence.

(d) Raw materials and components

59. The Committee understand that special types of steel were among the raw materials required for aircraft manufacture, which

were imported from abroad at present. They would suggest that the steel mills that are being set up should be given advance information of the special types of steel that will be required and the quantities thereof, in order that they may consider the practicability and economics of making such steel in this country.

60. It should be the aim of the H.A.L. to ensure that every part, instrument and accessory required in its manufacturing programme, is manufactured in this country. This is particularly important since the H.A.L. is an industry which is vital to the defence needs of the country and since its manufacturing programme would be very much hampered if such instruments or special equipment became unavailable in an emergency. The Committee, would, therefore, recommend that capacity should be expeditiously developed for the indigenous manufacture of such items by having a number of sub-contractors or sub-manufacturers aiding the H.A.L. For this purpose, they would suggest that the H.A.L. should keep in touch with the Developmental Wing of the Ministry of Heavy Industries and should also be assisted by a Committee consisting of representatives of industries and production units both in the public and private sectors, which are likely to assist in this matter. The Committee further recommend that the question of stockpiling should also be examined expeditiously with particular reference to the recommendations made by the Rolls Royce Engineers.

(e) Delay in procurement of Stores

61. The Committee understand that there had been some delays in the procurement of stores by the H.A.L. and that, as a result, the progress of work was hampered in 1955-56. To prevent such a situation arising in future, the Committee recommend that the system of provisioning of stores should be such that it should be able to meet all contingencies which might cause delays and that, wherever necessary, the reserve limit of stores may be revised and provision reviews carried out sufficiently in advance. Further, the machinery for this purpose should also be flexible and capable of adopting a policy of purchase in changing situations.

62. Apart from the delay in delivery, there have also been cases where delay occurred in placing orders. To obviate delay in placing and progressing orders, the Board of Directors of the H.A.L. have recently decided on the setting up of an H.A.L. Cell in the D.G.I.S.D., London. The Cell will be responsible amongst other things, for making overseas purchases on behalf of the H.A.L. The Committee desire that it should be examined whether delays occasioned by consultations before finalising orders to be placed on overseas suppliers could be curtailed by enhancing the powers vested in the Cell.

B. Repair and Overhaul

63. The H.A.L. has extensive arrangements for repair and overhaul of aircraft and engines of different types and is the largest factory for these purposes in the East. During the period 1943-45, the H.A.L.

overhauled/repared about 1,200 aircraft and 3,800 engines of various types in addition to several thousand instruments and accessories. During the post-war years, the H.A.L. reconditioned about 100 Dakotas for conversion as passenger airlines.

64. At present, the H.A.L. carries extensive repair, maintenance and overhaul work for the I.A.F. and the civil airlines. The number of aircraft overhauls and engine overhauls done by the H.A.L. for Indian Airlines Corporation and for other civil operators, during the last three years is given below:

Aircraft Overhauls	1954	1955	1956
I.A.C.	12	14	21
Other Customers	20	20	18

Engine Overhauls	1954	1955	1956
I.A.C.	109	12	122
Other Customers	69	95	107

65. The Committee understand that delays used to take place in the delivery schedules of the I.A.C. aircraft received for overhaul. This was stated to be due to some difficulty in obtaining documentation and technical clearance from the I.A.C. by means of correspondence. The matter was discussed between the Officers of the H.A.L. and the I.A.C. and in order to expedite matters a liaison Engineer from the I.A.C. has been posted at the H.A.L. The Committee hope that sufficient powers have been given to the Liaison officer to enable him to settle matters on the spot.

66. The H.A.L. is at present manufacturing certain types of spares required for the overhaul of airframes, engines, propellers, bearings etc. In this connection, the Committee would refer to para 148 of their forty-third report. In respect of Dakotas, which are in use both in the I.A.F. and in civil airlines and which are likely to be in use for some considerable time, it appears that there is a shortage of certain types of spare parts. They suggest as recommended in the earlier report, that the question of manufacturing the spare parts in short supply should be examined very early.

C. Branch Factory at Barrackpore

67. In April, 1951, the H.A.L. opened a branch at Barrackpore, Calcutta, for overhaul and repair of aircraft as well as for the sale of spare parts. This was considered necessary in order to avoid the loss of time and expenditure in ferrying the aircraft to be overhauled all the way to Bangalore and to separate overhaul work from the manufacturing work.

68. The Barrackpore factory is not an independent factory, but forms distinct unit of the main factory. The overhaul work is distributed between Bangalore and Barrackpore by the main factory. Spares required for the work at Barrackpore are supplied from the main factory, and its finances and administration are controlled by the Head Office. Although the accounts of the branch factory are maintained separately to a certain extent, they are not treated as separate, but merged in the accounts of the main factory while finalising the annual accounts under the Companies Act. The Committee consider it necessary that for the branch factory a profit and loss account should be drawn on a Proforma basis. Costing should also be done separately in respect of the jobs done by the Branch. The Committee feel that only thus could the efficiency of the Branch factory be watched and improved. They, therefore, suggest that suitable steps should be taken immediately for the purpose. This will be all the more necessary when more such branches are opened.

69. The Committee understand that there is further scope for opening small branch overhaul units elsewhere in the country. The Committee recommend that as and when needs arise, more such overhaul units should be opened in different parts of the country.

70. The Committee understand that the maintenance and overhaul work is entirely different in nature from the work of aircraft manufacturing. At present, the organisation at Bangalore undertakes both while the unit at Barrackpore does only overhaul work. The Committee were informed that the question of gradually transferring the overhaul work to Barrackpore so as to concentrate on the manufacturing work at Bangalore was under consideration. They hope that an early decision in this matter will also be taken.

V.

COMMERCIAL PRODUCTION

A. Railway Coaches

71. As mentioned earlier, one of the recommendations of the U.K. Aircraft Mission was that the H.A.L. should take up some complementary manufacture in addition to the manufacture of aircraft which was to be the main business. A start was made in 1947 with the manufacture of all-metal rail coaches for the Indian Railways, employing aircraft construction principles. 830 coaches have so far been turned out to model 407 in addition to another 104 coaches to various other models. These are fully furnished Class III coaches of conventional type for use on B. G. lines of the Indian Railways. Under the existing arrangement, the underframes for the coaches are supplied free by the Railways.

72. The price of the first 123 coaches to model 407 was Rs. 99,000 each. The price from the 124th coach onwards has been provisionally fixed at Rs. 34,731 each. The total price of a coach manufactured by the H.A.L. to model 407 thus comes to Rs. 1,37,731 (provisional) at present as per details given below:

	Rs.
(i) Fully furnished coach body shell	94,731
(ii) Standard underframe, ex-Belgium (at present being used for these coaches)	38,000
(iii) Wheels and axles	5,000
TOTAL	1,37,731

73. The Committee learn that the general lines of the prototype of a Military coach, developed by the H.A.L. have been accepted by the Railway Board and an initial order for 60 such coaches is in the process of execution.

74. The H.A.L. is expanding the railcoaches production from 180 coaches per year to 300 per year and is switching over to the integral type B.G. coaches. For this purpose a technical collaboration agreement has been entered into with Maschinenfabrick—Augsburg-Nuernberg (M.A.N.), West Germany. The new project will call for an investment of about Rs. 4 crores. It is understood that during the first five years 500 integral coaches will be produced at the H.A.L. in addition to a certain number of coaches of the conventional type. The H.A.L. intends to phase out the manufacture of B. G. conventional type coaches concurrently with the phase in of the integral type, decrease in output of the former being accompanied by increase in output of the latter, which, which, it is intended to step up to, and stabilise at, 300 per annum.

Agreement with the M.A.N.

75. The Agreement with the M.A.N. referred to earlier was signed on the 21st August, 1956 and is to remain in force for a period of 5 years from that date. Under the agreement, the M.A.N. is to render all assistance in planning the layout and equipment of the H.A.L. factory, for an annual output of 300 B.G. Class III coaches for use only by the Indian Railways. The M.A.N. will also supply all manufacturing information to the H.A.L. and assist in the selection, procurement and inspection of machinery and tools. They will further procure the services of Engineers or qualified staff to train at its Works in the West Germany technical personnel from the H.A.L. On the expiry of the initial period of five years of the agreement M.A.N. patent rights, documents, drawings, specifications, data etc. supplied by the M.A.N. will become the property of the H.A.L.

76. The coaches to be supplied by the M.A.N. under the terms of the agreement will be manufactured by them mostly at their works in Germany. The Committee understand that the first integral coach to be manufactured at the H.A.L.—but not the 100 per cent. of it—will take another 5 years and that the target of 300 coaches per annum is likely to be achieved only in the sixth year.

77. The Committee understand that the integral coaches to be supplied by the M.A.N. will be of a design different from that at present being produced at the Perambur factory. A detailed comparison of their cost may not, therefore, lead to a reliable conclusion. The estimated cost of a coach manufactured in the I.C.F. Perambur with an investment of Rs. 7.3 crores and a target capacity of 350 coaches, per annum is given below:

	<u>1956-57</u>	<u>1957-58</u>
<i>Unfurnished</i>	<i>(In thousands of rupees)</i>	
(a) Assembled at ICF from knocked down components of Schlieren	1,91	1,91
(b) Assembled at ICF from components in ICF	1,72	1,52
(c) Cost of furnishing each coach, when full production stage is reached	63	—

As against above, cost of an integral coach to be manufactured by the H.A.L. is anticipated to be between Rs. 1 1/2 lakhs and Rs. 2 lakhs.

78. The building of integral coaches is a new venture in India. Foreign collaboration and assistance are as such indispensable at the initial stage. The agreement with the M.A.N. is for 5 years. It provides not only for the supply of manufacturing information to the H.A.L. but also for training to the technicians here as well as abroad. These are opportunities of which maximum advantage should be taken so that after the agreement period is over the H.A.L. may be in a position to manufacture these coaches without the assistance from any foreign body. The Committee hope that no effort will be

spared to make a success of the agreement bearing in mind the difficulties encountered in working similar agreements elsewhere as well as the comments made in Audit Reports, P.A.C. Reports, Estimates Committee Reports etc. and if possible also to improve in the targets laid down so far.

B. Bus Bodies

79. The H.A.L. made a substantial contribution to the Motor Transport industry by producing pre-fabricated bus body kits, which could be easily assembled by the operators in their own small workshops. Till now, the H.A.L. manufactured 1,374 bus kits of various models and designs.

80. Initially when the H.A.L. took up the programme of bus body kits manufacture, it was thought that they would market the kits for all types of chassis. Consequently, they produced fairly large quantities of the kits. A number of small workshops were also building bus bodies, employing old methods of wood and angle iron construction, and these, though not every durable, found favour with road transport operators wishing to place additional vehicles on the road in short time, even at the cost of lower life of the bodies.

81. This resulted in severe competition, and the H.A.L. therefore changed their plans to concentrate on larger and specialised fields. In doing so, they developed standard bus bodies for Leyland Worldmaster, Leyland Comet, Tata Mercedes Benz and Dodge Fargo chassis, these being used by principal and reputed operators like BEST, Bombay; Government Road Transport, Madras; Mysore Government Road Transport; West Bengal State Transport; Rajya Transport, Bihar; D.R.T.A., New Delhi, etc., who it was stated value the standard, specification and durability of the H.A.L. bus kits. To cater to the requirements of these established road transport organisations, the H.A. L. built up stocks of basic bus body kits, and solicited orders on the basis of supply ex-stock.

82. The Committee understand that it is now the policy of the H.A.L. to taper off the bus body business gradually, on account of development plans for the manufacture of integral railcoaches. The H.A.L. is primarily intended for manufacturing aircraft. The bus body building is only a complementary industry for which sufficient capacity exists elsewhere. Further, from the financial point of view also the bus body manufacture has not always been a profitable concern as will be seen from the figures given below:—

	1953-54	1954-55	1955-56
	(In thousands of rupees)		
Sales	13,23	28,94	13,34
Cost of sales	11,92	28,76	15,29
Profit/Loss	1,31	18	(—)1,95

The Committee therefore feel that the H.A.L. might concentrate on aircraft manufacture.

VI

(A) Recruitment

PERSONNEL MATTERS

83. The recruitment of staff is effected as follows:--

- (a) Through Employment Exchange;
- (b) Through Ex-servicemen's Associations; and
- (c) By advertisement in the Press.

The recruitment is on all-India basis, though for lower posts, the bulk of the applicants is from the South. Applicants for posts below the rank of Assistant Supervisors are trade-tested by the Trade Testing Officer of the H.A.L. and by the head of the Department requiring their services to assess their skill and suitability and are employed on their recommendations. The applications received against advertised posts are screened and candidates who conform to the requirements are interviewed by the Staff Selection Committees. The H.A.L. has different Staff Selection Committees for different grades and types of appointments. For appointment in the rank of Section Supervisors and above, the H.A.L. co-opts representatives from the Union Industries in Bangalore to the Staff Selection Committee.

84. 75 per cent. of the vacancies in all ranks upto Chief Supervisors are reserved for the employees of the H.A.L. and 25 per cent. are filled by outside candidates. For the vacancies of Chief Supervisors and above there is no reservation. When vacancies of Chief Supervisors and above have to be filled, they are advertised in the press and applications from outside candidates and from the serving employees are considered by the Staff Selection Committee and a selection is made.

85. No specific reservation has been made for scheduled castes and scheduled tribes, but preference is given to such candidates in filling up these vacancies if they are suitable. Employees belonging to scheduled castes constitute 6.4 per cent. of the total strength and those of the scheduled tribes about 2.7 per cent. The Committee recommend that greater efforts should be made to increase the percentage of employees belonging to scheduled castes and scheduled tribes and for this purpose there should be regular reservations for them.

(B) Training

86. The H.A.L. has an Apprentice Scheme under which 20 boys between the ages of 16 and 18 who have passed S.S.L.C. Examination

are recruited every three months and given training for three years. The first six months training given is in the Occupational Institute, Bangalore, while the balance of 2½ years is spent in the various departments of the factory. These apprentices live in a hostel provided by the H.A.L. where they are given talks, lectures etc. on technical subjects. Upto now, the H.A.L. has completed the training of 82 apprentices and 58 apprentices are now under training. When the training is over, they are absorbed in the factory in a semi-supervisory cadre.

87. The H.A.L. has embarked on an ambitious expansion programme. This will necessarily call for more technicians every year. Moreover, as manufacture of aircraft, aero-engine and aeronautical accessories become more and more complicated, the standard of technicians has to be raised. The question of finding suitably trained technicians, therefore, assumes very great importance.

88. All big manufacturers in technically advanced countries have their own apprentice training schemes which are regarded as one of the important features in their factory set-up.

The whole object of an apprentice scheme within a factory is to make certain that the trainees are brought up in the ideas of the factory, its spirit and its working system, so that by the time they have completed their apprenticeship they would have grown up in the right tradition and would naturally become its loyal servants, and develop an *esprit de corps*. To rely on institutions outside the control of the H.A.L. for supply of technicians would not obviously serve this end.

Apart from this there is also the risk of the training given being not upto the requisite type and standard. With greater developments in their programme of manufacture, the H.A.L. would have to make sure of the technical competence of their employees and of their fitness in all respects for the job in which they are engaged. For this purpose, it is necessary that all the persons should be trained by H.A.L. itself and that there should not be excessive dependence on other institutions.

89. The Committee consider the existing scheme under which only 80 apprentices are recruited in a year for training as utterly inadequate. They are also surprised to learn that only a small number of 82 apprentices have so far completed their training in the H.A.L. Further about 10 trainees were annually obtained from the Artisans' Training School, Ambarnath, though there was proposal to increase it to 100 from 1960 onwards. The inadequacy of the existing training scheme will also be borne out by the fact that the H.A.L. will be required to augment and replenish the strength of its technicians every year not only to meet the requirements of the expansion programme but to maintain the present level of activities as well. The committee consider that even replacement of normal wastage

would necessitate the recruitment of about 300 new technicians every year. As the training is spread over a period of three years, 900 apprentices will have to be put under training at the same time. Allowance might also have to be made for wastage at the rate of about 10%. The Committee feel that recruitment of 165 trainees can be conveniently made at six monthly intervals; so that there are two intakes and correspondingly two absorptions into the factory each year.

90. Well-trained technicians are always of value especially in that country which is endeavouring to increase industrialisation in many spheres but is short of technical staff. The Committee, therefore, do not apprehend any danger on account of H.A.L. expanding their training programmes.

Any expenditure on apprentices is virtually an investment on technical talent for use of the factory in the future. They feel that it is worth-while spending sufficiently to ensure that the apprentices are well-trained.

91. The Committee learn that the H.A.L. will shortly be introducing a scheme by which they will train 360 welders in about three years' time, to meet the requirements of the integral coach project.

The scheme will be implemented in stages. Thirty boys will be recruited every three months and they will be trained for a period of two years.

While the Committee appreciate this as a move in the right direction, they recommend that the possibility of providing suitable training to artisans in other trade groups may also be explored so that the entire requirements of the H.A.L.'s technical hands may be drawn from the persons trained by them.

92. The Committee understand that the H.A.L. had experienced some difficulty in getting suitable aeronautical engineers. To overcome this, they recruited ordinary engineering graduates and gave them training in aeronautical work.

They were put to the design department and learnt the job while actually working on it. The results obtained were stated to be satisfactory.

The Committee realise that in the existing circumstances of dearth of qualified engineers, the H.A.L. had no other way but to adopt this course. They would, however, suggest that the H.A.L. should give an indication of their requirements of aeronautical engineers over a period of, say, five years, to the Ministry of Education so that the latter may see at the time of screening applications from intending candidates for study overseas that an appropriate number took up the subject of aeronautical engineering in important institutions, so as to provide a source from where H.A.L. can recruit their future aeronautical engineers.

(C) Resignations

93. The Committee notice that there has been quite a large number of resignations of staff from the H.A.L. during the recent years. Details of categories of officers and staff who resigned during the last three years is given below:

1. Contract Personnel (Foreign)	. . . . .	1
2. Senior Section Supervisors	. . . . .	2
3. Section Supervisor	. . . . .	1
4. Supervisors	. . . . .	13
5. Assistant Supervisors	. . . . .	12
6. X-Ray Assistant	. . . . .	1
7. Inspectors	. . . . .	42
8. Draftsmen and Tracers	. . . . .	41
9. Planners	. . . . .	3
10. Clerical Staff	. . . . .	59
11. Progress Staff	. . . . .	6
12. Maistries, Helpers, etc.	. . . . .	32
13. Others	. . . . .	19
14. Watch & Ward Staff & Fire Crew	. . . . .	7
15. Group Leaders	. . . . .	11
16. Mechanics	. . . . .	386
	TOTAL	<u>636</u>

94. The number of resignations grouped according to the reasons given for resignations is as below:—

Reasons	Year			TOTALS
	1954	1955	1956	
1. For better prospects	68	98	66	232
2. Domestic Reasons	48	93	77	218
3. Personal Reasons	40	43	55	138
4. Medical Reasons	15	22	11	48
TOTAL	<u>171</u>	<u>256</u>	<u>209</u>	<u>636</u>

95. The Committee consider that the large number of resignations of technical personnel is a matter for concern. From the circumstances of the resignations and the reasons both ostensible and real, it may be possible to determine whether any particular situation or group of factors is responsible for this. The matter requires attention because on the one hand it is necessary for an expanding

industrial undertaking of special importance like the H.A.L. to conserve its technical staff and on the other hand it is necessary to eliminate any source of real discontent which may prevail even among the existing staff. The Committee would, therefore, recommend that a careful examination should be conducted into the matter.

(D) Foreign Personnel

96. The Committee learn that at one time the H.A.L. employed about 200 foreign personnel and that by gradually putting understudies they have by now been able to reduce their number to five excluding the German Engineers who have arrived only recently. The Committee realise that building up experience takes a long time and hope that the right type of persons who are capable of absorbing the experience of the foreign experts and of developing it, are associated with them. Therefore it should also be periodically examined whether the maximum benefit is being derived from such association.

(E) Daily-rated workers

97. The Committee find that over 70% of the total employees are governed by daily-rated pay system.

The rate vary from post to post. It is understood that it is the usual practice for factories both in the private and public sectors located in Bangalore to employ technical staff of artisan class on a daily rated pay.

While the Committee do not desire to make any comment on this system beyond what they have already recommended in para 84 of their Thirty ninth Report, they would like to point out some anomalous instances of the working of the system. There are four categories of personnel on traffic inspection. Of these, the Chief Traffic Inspector and the Assistant Traffic Inspector are on monthly rates of pay; whereas the intermediaries between them *i.e.* the Traffic Inspector and the Traffic Assistant are on daily rates of pay. Similarly, the Driver, the Truck Driver and, Heavy Vehicle Driver are daily-rated employees, whereas the Airplane Tractor Driver is a monthly-rated employee. The Committee feel that a rationalisation of the pay structure so as to remove such anomalies is necessary.

(F) Wage Incentive System

98. The H.A.L. has a wage incentive system in force for the last eight years covering every measurable shop operation. The scheme is designed to compute extra pay for extra work. The main features of the scheme are:—

- (a) Guaranteed basic wages to workers regardless of out-turn.
- (b) The difference between "rate fixed time" and the "actual time" taken for an operation, resulting in the saving of man hours, if any, is distributed proportionately to the

working hours put in by the individuals in the group, and payment is made on the basic wage rates of the individuals.

and (c) Where an operator is involved, the hours saved are entirely credited to him and hour computed at his unit base rate.

The Committee are glad to learn that the H.A.L. has evolved another wage Incentive Plan (Geared Incentive Scheme) to increase the out-turn of low efficiency groups the results of which will no doubt be watched with interest.

(G) Absenteeism

99. The average absenteeism in the H.A.L. is in the neighbourhood of 13 to 14 per cent. This is inclusive of 11.2 per cent for leave to which the employees are entitled, so that the actual absenteeism is about 2 or 3 per cent.

The Committee understand that an attendance bonus scheme was introduced in the H.A.L. last year. Under that scheme a certain amount of bonus is paid for not taking holidays. The total amount paid on this account during the last two years comes to Rs. 1,36,665.

The Committee are glad to learn that the introduction of the scheme has resulted in improvement in attendance and reduction in absenteeism which has come down to 1.1 per cent. They recommend that the feasibility of the introduction of similar schemes, may be examined by other State industrial undertakings, also.

(H) Reward for suggestions

100. The Committee learn that there is a system of giving awards for suggestions. This has been in force in the H.A.L. since October 15th, 1952. Under this scheme, employees in all categories could offer their suggestions generally for improvements in:

- (a) Operations to eliminate waste in labour, material, power, etc.
- (b) Methods, processes, tooling or machine operations.
- (c) Departmental, executive and administrative procedures.
- (d) Safety devices or methods to increase safety.
- (e) Any other matters which are calculated to effect economy and increase efficiency.

Prizes are awarded taking into account the value of actual resultant savings for a period of three months at the then prevailing production schedule. The value of the award is 15% of the cost saved to the factory, in the period of three months, with a ceiling award of Rs. 2,000/-, in the form of National Savings Certificates. In the past three years 47 awards have been given of a total value of Rs. 7,101/-.

(I) Welfare Measures

(i) General

101. The H.A.L. has introduced a number of measures for the welfare of its employees. The figures of actual expenditure on such measures during the last three years are given below—

	1953-54	1954-55	1955-56	TOTAL
	Rs.	Rs.	Rs.	Rs.
Canteens	86,247	79,719	42,376	2,08,342
Labour Welfare Fund	8,395	4,378	5,801	18,574
Transportation	2,66,129	1,19,893	1,63,062	5,49,084
Medical & Health	1,47,812	1,56,571	1,56,173	4,60,556
Sanitation	5,12,992	5,23,200	5,80,043	16,16,236
TOTAL	10,21,575	8,83,761	9,47,455	28,52,792

(ii) Housing

102. The H.A.L. has provided housing facilities for its employees in a colony near the factory. There are altogether 587 houses, out of which 400 were built under the Government of India Subsidised Housing Scheme for lower income group and 187 houses from the H.A.L.'s funds. For the houses built under the Government of India Subsidised Housing Scheme, a monthly rent of Rs. 10 or 10% of the monthly emoluments whichever is less is recovered. The rent of houses owned by the H.A.L., ranges from Rs. 8/- to Rs. 45 per month and these are allotted to employees so as to ensure that rent is within 10% of their pay.

The Committee learn that a further 200 houses are being built under the Government of India Subsidised Housing Scheme. These 200 houses will be completed in the course of next few months. Even with the completion of these houses, the number of quarters would come to about 800 against a staff strength of 11,000. The Committee were informed that the H.A.L. proposes to build quarters at the rate of 200 a year. That figure has been fixed mainly on the basis of the availability of water supply which is the biggest difficulty in Bangalore.

103. Various schemes have been formulated under the Five Year Plans. They are interrelated to one another, but water supply, it appears, is considered as a local problem of the municipality and sometimes its capacity is not consistent with the developmental programmes envisaged by the Government of India in other spheres.

The Committee regret to note that the programme of construction of quarters in the H.A.L. is being delayed because of lack of water supply facilities. They recommend that the matter should be

urgently considered by the Government of India and Mysore at high levels and appropriate steps taken to ensure adequate supply of water not only to the H.A.L. but to other undertakings in and around Bangalore.

104. The following amenities have so far been provided in the colony built near the factory:—

- (1) Children's park.
- (2) Cafe.
- (3) Shops.
- (4) Flour Mill.
- (5) Fuel Depot.

105. The H.A.L. runs a Food Grains Depot in the colony where rice, wheat, ragi and sugar are sold on credit to employees. The credit is restricted to 40% of the employee's monthly emoluments and is recovered through pay-roll. Only employees living in the H.A.L. colony and within a radius of 3 miles are entitled to purchase food grains from this depot. Approximately 1,800 employees take advantage of the Food Grains Depot.

106. A Committee consisting of 3 elected representatives of ration card holders and 3 representatives nominated by Management has been constituted to advise management in the running of the Food Grains Depot.

(iii) *Education*

107. There are two middle schools and three primary schools in the colony. One middle school is run by the Government of Mysore, and the other four schools are run by private agencies. Buildings for all the schools are provided by the H.A.L., either free or on a nominal rent of Re. 1/- per month. The number of students attending these schools comes to about 1,100.

108. The H.A.L. further provides free transport to children and dependents of employees living in the colony, and within a radius of three miles for attending schools and colleges in the city and civil station.

(iv) *Medical Aid*

109. First Aid Centres have been established in the factory as required under the Factories Act. Free medicines are supplied to all employees. In addition to this, a Maternity Centre, dispensary and T.B. Hospital have been established by the H.A.L. in the Employees' Colony. Free medical treatment is extended to employees' families living in the colony and within a radius of 3 miles thereof. Only routine medicines are supplied.

110. The employees who have a minimum of 5 years service and who suffer from T.B. are admitted into the T.B. hospital. They are given free food and medicines and *ex-gratia* payment to the extent of 50% of their salary for a period of 6 months. The families of employees are not admitted into this hospital.

111. The maternity hospital has 10 beds and is in charge of a lady doctor. Employees' families and others are admitted into this hospital on a nominal fee. Mass X-Ray of all employees is taken.

112. Ambulance van service is provided to employees who live in the colony and within a radius of 3 miles; both for the purposes of bringing them and their families to the H.A.L.'s hospital or taking them to city hospitals. Service is free to those whose salary is below Rs. 150/-. Those whose pay is Rs. 150/- or more are charged 50% of the normal charges.

113. Employees working on jobs which are hazardous to health are given milk at work spot from 8 ozs. to 12 ozs. per head per day, depending upon the nature of the job. Lectures on Family Planning are given to the employees and their families living in the colony and in the nearby villages. Work in connection with the control of epidemics and control of mosquitoes is carried out by the Medical Department of the Company.

(v) *Transportation*

114. The H.A.L. maintains a fleet of 65 buses for transporting workmen from their homes to workshop. The workmen are charged Rs. 7/8 per month and Supervisors Rs. 15/- per month to travel in these buses. The loss incurred in the operation of the transport is borne by the H.A.L.

A special train has also been arranged by the H.A.L. for bringing workmen to work spot and to take them back. A flat rate of Rs. 6/8 per head is charged per month.

(vi) *Canteen*

115. The H.A.L. runs a canteen for the workmen. Tea and coffee are supplied at 1 anna and 1½ annas per cup respectively. Meals are supplied at 6½ annas per meal. Packet lunch consisting of rice and curry is sold at 3 annas per packet. Tea and coffee are taken to work spot in a mobile van and sold to employees during the coffee break.

116. The canteen is managed by a Canteen Managing Committee—the elected representatives of the workers and the nominated representatives of the H.A.L. being in equal number.

The Committee understand that the H.A.L. had tried to train the workers for participation in the management of the Food Grains

Depot and one or two other concerns, but that they proved a failure, one on account of defalcation and another on account of inability to form a proper committee. The Committee consider this very unfortunate, especially in the context of modern ideas of labour participation in management. They suggest that inspite of the initial failures, concerted action is necessary on the part of labour, with due co-operation from the management, to make such schemes an unqualified success.

(vii) *Labour Welfare Fund*

117. The primary object of the Labour Welfare Fund is to offer the benefit of recreational, cultural and educational facilities to the employees and their families. The Labour Welfare Fund was constituted by the H.A.L. in May, 1953.

118. The H.A.L. contributed a sum of Re. 1/- per employee without any stipulation as to contribution from employees for the year April, 1953 to March, 1954. During the next 2 years viz. April, 1954 to March, 1955 and April 1955 to March, 1956 the Company's contribution was at the rate of As. -8/- per employee on rolls plus an amount equal to employees' contribution subject to a maximum of As. -/8/- per employee.

119. The Committee are glad to learn that since the formation of the Fund the following activities have been undertaken by the H.A.L. for the benefit of its employees:

- (a) Reading rooms have been opened in different parts of the City and Cantonment. These reading rooms are provided with magazines, daily newspapers etc. Employees and their families are entitled to use these reading rooms free.
- (b) A milk Centre has been established in the Colony. This Milk Centre gives free milk daily to approximately 400 children and ill nourished mothers living in the colony. Milk powder is obtained from U.N.I.C.E.F., free of charges.
- (c) A picture house is run in the Colony where educational, social and cultural films are shown for the benefit of employees and their families. The charges are nominal.
- (d) An orchestra has been organised. Classes are held twice a week in the Welfare Centre where employees can learn instrumental music.
- (e) Painting and drawing classes are conducted in the H.A.L. Colony. The children are supplied drawing materials free of charges.

VII
GENERAL

120. The Committee have made two recommendations on certain other matters connected with the subject. The Committee, however, consider that in the national interest these recommendations should not be made public as they affect the security of the country. The Committee hope that the Government will consider those recommendations carefully and intimate to the Committee in due course action taken thereon.

BALVANTRAY G. MEHTA,

Chairman.

Estimate's Committee

NEW DELHI;
The 29th March, 1957.

APPENDIX V

(Vide para 47)

Outline of the Cost Accounting System followed in Hindustan Aircraft (Private) Limited, (H.A.L.)

1. The system of Cost Accounting Followed in H.A.L. is what is generally known as "Job Costing" mainly designed to suit the work carried out in H.A.L. which can broadly be classified under two main heads:

- (a) Manufacture and assembling of aircraft Rail-coaches, and Bus Body kits from raw materials or imported components and sub-assemblies;
- (b) Overhaul of Aircraft, engines, instruments and accessories.

2. The Manufacturing operations are carried out by issuing main work orders for a predetermined batch quantity whereas overhaul work is carried by issuing individual work orders for each aircraft or engine. Batch work orders are issued also in the case of overhaul of instruments and accessories.

3. In the case of both batch orders as well as individual orders, the actual work in the shops is carried out on what are known as shop orders (Job cards) a number of which are issued against each main work order.

4. The main purpose of splitting up the work involved on any major work order under different jobs is mainly to help segregation of the labour spent, department by department or group by group in the same department. This largely helps to fix the responsibility without any ambiguity for the purpose of investigating all major deviations from estimates.

5. The cost incurred on different work orders is collected under the following three heads:

- (a) Labour and Labour Overheads;
- (b) Material and Material Overheads;
- (c) Sundry Direct Charges.

6. Labour and Labour Overheads.

For purpose of costing, all employees are classified as,

- (a) Direct Labour.
- (b) Indirect Labour and Shop Supervision.
- (c) General factory and administrative staff.

7. Under Direct Labour are included all those workers who actually work on the job and whose time spent in the shop can conveniently be identified with specific jobs e.g. machinists, carpenters, mechanics, etc. Like all other employees below the rank

of supervisor, they punch on the *Time Cards* their time of arrival (on) and departure (off). Based on the clocked times payment is made to them at the end of the month. The Direct workers are also given *Time Dockets* to record therein the jobs actually executed by them during the day together with the commencement and closing time on such job. The *Time Dockets* are certified by the shop supervisors. The entries on the *Time Docket* serve two purposes viz., (a) The actual time shown on the *Time Docket* against each job will serve as the basis for charging the customers as all labour charges are directly proportional to the time spent by the direct workers on the jobs. (b) The time recorded on the *Time Docket* represents the actual time spent by the workers in the shop and by comparing the same with the time clocked by the worker on the *Time Card* which forms the basis for actual payment to the workers, it is ensured that the workers who have entered the workshop were actually at the workspot.

8. Time recorders attached to Accounts Department also exercise casual check at the workspot in order that no unauthorised work may be undertaken.

9. The entries made on the *Time Docket* are copied on the *Time Record Sheet* for each job. If more than one worker worked on the same job, the time spent by all of them will be recorded on the *Time Record Sheet*. Constant watch is maintained on the time actually spent on the job and the attention of the shop supervisors is drawn whenever the actual time taken is likely to exceed the estimates in order to enable effective action to be taken in the shop to achieve control. Once the job is completed and the job card is returned to Time Recording with the certification of the Inspector for the quantity approved, the actual time spent on it by different workers is added up and compared with the estimated time. In calculating the bonus the defectives resulting from the operators' fault are not taken into account. If the actual time taken is less than the estimated time, the difference represents the incentive bonus earned by the workers. It is distributed among the workers in proportion to the actual time worked by them on the job.

10. At the end of each month, all the time recorded on the *Time Record Sheets* for different jobs (completed as well as those in Process) during the month is copied on to monthly *time sheets*. The labour hour recorded during the month against each job are priced at the scheduled rates for each department for the month and entered in the cost ledger.

11. *Indirect Labour and Shop Supervision*.—Under this head are included all other shop workers such as helpers whose time cannot conveniently be identified with the jobs as they do all miscellaneous work; (2) shop clerical staff; (3) shop progress staff; and (4) shop supervisory staff. The wages and salaries paid to them form part of the shop overheads.

12. *General Factory and Administrative Staff*.—Under this head are included all the staff working in Accounts, Inspection, Planning, Secretarial, Personnel departmental, etc. The salaries paid to them is charged to the department under General Administration and Factory Overhead.

13. *Determination of the Man Hour Cost.*—Each department has been given a separate number and a list of standing orders has been issued for collecting the expenditure of each department under similar classifications. The expenditure recorded against each department is further grouped together and entered in the operation statement. The operation statements are prepared every month for each department and submitted to Management and all concerned shop executives for purposes of control. The operation statement shows the Direct labour, Indirect expenditure and General Administrative and Factory Overheads as well as the Direct Labour cost per man hour, total cost per man hour and overheads expressed as a percentage of the Direct Labour cost.

14. *Direct Labour cost per man hour.*—The actual wages, dearness allowance and incentive bonus paid to direct workers represents the direct labour cost. The total cost labour man hours and the total direct labour cost for the department are entered in the operation statement and an average direct labour cost per man hour for the department is worked out.

15. *Supervision, Indirect Labour, Vacation and Provident Fund.*—This represents the salaries paid to shop supervisory staff, shop clerical staff, shop progress staff and other indirect labour such as shop helpers. This also includes the vacation leave reserve provident fund contribution and provision for gratuity to employees of the department.

16. *Lost Time.*—Whenever idle time occurs in the shop as a result of machinery or power breakdown or for want of work or materials, the workers record such lost time separately in their Time Dockets which are certified by the shop supervisors. The money value of such lost time is included under this to be ultimately reflected in the total man hour cost as a part of the overheads.

17. *Defective Work.*—This represents the loss under defectives mainly resulting from operators' fault.

18. *Fuel, Shop Supplies and Stationery.*—This represents the value of fuel consumed in the shops, shop supplies such as lubricants, cotton waste, etc., and stationery items including printed forms.

19. *Depreciation, Insurance, Licenses and Taxes.*—This represents the depreciation on buildings, plant and equipment. It also includes the insurance premium paid for vehicles, stocks and work-in-process wherever applicable.

20. *Maintenance and Janitor Service.*—This represents the total cost incurred for civil, mechanical and electrical maintenance and also the charges incurred for janitor service.

21. *Power, Light, Water, Steam and Compressed Air.*—This includes the charges for electricity, steam, compressed air etc., wherever applicable.

22. *Transport Service.*—This includes the charges for transport service rendered to the department during the month by the Transportation Department.

23. *General Administration and Factory Overheads.*—This includes the expenditure incurred for the following departments.

- (a) Part of Accounts.
- (b) Secretarial.
- (c) Personnel.
- (d) Sales.
- (e) Production Engineering.
- (f) Inspection.
- (g) Part of Engineering Design and Maintenance.
- (h) Factory Manager's Office.

24. *Accounts.*—The expenditure incurred for Book-keeping, Finance, Pay-roll, Audit and Cost are included. The entire expenditure incurred for Material Accounts and 25% of the Finance Branch are included under "Material Overheads" described separately.

25. *Secretarial.*—This includes the salaries paid to the General Manager, Secretary and staff. It also includes Interest payable on loans received from Government.

26. *Personnel.*—This includes the salaries and other expenses for Labour Welfare Office, Employment, Training, Watch & Ward, Canteens and Medical branches.

27. *Sales.*—This includes the salaries and other expenses incurred for the Sales Department.

28. *Production Engineering.*—This includes the salaries and other expenses paid to Planners, and other Production Engineering Staff.

29. *Inspection.*—This includes the salaries paid to all Inspectors attached to Stores, manufacturing and Overhaul shops.

30. *Engineering and Design.*—In the case of all engineers engaged on design and other engineering work connected with Development programmes, the expenditure is debited to Development work orders to be later amortised on future production. Other expenditure incurred for handling day-to-day routine engineering problems is charged to the General Overheads during the month.

31. *Factory Manager's Office.*—This includes the salary of Factory Manager, Technical Assistant and other staff engaged in handling problems connected with the entire factory.

32. Under General Administration and Factory Overheads expenditure incurred for items (a), (b), (d), (g) and (h) is apportioned on an equitable basis between Railcoach and Bus Body manufacturing shops on one side carrying out relatively less complicated work and the Aircraft & engine shops on the other side carrying out relatively more complicated work requiring constant top supervision and detailed scrutiny. The expenditure allocated to each wing is distributed to the branches in the same wing on the basis of Direct Labour man hours. Expenditure incurred for item

(c) viz., Personnel is distributed to the various branches on a factory-wise basis in proportion to the number of direct labour engaged. With regard to item (e), there are two different production engineering units one for Railcoaches and Bus Bodies and the other for Aircraft Work. The expenditure collected separately for the two wings is distributed to the various branches in relation to the direct labour man hours. As regards Inspection (item 'f') the entire expenditure is distributed to the various branches in relation to the number of Inspectors allotted to each branch. Expenditure incurred for Stores Inspection is taken to Medical Overhead.

33. The total of Direct labour cost, shop indirect expenditure and General Administration and Factory overhead worked out as described earlier represents the total expenditure for the branch. Any direct services rendered to other branches and also overheads recoverable for outstation work and capital work is deducted in arriving at the net overheads. Only 50% of the normal overheads are charged to capital jobs with a view to keep the value of fixed assets as low as possible. The total man hour cost of the branch is obtained by dividing the total expenditure of the branch by the direct labour hours of the branch. The direct labour cost and overheads per man hour can similarly be obtained by dividing the total direct labour cost and net overheads of the branch respectively by direct labour man hours. The overheads of the branch are expressed as a percentage of the direct labour cost. For purpose of control, the overhead percentage of each item is separately expressed in the operation statement. These statements are sent every month to Management and Branch Chiefs.

34. The actual man hour cost for any branch is likely to vary from month to month depending on the actual expenses which vary slightly from month to month and also the number of working days in the month. For example, the number of working days in March is more than in February. Since, however, the monthly salaries paid are the same for both the months, the man hour cost for February will naturally be more than for March. As it is not desirable to allow such variances to affect the pricing or costing which should take into account only the normal conditions over a period, the average cost per man hour applicable for a period which is normally 3 months is predetermined taking into account the actual cost in the past quarter and also any fore-seeable variation in expenses or man hour utilisation during the next quarter. These rates are known as the scheduled rates referred in para 10.

35. Next to labour cost, the other important element is the material cost. Material cost includes not only the cost of material ex-works, but also the cost of procurement of the material, storage, etc. which are charged at a fixed percentage of the material cost as material overheads.

36. *Material cost (Excluding Material Overheads).*—All materials in use in HAL can be classified under two groups:

- (a) Standard items such as stationery and printed forms, small tools, lubricating oils, etc. which are meant for general consumption and not required for any specific project and are generally in constant demand. These

are procured on a maximum and re-order level basis. If the materials are obtained inside the country, the minimum, re-order and maximum levels are fixed at 4, 8 and 12 months' average requirements respectively. When the stock of an item reaches a level which will roughly suffice for 8 months on the basis of past average consumption, a request is raised for 8 months' requirements. As the procurement time is approximately 4 months for inland items (by the time the materials are actually received) the stock would normally go down to about 4 months' requirements. Adding to this the quantity ordered and received, the stock will go up to 12 months' requirements which is the maximum level fixed for this class of materials. Similarly, the minimum, re-order and maximum stock levels for imported items are 9, 18, and 24 months' requirements respectively. As it takes considerably more time for procurement of materials from abroad and stock levels are fixed higher than for materials obtained from inland suppliers.

- (b) Non-standard items which are generally specific to project requirements are not procured on a re-order level basis as their demand is not constant. In this case, the material requirements for each project or order are estimated in advance and the request is raised for the quantity required for adjusting the stocks already on hand, if any. The stock levels are constantly reviewed with a view to take prompt corrective action in all cases where the actual consumption exceeds the estimates.

37. On the receipt of the request co-ordinated by Stock Control group, Purchasing department send enquiries to all the approved suppliers for the materials. The quotations received are examined and the orders are placed generally on the vendor submitting the lowest quotation—if the quality of the material and the delivery times are found acceptable.

38. On receipt of the materials at HAL, a *way bill* is prepared by the Receiving Department showing the Railway freight particulars, weight of consignment, consignor's name, Railway Credit note number, purchase order number, etc. The material is then sent to Goods-Inward Stores who prepare a Receiving Report showing the description of goods, quantity advised, quantity received, etc. The materials are then put up for inspection and the Inspector signs the Receiving Report for the quantity approved with remarks, if any. The materials are then taken to regular stock by entering the quantity on the bin card and the concerned store-keeper signs the Receiving Report for having accepted the custody of the materials. The original of the completed Receiving Report is sent to Accounts department who link it up with the supplier's invoice. Payment is made by Accounts Department after making the following checks:

- (a) That the quantity supplied is not more than the quantity ordered;

- (b) That the quality of the materials received as certified by the Inspector tallies with the specification given in the Purchase Order;
- (c) That the rate charged by the supplier is in accordance with that stipulated on the purchase order.

39. After payment is made the materials are taken on charge in the Accounting Records which are known as Material Ledger Cards. There are about 60,000 items in use in HAL, every item has got a separate card. The total quantity received as well as the amount paid for the same are entered on the Material Ledger card. Freight and Insurance charges are also added to the cost.

40. The materials are issued from the Stores only on Material requisitions duly approved by the authorised personnel of the Planning and Progress department in the case of materials needed for manufacture and by the departmental heads in the case of consumables, stationery, etc. In the case of items like stationery, there is a fixed budget for each department and all requisitions are sent to Material Accounts section for checking that the value of materials requested falls within the budget sanction. The storekeeper issues the material after proper scrutiny and enters the quantity issued in the bin card and draws out a fresh balance available in stores and draws out a fresh bin card balance. He enters the quantity issued as well as the balance available thereafter on the material requisition. The original of the material requisitions which are made in triplicate are passed on to the Material Accounts section for accounting purposes. The store-keeper retains the second copy and the third copy is passed on to indenting department.

41. The Material Accounts section scrutinises the material requisitions to satisfy themselves that the work order quoted and the description tally. After scrutiny, the relevant Material Ledger card is taken out and the quantity issued is entered on the Material Ledger card and a fresh balance is drawn out. The balance shown on the ledger card is checked with the balance shown by the store-keeper on the Material Requisition. If they do not tally, the Material Accounts clerk contacts the stores and finds out the reasons for the discrepancy and necessary correction is immediately made on the stores bin card or the Material Ledger card. Discrepancies arise only in the case of material requisitions misplaced or in the case of Material Receipts entered on the stores bin card but not on the Material Ledger card. The systematic reconciliation, however, ensures that the quantities shown as available in the Material Ledger card tally with the Stores bin card balances for the custody of which the stores personnel are responsible.

42. After posting the quantity on the Material Ledger Card, the Material Accounts clerk enters the material rate which is the weighted average rate of the latest purchase rate as the case may be, on the stores requisition. The value of the materials issued is arrived at by multiplying the quantity and the unit rate and the extended value is entered both on the Material requisition as well as the

Material Ledger card. The balance value is worked out on the material ledger card and the requisition is sent to the other material Accounts staff who summarise the value of materials issued for each work order. At the end of the month, the value of the material issued against each work order is charged to the different work orders by issuing the necessary Accounting entries.

43. The Material issues on the work orders are scrutinised carefully to find out any discrepancies in the actual issue of materials as compared with the estimates wherever possible. Attention of the shops as well as planning group is drawn so as to take immediate corrective action as necessary.

44. *Stock Taking*: As explained in para 41 constant scrutiny is exercised in the Material Accounts Section to ensure that the quantities shown as available in the stores bin cards tally with the quantity shown on the Material Ledger cards. Though the quantities shown as available in both the cards may tally, actual physical check is made in the stores by the Accounts staff in co-ordination with the stores staff in all cases to certify the quantities shown in the course of actual physical check. Discrepancies occur mainly as a result of the following:

- (a) Actual issues being more or less than the quantity shown in the Material Requisition.
- (b) Issue of material to wrong specification.
- (c) Mix up of identical parts in stores during the course of issue.
- (d) Pilferage.

45. Accounts department have a special group for the physical check which is conducted throughout the year.

46. *Material Overheads*: As explained in para 42, the value of the materials issued, work order by work order, is calculated by the Material Accounts Section and submitted to the Cost section for incorporation in the cost Ledger. Sections add a fixed percentage of the cost materials (now 10%) to cover what are known as Material Overheads to cover the expenditure incurred for the following departments:

- (a) Purchasing (b) Stores (c) Material Control & Material Accounts (d) Bills payable group of the Finance Branch, and (e) Stores Inspection.

47. The Expenditure incurred on the above is charged to work orders as Material Overheads which are fixed proportion of the Material cost since the Services rendered by these departments have a relation only to materials consumed for the jobs. The actual expenditure incurred for these departments is compared with the amount charged to jobs at a fixed percentage of the Material cost and depending on the variance between the two over a period, the material overhead percentage is revised in order that the actual expenditure and the amount recovered may broadly be the same.

48. *Sundry Direct Charges:* These mainly relate to special expenditure incurred for any particular project such as Design and Development which is amortised over the entire production at a predetermined amount per unit of production. This also includes special expenditure for insurance, travelling and outstations allowances incurred on outstation projects, jigs, tools, fixtures, etc., for special projects.

49. All the three main constituents of cost *viz.*, labour and labour overheads, Material and Material overheads, and sundry direct charges are entered in the cost ledger sheet for all work orders. The sum of these three elements gives the total cost incurred on the job and the difference between the total cost and the billing value represents the profit or loss on the job. In the case of jobs undertaken on the basis of cost plus 10% profit mainly for the IAF the billing value will be 10% more than the total cost.

50. *Cost Control Documents:* As stated in para 9 statements are daily sent by the Time Recorders to the shop supervisors drawing their attention to all jobs on which the time expended is disproportionate to the estimates. Monthly statements are sent to Management and concerned Divisional Heads showing the actual man hours expended on the projects in comparison with the estimates. Variation in material consumption is pointed out in the form of typed statements.

51. As already stated in para 13, operation statements are sent every month to Management, Divisional Heads and Branch Chiefs showing expenditure incurred for the departments under them under various heads. Comments are given on any abnormal variations and investigations are made with a view to take prompt remedial action.

52. In addition to the above, the following statistical control documents are sent every month to Management and all concerned:

- (a) *Absenteeism (Direct Department):* Along with the figures for the month, the average for the previous year is also shown for purposes of comparison.
 - (b) *Cost of defective and spoilt work:* The loss under this head is analysed under the various causes *viz.*, operators' and supervision fault, Material fault, etc., based on the remarks given by Inspection Department.
 - (c) *Avoidable lost time:* The avoidable lost time is analysed under want of work, want of materials, machine breakdown, etc., based on the entries given on the Time Docket.
 - (d) *Overtime:* Along with the overtime figures for the month, the average for the past year is also given for the purpose of comparison.
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APPENDIX VI

S. No.	Ref. to para No.	Summary of conclusions/recommendations
1	2	3
1	11	The Committee observe that while several teams of experts have visited the factory to advise Government on the development of H.A.L. and other industries in India there has been no specific examination of the efficiency, economy, production programmes short term and long term planning from the point of view of the growing needs of the air power and civil aviation of this country. The Committee would, therefore, recommend that a high level Committee should be appointed to examine in detail all these matters and to make specific recommendations thereon.
2	14	While the Committee agree that the I.A.F. as the principal user department should be represented on the Board of Directors, they do not consider it desirable that the Board should include many officers of the Secretariat. The Committee recommend that the composition of the Board of H.A.L. should be reconsidered in the light of the observations made by the Committee in paras 47 to 49 of their 39th Report.
3	15	The Committee feel that it would also be advisable to appoint persons with wide experience in aviation and/or steel, and/ or aluminium industry to the Board of Directors. The present Board of Directors of the H.A.L. has only one such person as member. The Committee consider that the Board may be broad-based by the inclusion of more such persons. They feel that it should then also be possible to appoint one of them as Chairman of the Board
4	18	The Committee welcome the large delegation of powers to the Board of Directors. They, however, feel that besides giving large powers to the Board, it is also necessary to see that the climate for the full exercise of such powers is provided. The Committee also feel that while necessary

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safeguards might be provided by requiring, in matters which might concern I.A.F., approval of the Board of Directors of which the Chief of Air Staff is also a member, procedures which would lead to delays and remoteness of controls should be avoided.

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Besides the functional heads, there are four posts of Deputy General Managers. As the functional heads are expected to advise the General Manager on all important questions, technical or otherwise, the Committee feel that the necessity of placing additional functionaries in the form of the Deputy General Managers requires to be examined.

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The Committee feel that it is a healthy feature to associate State Governments in Central enterprises specially in those constituted under the Companies Act. Such association would enable the State Government concerned to take a greater interest in the enterprises located within its territory.

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The Committee feel that the I.A.F. being the principal customer of the H.A.L. should plan their programme of repair, overhaul and purchase affecting the H.A.L. in a realistic manner so as to obviate the necessity of revisions subsequently.

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The Committee suggest that the Railway Board should be approached to introduce a machinery to ensure timely delivery of underframes to the H.A.L. because delay in delivery causes idle labour with consequent loss to the company.

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The Committee consider that it is very necessary that the H.A.L. should obtain prompt payments from its customers. They, therefore, recommend that the H.A.L. in consultation with the I.A.F. and the Indian Airlines Corporation should draw up a procedure for obtaining quick payments for the work done.

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The Committee suggest that active steps should be taken to reach a finality in respect of bad and doubtful debts amounting to Rs. 10,78,406/-.

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The Committee observe that in addition to statutory audit by the company auditors and the Comptroller and Auditor General any claims preferred by the H.A.L. against Defence Services and the Railways are also scrutinised by their

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		respective Accounts Departments. The H.A.L. may, therefore, be said to have four different audits, or checks of accounts imposed on them, two statutory and two non-statutory.
12	45	The Committee feel that when transactions between different departments or undertakings of Government are concerned, it is not necessary to multiply these checks. It should be possible for the different departments or undertakings to accept a certificate from one agency. The Committee, therefore, suggest that matter should be examined by the Ministry of Defence in consultation with the Ministry of Finance, Ministry of Railways and Comptroller and Auditor General.
13	46	The Committee understand that provisional payment made to the H.A.L. for coaches supplied to the Railways has not yet been finalised. As the finalisation of payment is essential for a true picture of the accounts, the Committee recommend that immediate steps should be taken towards that end.
14	48	The H.A.L. being practically a monopolistic concern especially in the aircraft division, advantages of comparison of costs with other concerns are not available. The Committee, therefore, consider it all the more necessary that the costs should be carefully analysed and kept under check so that maximum efficiency could be attained.
15	52	The Committee suggest that active steps should be taken to induce the civil aviation authorities as well as the flying clubs to go in for HT-2 trainers, designed and made entirely in India.
16	54	The Committee feel that energetic steps should be taken to popularise the HT-2 Trainer aircraft and to expand the market for it. There is a great advantage in building such aircraft because whatever the type may be, trainer aircraft can continue in service for several years.
17	55	The Committee suggest that there should be full co-ordination between the H.A.L. and the I.A.F. in deciding the future policies of training in flying.
18	56	The Committee hope that the Gnat and Orpheus projects will be executed expeditiously.

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19	57	The Committee recommend that in future care should be taken to plan the requirements of new aircraft sufficiently in advance, so as to avoid causing idle capacity and idle labour in the H.A.L.
20	58	The Committee reommend that an early decision should be reached about the manufacture of a medium-sized transport aircraft which would be useful for both civil aviation and the Air Force. They feel that in such a matter it might be preferable to start manufacture under licence.
21	59	The Committee understand that special types of steel were among the raw materials required for aircraft manufacture which were imported from abroad at present. They would suggest that the steel mills that are being set up should be given advance information of the special types of steel that will be required and that they may consider the practicability and economics of making such steel in this country.
22	60	It should be the aim of the H.A.L. to ensure that every part, instrument and accessory required in its manufacturing programme is manufactured in this country. The Committee, therefore, recommend that capacity should be expeditiously developed for the indigenous manufacture of such items by having a number of sub-contractors or sub-manufacturers aiding the H.A.L. For this purpose, they suggest that the H.A.L. should keep in touch with the Development Wing of the Ministry of Heavy Industries and should also be assisted by a Committee consisting of representatives of industries and production units, both in the public and private sectors, which are likely to assist in this matter. The Committee further recommend that the question of stockpiling should also be examined expeditiously with particular reference to the recommendation made by the Rolls Royce engineers.
23	61	To prevent delays arising in future in the procurement of stores by the H.A.L. the Committee recommend that the system of provisioning of stores should be such that it should be able to meet all contingencies which might cause delays and that, wherever necessary, the reserve limit of stores may be revised and provision reviews

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		carried out sufficiently in advance. Further, the machinery for this purpose should also be flexible and capable of adopting a policy of purchase in changing situations.
24	62	The Committee desire that it should be examined whether delays occasioned by consultations before finalising orders to be placed on overseas suppliers could be curtailed by enhancing the powers vested in the H.A.L. cell in London.
25	65	The Committee understand that delays used to take place in the delivery schedules of the I.A.C. aircraft received for overhaul. This was stated to be due to some difficulty in obtaining documentation and technical clearance from the I.A.C. by means of correspondence. In order to expedite matters, a Liaison Engineer from the I.A.C. has been posted at the H.A.L. The Committee hope that sufficient powers have been given to the Liaison Officer to enable him to settle matters on the spot.
26	66	In respect of Dakotas, which are in use both in the I.A.F. and in Civil Airlines and which are likely to be in use for some considerable time, it appears that there is a shortage of certain types of spare parts. The Committee understand that the H.A.L. have a licence to manufacture certain types of spare parts of Dakotas. They suggest that the question of manufacturing the spare parts in short supply be examined very early.
27	68	Although the accounts of the Barrackpore branch factory are maintained separately to a certain extent, they are not treated as separate, but merged in the accounts of the main factory while finalising the annual accounts under the Companies Act. The Committee consider it necessary that for the branch factory a profit and loss account should be drawn on a proforma basis. Costing should also be done separately in respect of the jobs done by the branch factory. The Committee feel that only thus could the efficiency of the branch factory be watched and improved.
28	69	The Committee understand that there is further scope for opening small branch overhaul units elsewhere in the country. The Committee

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recommend that as and when needs arise, more such overhaul units should be opened in different parts of the country.

- 29 70 The Committee were informed that the question of gradually transferring the overhaul work to Barrackpore so as to concentrate on the manufacturing work at Bangalore was under consideration. They hope that an early decision in this matter will be taken.
- 30 78 The building of integral coaches is a new venture in India. Foreign collaboration and assistance are as such indispensable at the initial stage. The agreement with the MAN is for 5 years. It provides not only for the supply of manufacturing information to the HAL but also for training to the technicians here as well as abroad. These are opportunities of which maximum advantage should be taken so that after the agreement period is over the HAL may be in a position to manufacture these coaches without the assistance from any foreign body. The Committee hope that no effort will be spared to make a success of the agreement and also to improve on the targets laid down so far.
- 31 88 The object of an apprentice scheme within a factory is to make certain that the trainees are brought up in the ideas of the factory and absorb its spirit and working system. To rely on institutions outside the control of the H.A.L. for supply of technicians would not obviously serve this end. Apart from this, there is also the risk of the training given being not up to the requisite type and standard. With greater developments in their programme of manufacture, the H.A.L. would have to make sure of the technical competence of their employees and of their fitness in all respects for the job in which they are engaged. For this purpose, it is necessary that all the persons should be trained by the H.A.L. itself.
- 32 89 The Committee consider the existing scheme under which only 80 apprentices are recruited in a year for training as utterly inadequate. They are also surprised to learn that only a small number of 82 apprentices have so far completed their training in the H.A.L. The Committee consider that even replacement of

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normal wastage would necessitate the recruitment of about 300 new technicians every year. As the training is spread over a period of three years, 900 apprentices will have to be put under training at the same time.

- 33 90 Well-trained technicians are always of value especially in a country which is endeavouring to increase industrialisation in many spheres but is short of technical staff. The Committee, therefore, do not apprehend any danger on account of H.A.L. expanding their training programmes. Any expenditure on apprentices is virtually an investment on technical talent for use of the factory in the future. The Committee feel that it is worthwhile spending sufficiently to ensure that the apprentices are well-trained.
- 34 91 The Committee learn that the H.A.L. will shortly be introducing a scheme by which they will train 360 welders in about three years time, to meet the requirements of the integral coach project. While the Committee appreciate this as a move in the right direction, they recommend that the possibility of providing suitable training to artisans in other trade groups may also be explored so that the entire requirements of the H.A.L.'s technical hands may be drawn from the persons trained by them.
- 35 92 The Committee understand that the H.A.L. had experienced difficulty in getting suitable aeronautical engineers. To overcome this, they recruited ordinary engineering graduates and gave them training in aeronautical work. The Committee realise that in the existing circumstances of dearth of qualified engineers, the H.A.L. had no other way but to adopt this course. They would, however, suggest that the H.A.L. should give an indication of their requirements of aeronautical engineers over a period of say five years, to the Ministry of Education so that the latter may see at the time of screening applications from intending candidates for study overseas that an appropriate number took up the subjects of aeronautical engineering in important institutions so as to provide a source from where H.A.L. can recruit their future aeronautical engineers.
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36	96	The Committee learn that at one time the H.A.L. employed about 200 foreign personnel and that by gradually putting understudies they have by now been able to reduce their number to five excluding the German engineers who have arrived only recently. The Committee realise that building up experience takes a long time and hope that the right type of persons who are capable of absorbing the experience of the foreign experts and of developing it are associated with them. They feel that it should be periodically examined whether the maximum benefit is derived from such association.
37	97	The Committee find that over 70% of the total employees are governed by a daily-rated pay system. While the Committee do not desire to make any comment on this system beyond what they have already recommended in para 84 of their Thirty-ninth Report, they feel that a rationalisation of the pay structure so as to remove all anomalies is necessary.
38	98	The Committee are glad to learn that the H.A.L. has evolved another Wage Incentive Plan (Geared Incentive Scheme) to increase the outturn of low efficiency groups.
39	99	The Committee are glad to learn that the introduction of the attendance bonus scheme has resulted in improvement in attendance and reduction in absenteeism which has come down to 1.1 per cent. They recommend that the feasibility of the introduction of similar schemes may be examined by other State industrial undertakings also.
40	103	The Committee regret to note that the programme of construction of quarters in the H.A.L. is being delayed because of lack of water supply facilities. They recommend that the matter should be urgently considered by the Governments of India and Mysore at a high level and appropriate steps taken to ensure adequate supply of water not only to the H.A.L. but to other undertakings in and around Bangalore.
41	116	The Committee understand that the H.A.L. had tried to train the workers for participation in the management of the Food Grains Depot and one or two other concerns, but they proved a failure on account of inability to form a proper committee. The Committee consider this very

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unfortunate, especially in the context of modern ideas of labour participation in management. They suggest that in spite of the initial failures, concerted action is necessary on the part of labour, with the cooperation of the management to make such schemes an unqualified success.

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The Committee have made two recommendations on certain other matters connected with the subject. The Committee, however, consider that in the national interest these recommendations should not be made public as they affect the security of the country. The Committee hope that the Government will consider those recommendations carefully and intimate to the Committee in due course action taken thereon.
