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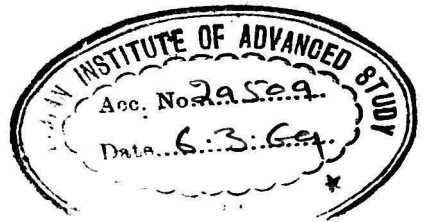
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MEMBERS OF THE ESTIMATES COMMITTEE
1958-59

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30. Shri Ramji Verma

*Elected w.e.f. 28-8-1958 *vice* Shri Mahavir Tyagi resigned.

**Elected w.e.f. 17-9-1958 *vice* Shri J. Rameshwar Rao resigned.

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SECRETARIAT

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

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

Shri R. K. A. Subrahmanya —*Under Secretary.*

INTRODUCTION

I, the Chairman, Estimates Committee having been authorised by the Committee to submit the Report on their behalf present this Forty-Sixth Report on the Ministry of Finance (Department of Economic Affairs)—Government of India Mints and Assay Department.

2. A statement showing an analysis of the Recommendations contained in the Report is also appended to the Report (Appendix V).

3. The Committee wish to express their thanks to the Special Secretary and other Officers of the Ministry of Finance (Department of Economic Affairs) for placing before them the material and information in connection with the examination of the estimates.

NEW DELHI;
April 1, 1959

BALVANTRAY G. MEHTA,
Chairman,
Estimates Committee.

Chaitra 11, 1881 (*Saka*)

I ORGANISATION

(a) Introductory

The evolution of Mints¹ is linked with the origin of the system of coinage as a medium of exchange. In pre-historic days shaped metals in crude forms were used as a medium of exchange. This was followed by coins of regular shapes with definite weights. With the development of the community, and expansion of trade and commerce, Governments of several countries, began issuing money in the form of metallic money and paper instruments.

2. Mints with adequate machinery were established in India at Bombay, Calcutta and Madras as early as 1829. The Mint at Madras was however, closed sometime after 1862 but the other two Mints have been in existence since then with the only change that the old Calcutta Mint was replaced with the present Alipore Mint in 1951. Certain Indian States also had their own Mints during the British Rule and issued their own coins, subject to certain stipulated conditions. All those Mints except the one at Hyderabad were, however, abolished in course of time for various reasons. The Hyderabad Mint was taken over by the Government of India from 1-4-1950, as a result of financial integration of that State.

3. The main functions of the Mints as the name indicates is, to mint Government of India coins. They also take up foreign coinage, and do the following items of work:—

- (a) Production of coins.
- (b) Manufacture of medals, tokens, badges, seals, etc.
- (c) Receipt, examination and disposal of withdrawn coins.
- (d) Tendering expert opinion on counterfeit and doubtful coins.
- (e) Melting of gold and silver for the public, and issue of Assay Certificates,
- (f) Manufacture and adjustment of weights, as also adjustment of measures.
- (g) Holding of Surplus Silver or Q.* Silver Stocks including confiscated gold.

(b) Central Organisation

4. The three Government of India Mints are under the Administrative-Control of the Ministry of Finance. The Alipore and Bombay Mints are under the charge of a Mint Master each. The Mint Master at Bombay is also in overall charge of the Hyderabad Mint, which² is managed by a Deputy-Mint Master.

5. The Committee were informed that the Mint Masters determine in consultation with each other the programme of production of coins as well as destruction of uncurrent coins on the basis of advices received from the Chief Accountant, Reserve Bank of India. It was also stated that for purposes of co-ordination, the Mint Masters maintained liaison with each other through correspondence and meetings which were held once a year at least. Some co-ordination was also said to be effected from the Ministry.

*Quarterly Coins.

6. *The Committee find, however, that apart from the control exercised from the Ministry, there is no central co-ordinating and controlling authority in charge of the working of the Mints, with the result that there is absence of uniformity among them even in a matter like the system of maintaining Accounts. They feel that such a central control and direction would facilitate planning of production and distribution of work among the Mints, introduction of modern techniques, uniformity in standards of work, welfare measures etc.*

7. *Since the Mints are industrial undertakings, the Committee feel that it would be desirable if co-ordination of work and centralization of authority in the Mints is provided by organising them on commercial lines under the company form of management.*

8. It has been stated earlier that the production programme in the Mints is undertaken by the Mint Masters on the basis of the advices received from the Reserve Bank of India. The Ministry of Finance have, therefore, no special role to play in regard to the minting of coins. *The Committee, therefore, suggest that in view of the capacity and scope for undertaking the manufacture of a variety of products (c.f. paras 3 and 42) in the Mints for the State Governments, private parties etc., and of the experience of the Ministry of Commerce and Industry in running industries, the control of the Mints might with advantage, be transferred to the latter Ministry so as to enable it to utilize the capacity in the Mints to the maximum advantage.*

(c) Local Organisation

9. The Mint Masters are the Heads of the respective Mints and exercise the same financial and cognate powers as have been delegated to the Heads of Departments under the various Rules. In addition, they have also been given some specific powers. *The Committee feel that it is not desirable to vest all powers in a single individual and that the same should be shared jointly by a Board of Management. In their opinion such an arrangement would not only develop a tendency for taking collective and considered decisions but would also foster a sense of commonness and joint responsibility. The Committee, therefore, suggest that a Board of Management, consisting of the Mint Master and other senior officers of the Mint, should be constituted in each Mint for assisting the Mint Masters in the exercise of their powers, functions and responsibilities relating to the administration of the Mints.*

10. The main departments in the Mints are as under :—

- (i) The operative departments consisting of the Engraving and Melting departments etc.
- (ii) Bullion department.
- (iii) Administration and Accounts Office.
- (iv) Labour Office.
- (v) Medical department.
- (vi) Watch and Ward department.

11. The Bullion Department of the Mints consists of a Bullion Keeper (a Dy. Bullion Keeper in the case of Hyderabad Mint) and his staff who number 33, 47 and 11 at Bombay, Alipore and Hyderabad respectively. They are in charge of the receipt, custody and handling of bullion (precious metals and coins) base metals, their alloys etc. The Bullion Keeper is also responsible for making good such shortages and losses as cannot be attributed to bonafide operational losses.

12. Besides the above, there is also in each Mint, a Bullion Registrar and his staff numbering 10, 8 and 1 at Bombay, Alipore and Hyderabad

respectively, to exercise on the spot control and general supervision over all the transactions relating to bullion and metals at the various stages of processing.

13. It was explained during evidence by the Representative of the Ministry that this dual control over the transactions connected with metal and coins etc. in the Mints was necessary to ensure strict control and that this system was in vogue for the past 130 years. It was added that the Ministry were "very much alive to this peculiar complexity between the two types of work—bullion keeping and bullion registering" and that this question had been repeatedly gone into. It was admitted that the system did not seem to be a fundamental necessity of the present times. The Ministry were also stated to be trying to have one system of bullion keeping-cum-registering in the Silver Refinery, Calcutta though it was presenting some difficulties.

14. *The Committee feel that since gold and silver coins are no longer minted, a rigid control over bullion transactions at every stage is probably not warranted. They understand that such elaborate checks do not exist in other countries. The Committee, therefore, recommend that a system of combined bullion keeping and registering be introduced not only in the Silver Refinery at Calcutta but in the Mints also and economies effected.*

15. In this connection, the Committee understand that appointments to the posts of Deputy Bullion Keepers and Assistant Bullion Keepers are made from amongst the nominees of the Bullion Keeper to whom they are responsible for the proper accounting of metals etc. entrusted to their care and custody in the various stages of processing. *The Committee consider that this system is likely to be a source of nepotism. They recommend that this practice be stopped and recruitment to these posts made in the normal manner.*

16. The Security Organisation of the Mints consists of Jamadars, Havildars, Naiks, Policemen etc. who numbered 145, 70 and 45 in all, at the Alipore, Bombay and Hyderabad Mints respectively during 1957-58. Their main function is to prevent and arrest theft and pilferage of metal coins and other stores from the Mints. As a rule, no relation of a member of the security force was permitted to be employed in the workmen category and no Mint Policemen was stationed in any one particular department for more than one day, so as to avoid any collusion between the workers and the policemen. The outer security perimeter of the Mints is, however, guarded by the armed police guards of the State Police, who, during non-working hours, also guard the inner security area.

17. The Committee find that the percentage of security staff to the total staff was about 6% and 9% respectively at Alipore and Hyderabad during 1957-58 as against 3% at Bombay. *They recommend that the strength of security staff at the various Mints, particularly at Alipore and Hyderabad, might be reviewed with a view to achieving economy.*

(d) Consultative Machinery

18. The Committee understand that there is no liaison or consultative machinery in the Mints for maintaining liaison with the principal indentors and users like the Reserve Bank of India etc. and for obtaining advice on coins and medals' production programme etc. *They feel that it would be desirable to set up an Advisory Committee consisting of the representatives of the Reserve Bank of India, Ministry of Finance, Mint Masters, representatives from institutions of Arts etc. on the lines of the Advisory Committee in the Royal Mint, London.*

II

FINANCE AND ACCOUNTS

(a) Pro forma Accounts

19. The Government of India Mints, being departmentally managed units are financed from the grants of the Ministry of Finance. Their accounts are maintained under two systems. Besides the usual Government system of accounting, they also maintain pro forma accounts for the purpose of drawing up Profit and Loss Accounts and Balance Sheets. In this connection the Committee observe that while separate Production Accounts have been compiled in the case of Alipore Mint, no such Accounts have been attempted for the Bombay and Hyderabad Mints, though Balance Sheets and Profit and Loss Accounts, have been drawn up. The difference in practice is difficult to understand since Production Accounts are usually prepared in all manufacturing units even if run as Government Departments. As a result, the Committee could analyse on the basis of the data available in the production accounts of the Alipore Mint the details of the cost of production in that Mint at various places in the report. It could not however, be attempted in respect of the other two Mints for want of proper production/or Manufacturing Accounts. The Committee are surprised that the Ministry of Finance as the supervising or coordinating authority did not consider it necessary to obtain Production Accounts in respect of Bombay and Hyderabad Mints. The Committee recommend that the Bombay and Hyderabad Mints should also compile Production Accounts every year.

20. The following are the figures of the capital and the output of Alipore Mint as on 31st March during each of the years 1954-55 to 1956-57 :—

(Figures in Lakhs of Rupees)

1954-55			1955-56			1956-57		
Capital	Out-put	Ratio	Capital	Out-put	Ratio	Capital	Out-put	Ratio
769	63	1:08	723	69	1:09	354	129	1:36

21. Thus the ratio of output to capital in the Alipore Mint for the year 1956-57 is not even 1:4. The ratios for the years 1954-55 and 1955-56 do not seem to be comparable with 1956-57, since the method of calculating capital was stated to have been changed in 1956-57. However, since the production prior to 1956-57 was very much less than in 1956-57, (c.f. para 38) it is evident that the capital-output ratio would have been even lower during the earlier years.

22. Similar ratios could not be calculated for the Bombay and Hyderabad Mints as the details in regard to them were not furnished to the Committee. *The Committee regret that the Ministry did not find it necessary to calculate these ratios with a view to assessing the comparative productivity of capital in the three Mints.*

23. *As the productivity of capital in the Alipore Mint is abnormally low, the need for expert enquiry in respect of all Mints so as to increase their productivity by extending the scope of production to items other than coins, is evident. The matter is referred to later in para 42.*

(b) Trends in Expenditure

24. The following table gives figures for certain items of expenditure, production etc. in the Alipore Mint for the years 1954-55 to 1956-57.

(Figures in Lakhs of Rupees)

Particulars	1954-55	1955-56	1956-57
1. Total Production	62.7 (100)	68.6 (109)	128.8
2. Salaries & Allowances	10.9	10.7	11.3
3. Depreciation	9.8	10.0	12.4
4. Rent, Rates	2.1	1.99	1.9
5. Misc. Expenses . . . . .	.5	.2	.3
6. Gas Consumed . . . . .	.4	.4	.6
7. Electricity charges	1.2 (100)	1.5 (125)	1.6
8. Travelling Allowances . . . . .	.13 (100)	.16 (123)	.10
9. Police charges . . . . .	.6	.64	.64
10. Repairs to Machinery . . . . .	.9	3.5	2.04
11. General on Cost	23.7 (100)	26.6 (112)	24.5

25. Thus while production increased by about 9% between 1954-55 and 1955-56, the corresponding increases in the General on Cost, Electric charges and Travelling Allowances have been 12%, 25% and 23% respectively. The expenditure trends have, however, improved since 1956-57 primarily because of increased production of decimal coinage.

26. *The Committee suggest that the trends of expenditure should be constantly analysed specially after the present high production tapers off, so as to control disproportionate increases, particularly in salaries and over-heads, whenever noticed.*

(c) Financial Results

27. The financial results of the working of the Mints as reflected in the Profit and Loss Accounts and Balance Sheets of the three Mints for the last five years are given below :—

(Figures in Lakhs of Rupees)

Year	Alipore		Bombay		Hyderabad	
	Profit	Loss	Profit	Loss	Profit	Loss
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1953-54	..	81·63	..	136·69	..	3·86
1954-55	69·83	..	..	87·94	..	4·05
1955-56	115·51	..	..	186·66	..	4·63
1956-57	199·92	..	..	51·39	..	3·24
1957-58	..	..	..	124·28	..	4·33

28. The Committee were informed by the representative of the Ministry that while the profits in the Mints represented the net difference between nominal or face value of the coins and their actual production costs, the losses were based on the difference between the face value and the metal value of the coins withdrawn from circulation and received at the Mints for recoinage or disposal. The net financial results were, therefore, stated to depend largely on the types, denominations and the amount of coins minted as well as the total amount of coins of various denominations withdrawn from circulation.

29. *It is evident, therefore, that the profits and losses, as exhibited in the Profit and Loss Accounts, at present, do not in any way reflect the efficiency of the working of the Mints. The Committee do not quite appreciate the advantages of maintaining accounts in this manner. They would suggest that the question might be reviewed in consultation with the Comptroller and Auditor General of India with a view to evolving a system which, while suiting such establishments, would exhibit their working faithfully. The practice followed in other countries in this regard might also be studied before finalising the procedure.*

(d) System of Accounts

30. The Committee were informed that with a view to improving the existing system of accounts and initial check and rectification of loop holes, if any, in the methods adopted, the entire procedure of accounts obtaining in the various departments of the Alipore Mint, including the system of Store Accounts, was subjected to a review by an officer on special duty (a retired Deputy Accountant General) from March 1956 to April 1957. No such examination of the accounting procedure has however been undertaken in respect of the Bombay and Hyderabad Mints since 1926. *The Committee feel that, from the point of view of economy, efficiency and uniformity in procedure, it would have been advantageous if the officer who examined the accounts of Alipore Mint, had been entrusted with similar work in respect of the other Mints as well. At this stage, they would suggest that improvements brought about in the accounts of Alipore Mint as a result of the recommendations made by that officer might be studied for adoption in the Bombay and Hyderabad Mints also.*

(e) Cost Accounting

31. The Committee were informed that a Cost Accounts Organisation had been set up and that a Costing procedure on scientific basis had been introduced in the Alipore Mint from 1956-57, though it was still in an experimental stage. A beginning in this respect, however, still remained to be made in Bombay and Hyderabad Mints.

32. The representative of the Ministry told the Committee during evidence "The present senior-most man does not like detailed Cost accounting to be made. He has very sound reasons for offering his views". *The Committee are surprised that the importance of Costing has not been realised even by senior executives although it has been recognised universally as a means of controlling costs in industrial units.*

33. In connection with the introduction of costing in the Alipore Mint, a Cost Accountant from the Ministry of Finance was deputed to the Mint in 1956. After he had worked there for some time and had made certain suggestions/recommendations, he was transferred elsewhere as he had become ripe for promotion. The Ministry are stated to be trying to get another man to take up this work again.

34. *The Committee regret that the work relating to the introduction of costing should have been interrupted in this manner and left unfinished due to the promotion of the person concerned. They feel that it should have been possible to foresee the promotion before deputing him for this job. Further, even if the promotion could not be foreseen or helped it should have been possible to allow the person to complete his work by giving him suitable protection under the usual rules.*

35. *The Committee regret the delay in introducing costing in the Government of India Mints, especially at Bombay and Hyderabad, more so when they are under the Ministry of Finance. They feel that there should be uniformity in such matters in similar organisations so that a comparative study of their costs etc. could be made. The Committee recommend that immediate steps be taken to introduce a uniform system of costing in all the Mints.*

III
PRODUCTION
(a) Extent of Production

36. The daily production capacity of the Alipore, Bombay and Hyderabad Mints when worked for 48 hours a week, is stated to be 12, 10 and 3.5 lakh pieces of coins respectively. Their total annual output, daily average and percentage utilization of capacity for the last five years is shown below :—

(Figures in Lakhs)

Year	Alipore			Bombay			Hyderabad		
	Total output of coins	Average daily output	Percentage utilisation of capacity	Total output of coins	Average daily output	Percentage utilization of capacity	Total output of coins	Average daily output	Percentage utilization of capacity
1953-54	1295.68	4.58	83.16	1290.41	4.4	44	35.95	0.12	3.4
1954-55	1129.49	3.90	32.5	1238.36	4.2	42	38.27	0.13	3.7
1955-56	835.63	2.86	23.83	267.23	0.92	9.2	0.70	0.002	00.57
1956-57	3494.30	12.00	100.00	3526.90	12.2	122	849.70	2.9	82.85
1957-58	4782.79	17.02	141.83	4169.61	14.4	144	1516.29	5.28	150.85

37. The Alipore and Bombay Mints also undertake the manufacture and supply of various kinds of metals, tokens and badges etc. and scales, weights and measures to government departments and private parties. They also melt and refine gold and silver for the public etc. The extent of some of the items of work done in the two Mints during the last three years is given at Appendix I.

38. The output of all the Mints, particularly of Hyderabad Mint was very low upto the year 1955-56. In the latter case, the annual production did not even equal its monthly capacity. It is only after the introduction of decimal coinage that not only the full capacity of the Mints has been brought into commission but they are being worked overtime (*i.e.* 54 hours a week against the normal 48 hours).* During evidence it was stated that the current production programme would continue for another three years when the work in connection with decimal coinage was likely to taper off and the problem of idle capacity in the Mints might arise again.

39. The existence till 1956 of the Hyderabad Mint which was taken over from the then Hyderabad State in 1950 surprised the Committee since there was not sufficient work even for the other two Government Mints. No doubt, the problem of idle capacity in Hyderabad Mint does not exist since 1956 but it is likely that it will arise after 2 or 3 years not only in this Mint but in the other two bigger Mints also. *The Committee, therefore, suggest that the question of the existence of Hyderabad Mint as a separate unit, as also the feasibility of its merger with one of the other two bigger Mints be examined.*

40. In this connection, the Committee also learn that there was a Currency Note Section in the Hyderabad Mint and that it was abolished only from 1-3-58 although that Mint was taken over by the Government of India in April, 1950. It was stated that this section was engaged on the verification and destruction of H.S. Currency Notes till its abolition, and that till July, 1953 it was also entrusted with the work relating to examination, numbering, counting and stitching of one Rupee H.S. Currency Notes. The actual expenditure on this section since 1953-54 was as under :—

Year	Expenditure
	Rs.
1953-54	67,847
1954-55	31,230
1955-56	32,560
1956-57	30,658
	32,326 (arrears on account of refixation of pay on integration)
1957-58	28,354

*At the time of factual verification it was pointed out by the Ministry that the normal working hours of the Mints were 37½ hours a week. The Committee were given to understand that overtime payments were being made for extra hours. In this connection, they learn that the normal working hours in the Ordnance Factories are 44 ¾ hours per week. They fail to understand why there should be so much disparity in working hours in different industrial units under the Government. The Committee therefore recommend that steps should be taken to bring about uniformity in this matter as early as possible.

41. The Committee feel that after the work relating to the circulation of one rupee H. S. Currency notes was stopped w. e. f. 1-8-53 there was no need for maintaining the Currency Note Section in the Mint and that its work could have been transferred to the Reserve Bank of India.

42. The Committee regret that no attempt was made to put the idle capacity of Hyderabad as well as of other Mints prior to 1956, to alternative uses. It has already been pointed out in para 23 that the productivity of capital in the Mints is low. Further, the problem of idle capacity in the Mints is likely to arise in 2 or 3 years again as admitted by the representative of the Ministry. In this connection, the Committee feel that there might be considerable scope for undertaking in the Mints, a variety of work on behalf of private parties, Government departments and adjacent countries. They, therefore, recommend the appointment of a team of experts to examine the feasibility of undertaking additional items of work in the Mints so as to utilise the spare capacity therein.

43. The Committee would also suggest that with a view to maintaining efficiency in the Mints, the staff rendered idle on account of fall in production of coins etc. might be segregated and accounted for separately as was being done in the case of Ordnance Factories when they faced a similar problem.

(b) Cost of Production

44. The following table gives the break-up of the cost of production in the Alipore Mint during the years 1954-55 to 1956-57 :—

(Figures in lakhs of Rupees)

	1954-55		1955-56		1956-57	
1. Direct labour and direct material	31.7	50%	36.4	53%	95.5	74%
2. Factory expenses	7.3	12%	5.6	8%	8.7	7%
3. General on Cost	23.7	38%	26.6	39%	24.5	19%
TOTAL	62.7	100%	*68.6	100%	*128.7	100%

45. Both the Factory expenses and General Overheads in the Mint have declined in the year 1956-57 due mainly to increased production. However, the Committee feel that there is still scope for reducing the overheads in the Mint especially since there is scope for reduction in staff (c.f. Para 80). In this connection, it might be pointed out that in the India Security Press the overheads are only 8% of the total cost as against 19% in the case of Alipore Mint even in 1956-57. The Committee would suggest that efforts be made to reduce the overheads to a reasonable figure in the three Mints and thereby reduce the cost of production.

*Without adjustment for the work in progress at the beginning and at the end of the year.

46. The Committee called for on 23-12-1958 from the Ministry the details regarding the comparative cost of manufacture of coins in the three Mints during the last three years together with reasons for variations if any. The information was furnished to the Committee only on the 17th March 1959. From the figures of comparative Cost of manufacture of coins in the two Mints at Alipore and Bombay *vide* Appendix II, the Committee find that the cost is much less in the latter than in the former. Thus, while the cost of producing 1000 pieces of P.N. 1/2 Re. coins and P.N. 25 nP. was Rs. 8.5 and Rs. 4.9 in 1956-57 and 1957-58 respectively in Bombay Mint, the corresponding figures at the Alipore Mint were about Rs. 56.3 and Rs. 116.4 respectively. In this connection the Committee were informed that "in the Bombay Mint there is no full costing system to arrive at scientifically correct figures and the figures given for that Mint can be taken as only very rough ones. These figures were worked out in 1947-48 by the then Mint Master, Major D.V. Deane R.E. (Retired) who has retired from Mint service long ago. In the absence of any cost system in the Mint, these figures have been taken as the basis for estimating the cost of new coins with minor adjustments". *The Committee will refer to the absence of Costing in the Bombay Mint later. They are however, surprised that the Ministry of Finance, as the controlling Ministry, did not consider it necessary to obtain accurate and comparative figures of costs for controlling expenditure and ensuring efficiency in the Mints. They recommended that this be done and efforts made to reconcile the Costs of Production of Coins in the two Mints.*

In this connection the Committee also observe that one of the reasons for higher cost of manufacture of Coins in the Alipore Mint is that the cost of construction of Colony is being added to the overheads of that Mint, *They suggest that the properties including such cost in the overheads be examined..*

47. The Committee observe, however, from the statement (attached to the Administration Report of Alipore Mint for the year 1956-57) showing the manufacturing cost per thousand pieces of coins produced at that Mint during 1956-57, that the manufacturing costs (excluding metal cost) of coins of the same denomination varied widely from month to month. For example, the manufacturing cost per thousand pieces of pure nickel 1/2 rupee coins fluctuated from Rs. 79.10 in April, 1956 to Rs. 48.02 in May, 1956 and again to Rs. 58.03 in July, 1956. Similarly the manufacturing cost per thousand pieces of cupro nickel 10 nP. registered an increase from Rs. 18.48 in October, 1956 to Rs. 23.39 in January, 1957, and that of cupro nickel 2 nP. from Rs. 12.52 in January, 1957 to Rs. 17.75 in March, 1957.

48. It was explained by the representative of the Ministry that the cost of production depended upon the cost of establishment, the metals purchased by the Mints and the type of plant and machinery used therein. *The Committee feel that in view of the wide variations in the costs of production from Mint to Mint and even from month to month in the same Mint, there is scope for bringing them down if closer control is exercised. They therefore, suggest that the production costs in the three Mints be regularly analysed and compared from month to month with a view to securing economy and avoiding wasteful expenditure.*

49. The Committee were informed during evidence that production costs of coins of lower denomination *vis.* 1 nP. and 2 nP. were generally

more than their face value. Thus, while the face value of one thousand pieces of 1 nP. and 2 nP. coins was Rs. 10 and Rs. 20 only, the cost of their production at Alipore Mint during 1956-57 was about Rs. 14 and Rs. 29 respectively. In this connection, the Committee might point out that the excess of production cost of coins over their face value is treated as a loss which is borne by the public exchequer. The extent of such loss in respect of 1 nP. and 2 nP. during 1956-57 at Alipore Mint alone amounted to Rs. 11.70 lakhs. They, therefore, recommend that the feasibility of utilising cheaper substances and economical processes with a view to reducing cost of production, should be constantly explored. The representative of the Ministry stated that they were alive to this problem and were investigating in consultation with the National Metallurgical Laboratory, the possibilities of using aluminium and electrolytic chromium. The Committee hope that decisions in the matter would be expedited.

(c) Operational Losses

50. The percentage of coins found defective in the production process, i.e., at the stamping and examination stage, in the three Mints during the last three years is shown below :—

(Percentage of defective coins)

	Alipore			Bombay			Hyderabad		
	1955-56	1956-57	1957-58	1955-56	1956-57	1957-58	1955-56	1956-57	1957-58
1. Pure Nickel									
1/4 Rupee.	2.6	5.9	5.0	..	..	..	..	..	..
2. 10 nP.	3.0	3.6	2.1	2.53	2.50	2.48	..	..	..
3. 5 nP.	1.7	2.1	2.4	3.82	3.80	3.77	..	..	..
4. 2 nP.	2.9	2.5	3.2	3.02	3.00	2.94	..	..	..
5. 1 nP.	3.2	2.6	2.7	1.50	1.49	1.46	0.78	1.48	1.64

It is observed that the percentage of defective coins of the same denomination differs from Mint to Mint. Even in the same Mint, these percentages have fluctuated from year to year.

Further, the percentage of defective 1 nP. has increased from year to year at Hyderabad while at Alipore the percentages in respect of 5 nP. and 2 nP. have gone up appreciably during 1957-58 as compared to 1955-56.

51. The Committee feel that there is need and room for improvement in the operational efficiency of the Mints. In this connection they understand that permissible limits of operational losses in the various processes have not been laid down in the Mints as yet. They were told that the fixation of such limits, apart from being a formidable task, would generate a sense of

complacency among the staff as long as losses were maintained below those limits. The Committee feel that the practice of laying down such limits is general and is meant only to provide a yardstick to the supervisory staff for judging the operational efficiency of the Units concerned. They, therefore, recommend that the maximum limits for operational losses in the various processes in the Mints should be fixed as early as possible.

52. The Committee further recommend that statistical quality control methods might also be introduced in the Mints so as to reduce wastages and to secure greater and effective control over production costs and also to improve the quality of products.

(d) Coinage Dies

53. The number of dies used and the number of pieces of coins struck (inclusive of rejections) at the Alipore Mint during 1955-56 and 1956-57 are given below :—

Year	No. of dies used			No. of pieces of coins struck
	Obverse	Reverse	Total	
1955-56	2382	1924	4306	8,29,24,401
1956-57	7972	7582	15554	35,62,01,528

54. Thus the average number of pieces of coins struck per pair of dies during the two years was 38,516 and 45,802 respectively. The Mint Master, Bombay also confirmed during evidence that on an average only about 40 to 50 thousand pieces of coins could be made with a pair of dies.

55. The Committee understand that in U.K. the average number of coins struck per pair of dies, was over seventy thousand. During discussion with the representative of the Ministry it transpired that no research on the wearing out of dies had been conducted by the Mints. The problem had also never been referred to the National Metallurgical Laboratory. The matter was, however, stated to have been investigated by the Tata Iron and Steel Co., Ltd. who were supplying die steel to the Mint till recently. The Committee suggest that with a view to increasing the durability of the dies a comparative study of the properties of die steel and the techniques employed in the manufacture of dies in foreign countries might be undertaken in collaboration with the National Metallurgical Laboratory.

56. Incidentally the Committee were surprised to learn that at present die steel was being imported by the Mints as the Tata Iron and Steel Co. Ltd., had stopped its supply. It was also stated that difficulties were being experienced in importing the requirements. The Committee regret that it should have become necessary to import die steel which was previously being manufactured in the country. They recommend that the question relating to its manufacture in India be taken up with the Ministry of Steel, Mines and Fuel.

(e) Counterfeit Coins

57. The average number of counterfeit coins referred to the Bombay Mint during the last three years was as under :—

	1955-56	1956-57	1957-58
	<i>Pieces</i>	<i>Pieces</i>	<i>Pieces</i>
Rupees	5005	1320	7328
Half-Rupees	3759	1464	6610
Quarter-Rupees	4264	4973	6548
Two Annas	67893	40214	162842
One Anna	2864	17022	6885
Half-Anna	443	8067	1146
TOTAL NO.	84228	73060	191359
VALUE	Rs.	Rs.	Rs.
	16,629	9,638	33,091

The total yearly average of counterfeit coins referred to the Alipore Mint, was stated to be 7468 only.

58. The Committee were informed during evidence that the counterfeit coins were generally made of base metals and with crude machinery. The counterfeit two-anna brass coins were, however, admitted to be mostly of good execution and capable of escaping detection from ordinary observation and also being somewhat easy to counterfeit. As regards the new decimal coinage, some stray cases of counterfeiting were stated to have been referred to Alipore Mint but it was claimed that these coins were more complicated and very difficult to counterfeit successfully.

59. *The Committee regret that the designs etc. of the brass two-anna coins which were counterfeited on a large scale (vide above table) were such that it did not make counterfeiting difficult. The extent of counterfeiting in other coins has also been quite large. The Committee understand that in U.K. the total nominal value of counterfeits reported by the police, banks, railways, shops, etc. to the Royal Mint, London during the years 1955, 1956 and 1957 was £ 307, £ 317, and £ 227 respectively.*

60. *The Committee feel that the extent of counterfeiting in coins can be appreciably reduced if proper investigations into the nature of counterfeit coins as well as into the methods employed by counterfeiters are carried out on the one hand and the designs of coins and composition of metals used in their manufacture are made more complicated and intricate on the other. They suggest that the techniques employed in other countries in this matter might also be studied for adoption in this country.*

(f) Research

61. The Committee were told that there was no regular research cell in any of the Mints to undertake research work systematically though at present some research work in regard to coinage metals and alloys was

being conducted by the Assay Department. They have pointed out elsewhere the necessity of research for finding substitute indigenous and cheaper metals for the manufacture of coins as well as for increasing the durability of dies. *The Committee, therefore, feel that it would be desirable if a Central Research Cell is established in the Mints to study not only their common problems but also the latest techniques in foreign countries with a view to increasing efficiency and economy in the Mints. They hope that with the amalgamation of the Assay Department with the Mints which they have recommended in para 96 it might be possible to centralise at one place all research work connected with the Mints.*

Chapter IV

STORES

(a) Imports

62. The Committee were informed that in the current series of domestic coins, base metals which are used as raw materials (*viz.*, nickel, copper, tin and zinc) are all imported. Of these, copper and nickel are consumed in large quantities, the value of their imports during the last five years for the Alipore and Bombay Mints being as below :—

(In lakhs of Rupees)

Year	Alipore		Bombay		Total
	Nickel	Copper	Nickel	Copper	
1953-54	14.33	3.49	..	..	17.82
1954-55	..	6.80	..	..	6.80
1955-56	3.54	0.01	..	..	3.55
1956-57	0.10	39.61	..	23.17	62.88
1957-58	23.08	9.74	..	31.55	64.37
	41.05	59.65	..	54.72	155.42

63. No imports were made for the Hyderabad Mint during this period.

64. The Committee were informed that in the early stages when nickel coins were introduced, the practice was to import manufactured blanks. After the installation of necessary plant and machinery, imported raw nickel was being processed in the Mints thus reducing the cost of such imports. It was further stated that with the present composition of coinage alloys, it was not possible to altogether avoid imports. Even the particular quality of copper *viz.* electrolytically refined copper, required for the coins, was stated to be not available from indigenous sources and was being imported.

65. *The Committee regret the dependence on imported metals for the coinage of the country. Apart from the important consideration of conserving foreign exchange, it is desirable that indigenous metals are used for coins to the extent possible. The Committee, therefore urge that the possibilities of utilizing indigenous metals in the manufacture of coins might be examined in collaboration with the National Metallurgical Laboratory, Jamshedpur.*

66. The Committee were informed that in March, 1957 the Alipore Mint had experienced difficulty in arranging regular supplies of nut coke which being a controlled commodity, was not available from any Coke Oven Plant. Even the Tatas who had earlier agreed to supply, could not do so, thus dislocating the supply arrangements. Subsequently, at the intervention of the Deputy Coal Commissioner, Calcutta, the requisite supply of nut coke was made by the Tatas. The annual requirements of this type of Coke were stated to be about 1,600 tons. *With a view to avoiding recurrence of such difficulties in future, the Committee suggest that the question of its supply be taken up with the Hindustan Steel Ltd.*

(b) Gold and Silver Stocks

67. The gold and silver holding in the Bombay Mint during the last three years was as under:—

	1955-56	1956-57	1957-58
Gold :	<i>(In ozs. fine)</i>		
(i) Govt. A/c.	33,726·6129	30,849·9403	30,878·4911
(ii) Confiscated	1,09,949·4895	1,33,147·6631	1,45,298·4354
TOTAL	1,43,676·1024	1,63,997·6034	1,76,176·9265
Silver :	<i>(In lakhs of rupees)</i>		
(i) Govt. A/c.	22·84	22·66	0·94
(ii) Surplus Silver Stock A/c.	1418·39	1418·44	7·38
TOTAL	1441·23	1441·10	8·32

Similar stocks to a lesser extent, are kept at the Alipore Mint also. These stocks comprise of gold and silver held not only on Government account but also confiscated gold and silver, received from the Customs and Central Excise authorities in Bombay and elsewhere.

68. *The Committee feel that since the main function of the Mints is to manufacture coins, they should not be burdened with the responsibility of holding stocks of these precious metals for which considerable security arrangements are required. They, therefore, suggest the the feasibility of relieving the Mints of this responsibility by transferring these stocks to the Reserve Bank of India might be examined.*

(c) Verification of Stores

69. The Committee were informed that the physical verification of all stores in the Mints, except metals, is done at least once every year departmentally. This verification is carried out progressively throughout the year in different convenient lots. For this purpose a control register is maintained by the Accounts Officer to ensure a 100% physical verification of all the items held as 'stores balances in the Mints' once every year.

70. As regards metal balances (*i.e.*, platinum, gold, silver—including Quarternary Alloy, silver, copper, bronze, nickel, tin, zinc etc.), the verification is undertaken annually by the Accountant General concerned to the extent of 100% in the case of gold and silver and on a percentage basis in the case of other base metals. No departmental verification of metal balances is done, as a matter of course, although occasionally this was stated to have been done. The question of conducting such departmental verifications annually was stated to be under the consideration of Government.

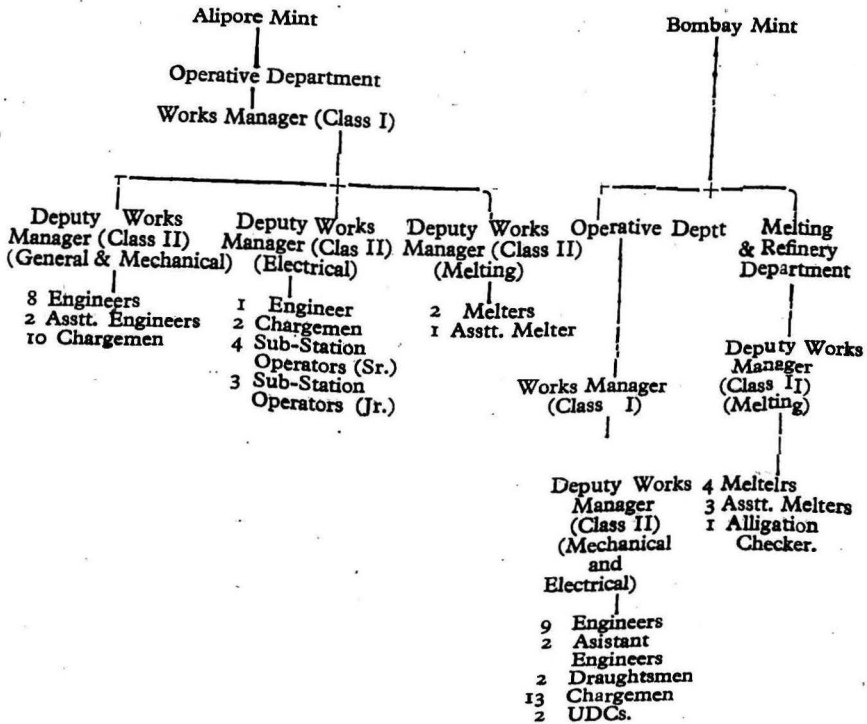
71. In this connection the Committee find that in a case of loss of nickle brass pigged ingots of the value of Rs. 6,454 in the Alipore Mint in 1954, it was not found possible to fix responsibility therefor squarely on the Bullion Keeper due mainly to the absence of complete verification of the stock of his metal for a number of years.

72. *The Committee consider it surprising that base metals, which are stores for all practical purposes, should have been excluded from the requirement of rules regarding cent per cent. annual verification all these years. They suggest that the circumstances in which the rules were not observed in this case be examined and responsibility fixed therefor. They also hope that the procedure for cent per cent verification of all such stores would be finalised expeditiously.*

PERSONNEL

(a) Staff Strength

73. The strength of Works Managers and Deputy Works Managers and departments under them in the Alipore and Bombay Mints are given below :



74. It is observed that at the Alipore Mint there are 8 Engineers, 2 Assistant Engineers and 10 Chargemen under the Deputy Works Manager (General and Mechanical), and only one engineer, two chargemen and 7 sub-Station Operators, and two melters and one Assistant Melter under the Deputy Works Manager (Electrical) and Deputy Works Manager (Melting) respectively. At Bombay the Deputy Works Manager (Melting) has only 4 Melters and 3 Assistant Melters under him.

75. In view of the foregoing, the Committee doubt whether there is adequate justification for the posts of three Deputy Works Managers at Alipore Mint. The charge of the Deputy Works Manager (Melting) at Bombay also seems to be light. The Committee recommend that the scope of economy in regard to these posts should be examined.

76. The strength of the Engraving Departments at the Alipore and Bombay Mints is as under :—

Alipore Mint		Bombay Mint	
1	Artist Engraver	1	Senior Artist Engraver
1	Assistant Artist Engraver (Vacant)	9	Engravers (Gr. I)
8	Engravers (Gr. I)	8	Engravers (Gr. II)
9	Engravers (Gr. II)		
12	Engravers (Gr. III)		
31	(including one vacant)	18	

77. The primary functions of this department are preparation of models, matrices, master punches, working punches, medal dies and dies for special badges and tokens etc. in collaboration with the Die Department. It was stated that the models, matrices, and master punches of coinage dies were made in the Bombay Mint only and that coinage (working) dies were multiplied only in the Alipore Mint from the master punches supplied every year by the former. *In the circumstances the Committee are surprised that the strength of the Engravers in the Alipore Mint should be 72% higher than in the Bombay Mint.* In this connection they find that the total strength of Engravers in the Royal Mint London was 7 in 1956 and 6 in 1957 and the number of coins and metals and decorations issued during the period was 49.95 crores and 1.53 lakhs respectively in 1956 and 50.77 crores and 1.18 lakhs respectively in 1957. Against this, the number of coins and medals produced at Alipore and Bombay Mints during 1956-57 and 1957-58 was as under:—

	Alipore		Bombay	
	Coins	Medals	Coins	Medals
1956-57	34.94 crores	63,203	35.27 crores	919 Nos.
1957-58	47.83 crores.	8,998 Nos.	41.70 crores	1,117 Nos.

78. Since the designs of the coins are not altered frequently and the amount of medal work done in the past has also been much, *the Committee feel that the staff employed in the Engraving Department in both the Mints is on the high side and that there is a scope for its reduction. They, therefore, suggest that the strength of engravers might be reviewed. They further suggest that feasibility of centralising the work relating to the Die, Engraving and the Medal Departments in one Mint, to the extent possible, might also be examined.*

79. The staff employed in the three Mints and the output of coins during the last five years are given below in Table I. Similar information in respect of the Mints in U. K. and U.S.A. for the years 1956 and 1957 which was furnished to the Committee is shown in the Table II.



TABLE I

	ALIPORE MINT			BOMBAY MINT			HYDERABAD MINT			
	Total No. of staff (a)	Output of coins in lakhs (b)	Ratio of (a) to (b)	Total No. of staff (a)	Output of coins in lakhs (b)	Ratio of (a) to (b)	Total No. of staff (a)	Output of coins in lakhs (b)	Ratio of (a) to (b)	
			lakhs			lakhs			lakhs	₹
1953-54	1946	1295.68	1 : .7	1617	1290.41	1 : .8				
1954-55	1901	1129.49	1 : .6	1627	1238.36	1 : .8				
1955-56	2249	835.63	1 : .4	1651	267.23	1 : .2	186	0.7	1 : .004	
1956-57	2342	3494.30	1 : 1.5	2089	3526.90	1 : 1.7	465	849.7	1 : 1.8	
1957-58	2344	4782.79	1 : .2	2159	4169.61	1 : 2	478	1516.2	1 : 3.2	

TABLE II

	PHILADELPHIA MINT (USA)			DENVER MINT (USA)			ROYAL MINT, LONDON		
	Total No. of staff (a)	Output of coins in lakhs (b)	Ratio of (a) to (b)	Total No. of staff (a)	Output of coins in lakhs (b)	Ratio of (a) to (b)	Total No. of staff (a)	Output of coins in lakhs (b)	Ratio of (a) to (b)
1956	223	5597.8	1 : 25.1 lakhs	198	8539.6	1 : 43.1 lakhs	553	4995.5	1 : 9 lakhs
1957	223	5605.8	1 : 25.1 lakhs	198	13454.0	1 : 67.9 lakhs	565	5077.0	1 : 9 lakhs

80. It is observed that whereas the annual output of coins per worker in India was below one lakh till 1955-56 and about 2 lakhs thereafter, it is about 9 lakhs in the Royal Mint, London and above 25 lakhs in the Mints in U.S.A. * It was stated by the representative of the Ministry in this connection that the staff strength in India could not be compared with that of the Mints in Foreign Countries as the productivity of a crafts-man/labourer was much lower in India. *Nevertheless the Committee fail to understand why there should be so much disparity in the employment and output of staff in India as compared to other countries when new and modernised machinery is stated to have been installed in Indian Mints.* They understand that the efficiency of the Indian worker at Chittaranjan, Sindri, HMT and other public undertakings has increased considerably as a result of training and practical experience. *They, therefore feel that there is scope for examining outmoded methods of work and staff placing in the Mints with a view to improving the efficiency of the workers in the Mints. The Committee suggest that this matter might be investigated by a Committee of Technical Experts.*

81. The Committee were informed that, except for a few categories of workmen, norms of work had not been fixed in the Mints and that the output in such cases was ensured from the overall outturn of work assigned to each operative process since it involved team work. *The Committee feel that such a system does not ensure proper utilisation of manpower. The Mints are industrial units and as such there should be a scientific and uniform basis to determine staff strength with a view to ensuring their optimum utilisation and preventing over-staffing. The Committee, therefore, consider that norms of work should be laid down for the various categories of staff as far as practicable.*

82. *The Committee recommend that the team of technical experts suggested in para 80 might be asked also to conduct a job analysis in the various departments in the Mints to fix norms of work and to review comprehensively the staff strength in the Mints in the light of those obtaining in foreign countries.*

(b) Absenteeism

83. The Committee were informed that although the incidence of late attendance in the Mints was extremely small, that of absenteeism was high particularly immediately before the harvest season and the period adjoining the holidays. *They feel that absenteeism can be lessened if incentives are offered for the purpose. The Committee, therefore suggest that the feasibility of introducing Attendance Bonus Scheme etc. in the Mints might be examined.*

(c) Rewards for Suggestions

84. The Committee were told during evidence that suggestion boxes were kept in each department of the Mints and that all suggestions, received either from the boxes, Works Committees or individuals, were examined by the management and implemented if found acceptable. No rewards for good suggestions were, however, given. *The Committee feel that the 'suggestions' scheme can be made really effective and successful, if inducement*

*At the time of factual verification it was pointed out by the Ministry that in the case of foreign Mints vide Table II, the number of staff relate only to the Operative Departments while in the case of Indian Mints, the entire staff including the staff for administration has been taken into account.

for bringing forward good suggestions are offered to the individuals concerned, as is done at Chittaranjan Locomotive Works, etc. They suggest that the introduction of similar schemes in the Mints might be considered.

(d) Accidents

85. The percentage of accidents in Alipore Mint during 1957-58 was stated to be approximately 1.6% of the average daily strength of 1935 workers which comes to about 31 workers daily. †However, during the period from 1-6-58 to 30-11-58 the number of accidents in this Mint was 149 of which 19 were of a serious nature. In Bombay Mint the number of accidents during 1957-58 was stated to be 236, all of which were of minor nature. The amount of compensation paid during the last five years at the Alipore and Bombay Mints was Rs. 27,194/- and Rs. 4,256/- respectively

86. The Committee were informed that besides compliance with the provisions of the Factory Act etc. remedial measures to avoid accidents were taken according to the instructions given by the Factory Inspector from time to time. *The Committee feel that the Mints should also devise with the cooperation of workers, proper safeguards to prevent and eliminate causes of accidents. They, therefore, recommend that the scope of the existing Works Committees might be enlarged suitably so that they might function as Safety Committees also.*

(e) Welfare Measures

87. Schemes for the construction of residential quarters for the staff and workmen of the Mints at Alipore and Bombay were included in the Second Five Year Plan at a total estimated cost of Rs. 68 and Rs. 118 lakhs respectively. Two phases of the work of the Scheme in respect of the Alipore Mint have been completed and the third and fourth phases were stated to be in progress and under consideration respectively. So far, however, only 14.5% of the number of workers for whom accommodation is proposed to be built and 7.48% of the total strength have been provided with either single or family accommodation. As regards the Bombay Mint, it was stated that there had been no progress on account of non-availability of a suitable plot. Recently three plots, sufficient for the colony, were stated to have been selected for which acquisition proceedings were in progress. During evidence, the representatives of the Ministry attributed the slow progress in the construction of quarters to the overall need for economy as well as the limited capacity of the Public Works Department.

88. *The Committee regret to note that even after about three years of the inclusion of the schemes of construction of quarters in the Second Five Year Plan, there has been little progress in the matter, particularly at Bombay. They recommend that steps be taken to expedite the construction of quarters at both places.*

89. As a precautionary measure, the workmen in the Mints are prohibited from taking coins inside the inner security quadrangle and are subjected to a search of their persons while leaving their respective departments at

†At the time of factual verification it was stated by Ministry that most of the accidents were of a minor nature.

the departmental exits and again at the exits to the Mints inner security ring. *The Committee feel that the system of physical search must be taking long time and is also irksome. They, therefore, suggest that the possibility of installing metal detectors in the Mints, like those in the customs departments in India and U.K., might be examined.*

VI

ASSAY DEPARTMENT AND SILVER REFINERY PROJECT

(a) Assay Department

(i) Organisation and Functions

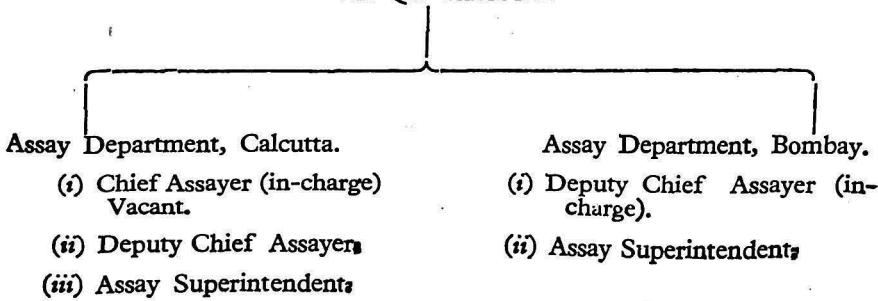
90. The Assay Department has two Offices, one at Calcutta and the other at Bombay. The present organisation of the Department is as under :

MASTER ASSAY DEPARTMENT

AND

SILVER REFINERY PROJECT

H. Qs. CALCUTTA



91. The primary function of the Assay Department is to check the correctness of the coins made by the Mints and to maintain and ensure a correct legal standard of the coinage of the country. It also advises the Mints in their selection of coinage metals and alloys which are tested for their mechanical properties as well as chemical composition. The composition and behaviour of the coinage metals are also checked at intermediate stages of the process. Other important items of work carried out in the Assay Department are :—

- (i) Assays on precious metals including gold and silver received from Government as well as public.
- (ii) Assays on various metal ores etc. received from the public.
- (iii) Verification of standard weights used in the Mint.
- (iv) Inspection of local refineries and assay offices in Bombay whose certificates for fineness are recognised by the Reserve Bank of India.
- (v) To examine and assay the exhibits in cases of counterfeit coins and smuggled bullion as received from the Police and Customs Departments.

- (vi) Refining of platinum group of metals from scrap, jeweller's fillings etc.
- (vii) Preparation of 9 ct. white gold for the jewellers.
- (viii) Research for the improvement and progress in the Mints and Assay Department activities and processes.

92. The Assay Department is as old as the Mints and had an independent status ever since its establishment. In 1932 due to the economy drive, the administrative control of this department was transferred to the respective Mint Masters. In 1952 the Assay Department was separated from the organisation of the Mints and again constituted as an independent and self-contained unit under the Master, Assay Department and Silver Refinery Project.

93. In justification of the independent status of the Assay Department it was stated by the representative of the Ministry of Finance that a correct and independent check on the production of coins in the Mints, immune from any extraneous influence or consideration, was necessary. There was also need to have a detached Department to examine the coins in an objective manner and offer scientific criticism.

94. Another reason for keeping the Mints and Assay Department separate was stated to be that it would be *prima-facie* incongruous for the Mint Master who is primarily and professionally an engineer to be in charge of the scientific staff of a chemical and research laboratory. During the period between 1932 and 1952 when the Assay Department was merged with the Mints, the former was stated to be practically overshadowed by the latter to a state of concealed entity and was prevented from growing into full stature. Also, situations had arisen in the past when a Deputy Mint Master, considerably junior in age and service became Mint Master and Head of the Department over a senior and experienced Assay Department Officer, which resulted in a feeling of resentment among Assay Officers.

95. *The Committee do not feel convinced by the reasons advanced for according an independent status to the Assay Department. They feel that the purpose of ensuring an objective check on the correctness of coins etc. could as well be served by creating a separate special cell in the Mints for the assay work.* In this connection it is understood that during the merger period of 20 years, i.e., from 1932 to 1952 there was no complaint about lack of objectivity in the check of the Assay Department or adverse effect on the coinage. They also learn that in the United Kingdom, the Superintendent of Operative Department and the Chemist and Assayer are under the Deputy Master and Comptroller of the Royal Mint, London.

96. *The Committee feel that considerations of economy, which led to the merger of the Assay Department with the Mints in 1932, are paramount even now and that a similar reorganisation would result in the reduction of the post of Master, Assay Department and Silver Refinery Project. They, therefore recommend that the administrative control of the Assay Department be transferred to the mint masters*

(ii) *Schedule of Assay Charges*

97. The financial results of the working of the Assay Department according to the proforma accounts for the year 1957-58 are as under :—

(Rupees in lakhs)

	Revenue	Expenditure	Excess of Revenue over expenditure
(a) Assay Deptt., Calcutta	2.52	0.73	1.79
(b) Assay Deptt., Bombay	3.91	1.22	2.69
TOTAL	6.43	1.95*	4.48

98. The revenue figures were stated to have been calculated on the basis of Assays done for private parties and Government Departments including coinage assays for Mints. The schedule of charges for assays was however fixed after an *ad hoc* costing and after taking into consideration the prevailing rates for such work undertaken by Government Test House, private assayers and the actual cost in the Assay Department. It was also claimed that their schedule of charges was much below the rates charged by other parties.

99. The Committee find that out of total revenue of Rs. 6.43 lakhs shown in the proforma accounts for the year 1957-58 the amount of fees earned from private parties amounts to about Rs. 22 thousand only. Thus the revenue of the Assay Department is mainly derived from the Assays done for the Mints. Further, the revenue is about 3½ times of the expenditure. In the circumstances the Committee feel surprised that the charges made by a Government department from a sister department should be so unrelated to costs. They recommend that the schedule of charges in the Assay Department be revised so as to correspond to reasonable costs, in so far as the work done for the Government Departments is concerned.

100. The Committee also recommend that the scope for increasing the volume of work received from private parties etc. be examined by offering better facilities and by making suitable publicity.

(b) **Silver Refinery Project**(1) *Historical*

101. The history of the Silver Refinery Project is as follows :—

During World War II, India obtained under the Lend-Lease Agreement 226 million ozs. of silver from the U.S.A. for the manufacture of Quaternary Alloy Coins (composition silver 50%, copper 40%, nickel 5% and zinc 5%). The Silver was returnable to that country within five years from the date of cessation of emergency to be proclaimed by the President of the U.S.A. After the War, the Government of India replaced the Q.A. coins by coins of pure nickel and other metals, and decided to extract silver from the former so as to redeem their obligation towards the U.S.A.

*This does not include a sum about Rs. 0.15 lakhs under expenditure on account of service charges of the Alipur Mint on which final decision has not been taken.

102. The Committee were informed that the existing Silver Refinery at Bombay was not equipped for the extraction of silver from Q.A. coins. Further, the cost of refining these coins in foreign refineries was found to be prohibitive and their capacity to undertake the work also limited. The Government of India, therefore, decided in 1948 to set up a Silver Refinery in the country for the purpose of extracting silver from the Q.A. coins at the rate of 23 million ounces of fine silver per annum from 1951 onwards.

103. The Refinery Project which was based on a new process, evolved by two Officers of the Assay Department, was originally approved in June 1948. A firm of Chemical Engineers [M/s. Associated Consulting Engineers (India)] was appointed as Consulting Engineers in May 1950 on the terms and conditions given in Appendix III on the recommendation of the then Master of Mint, Lahore who was specially deputed to U.K. for the purpose. The plans and specifications of the Refinery were finalized in consultation with the Consulting Engineers and global tenders for the work were invited early in 1952 but none of the seven tenderers except one (i.e. the A.P.V. Engineering Co. Ltd. of India) quoted for all the items for which quotations were invited. Further, in view of the constant charging of the plant with highly corrosive substances, no tenderer agreed to undertake the responsibility for the design, durability and performance of certain important sections of the plant even for a limited period. Under the circumstances the tender of M/s. Demag Electrometallurgic G.m.b.h., who suggested an alternative process of refining, which was stated to have many advantages, including lower operational costs, over the Government process, and offered to supply the complete plant, was accepted and a contract was finally concluded with them in March 1953. This agreement provided for a time schedule of 18 months for the supply of machinery.

The Committee were informed that the agreement with the Consulting Engineers was terminated with effect from 1st July, 1952, as with the execution of the agreement signed with M/s. Demag for the Silver Refinery Project, the services of the consulting Engineers were no longer required. A sum of Rs 2,39,711 was, however, paid to them in consideration of the services rendered before the termination of the agreement. They were also informed that the work relating to erection, testing and commissioning of the plant which was originally entrusted to the Consulting Engineers, was entrusted to M/s. Sepulchre Bros. (India) Private Ltd., who in a way were the Indian Contractors of M/s. Demag, on a much lower remuneration viz. 10% on the erection expenses and ancillary equipment procured through them, subject to a minimum of Rs. 1 lakh and maximum of Rs. 15 lakhs. *The Committee doubt whether adequate thought was given to the details of the project while appointing the Consulting Engineers who had to be paid about Rs. 2.4 lakhs for services which were later found to be redundant.*

104. The cost of the Refinery Project was originally estimated at Rs. 60 lakhs, later it was revised to Rs. 88 lakhs in 1952, as a result of the tenders received for the project. The cost is now estimated to be Rs. 111.74 lakhs which excludes the cost of land and the payments made to M/s. Associated Consulting Engineers. The Committee were informed that the increase in the cost of the project was due to price adjustment as per Demag contract, rise in general price index in India, rise in municipal tax, additions of certain items in the constructional work etc.

105. The projected Silver Refinery, however, has not yet been put into commission. The reasons for this were stated to be :—

- (i) Delay in the construction work by the CPWD on account of late receipt of certain civil engineering drawings for process building etc. from the plant suppliers.
- (ii) Lack of raw materials and accessories within the country.
- (iii) Water treatment plant which was bought for the project was found inadequate for the purpose and water had to be taken from the Calcutta Corporation, who, however, failed to supply filtered water and the supply of unfiltered water had to be arranged for etc.

106. Meanwhile, consequent on the cessation of the state of emergency in the U. S. A. on 28-4-52, India's share of Silver debt amounting to 172.5 million ounces of fine silver (53.5 million ounces being the share of Pakistan) became due for payment on 28th April 1957. Since it was not found possible either to get the silver extracted from Q. A. coins in foreign refineries within the time available under the agreement or to purchase silver from the open market on account of the difficulty of foreign exchange, India's liability in this respect was discharged by delivering 50.3 million fine troy ounces of silver and the balance *viz.* 122.2 million fine troy ounces, in the form of 245 million ounces of Q.A. coins. Under the agreement the metals recovered in the refining process were to be retained by the Government of U. S. A. since that Government had assumed all transport, handling and refining costs. In this connection the Committee were informed that had silver been refined in India and transported to U. S. A. it would have resulted in an extra expenditure of Rs. 192.66 lakhs to the Government of India, even after making allowance for the value of copper retained by U. S. A.

107. *The Committee observe that the purpose for which the Silver Refinery Project was conceived, was not served by it. The refinery which was planned to have been commissioned in 1951 has not gone into operation yet. There have been a series of unfortunate delays at every stage of the project. The consultants were appointed two years after the approval of the scheme. It took approximately another three years to call tenders and enter into a contract. Another 5½ years elapsed in the erection and commissioning of the plant. In all, a period of about eleven years has passed since the scheme was originally approved. The trial commissioning of the plant was expected to commence in February 1959 and full production three months thereafter. However, on account of serious damage to one of the melting furnaces in a recent accident, the date of commissioning of the plant might be further affected.*

108. The Committee were informed by the representative of the Minister that the Silver, extracted from the Q. A. coins, at the Calcutta Refinery would not be pure and would require further refining at Bombay thereby resulting in an additional expenditure on transport.

109. *The Committee cannot help feeling that the planning, including location and execution of the entire scheme of the Silver Refinery Project, was not undertaken with the care it deserved. They wonder whether in view of the subsequent developments, the expenditure on this project was at all necessary. The Committee recommend that a comprehensive enquiry be conducted into the reasons for delay, rise in costs, siting etc. of the Silver Refinery Project and responsibility fixed therefor.*

110. The staff employed on the Silver Refinery Project and the expenditure on their pay and allowances since 1952-53 are given below :—

	1952-53	1953-54	1954-55	1955-56	1956-57	1957-58	1958-59
1. No. of staff as on 1st April.	1	6	61	106	112	134	143
2. Expenditure	Rs. 26200	Rs. 66300	Rs. 190500	Rs. 212700	Rs. 239600	Rs. 281100	245000 (upto Nov. 58)

111. The staff were employed, it was stated, on the receipt, custody and accounting of Plants from Demag, the work of erection, running of workshop and electric sub-station but mainly on the receipt, weighment, and custody of Q. A. Coins. *The Committee feel that most of the expenditure could have been avoided had the custody of Q. A. coins not been transferred from the Mines till the commissioning of the Silver Refinery Plant. They suggest that the premature transfer of the custody of Q.A. coins might be examined with a view to fixing responsibility therefor.*

(ii) *Alternative Utilisation*

112. The Committee were informed that the existing stocks of Q.A. Coins with the Government together with those yet to be withdrawn, would keep the Refinery busy for a period of five years only.

113. In this connection the Committee were told that according to the suppliers of the equipment of the Silver Refinery, the plant was so designed that it could be converted into a Copper Refinery with certain adjustments after the work relating to the extraction of silver from Q. A. Coins was over. Since, however, raw copper in adequate quantities was not available in the country it was proposed to import it from abroad. The whole question regarding its alternative uses, including the economics of the proposal to convert the Silver Refinery into a Copper Refinery, was stated to be under examination in consultation with the Chief Industrial Adviser, Ministry of Commerce and Industry, National Metallurgical Laboratory and other experts in the line. The Committee hope that early decision would be taken in the matter.

The Committee understand that electrolytic copper which is required for the manufacture of electrical conductors, wires, cables and other industrial requirements as well as by the Defence Services, Railways and Mints etc., is at present being imported in substantial quantities as there is no capacity for producing such copper in the country. *They, therefore, suggest that the demand for electrolytic copper in the country might be assessed and taken into account while examining the economics of converting the Silver Refinery into a Copper Refinery and the feasibility of adapting it to the demand as also of providing additional capacity in the country, if necessary, considered.*

(iii) *Silver Refinery, Bombay*

114. There is a Silver Refinery in the Bombay Mint which was commissioned in 1929 at a cost of Rs. 4.40 lakhs for refining silver out of withdrawn standard silver coins. This refinery which has an installed capacity of 18.

million fine ounces of silver annually worked upto the year 1955-56 but has since been closed for want of raw silver. It would, however, be responsible for final refining of the silver which would be extracted at the Silver Refinery, Calcutta.

115. *Since the two silver refineries are complementary to each other, the Committee do not see any advantage in keeping them as separate units since the existing arrangement besides resulting in extra expenditure on transport of silver from Calcutta to Bombay for final refining, is also undoubtedly bound to result in the employment of more supervisory staff. It might also be more convenient and economical if the entire process of extracting and refining silver was done at one place. The Committee, therefore, suggest that the feasibility of merging the two refineries together and bringing them under one management might be examined.*

VII

MISCELLANEOUS

(a) Annual Reports

116. The Committee observe that the Annual Administrative Reports of the three Mints are not uniform in content. While, in the case of the Alipore and Hyderabad Mints, detailed activities of the various departments during the year under report are given, it is not done in the case of the Bombay Mint. As such, it is difficult to compare the working of corresponding departments existing in these Mints. Further, no Consolidated Report showing vital information regarding the activities (*e.g.* coins minted, coins in the circulation, etc.) of the three Mints is prepared. *The Committee suggest that a consolidated report for all the Mints containing comprehensive information regarding their activities might be prepared every year. They also suggest that the Annual Administrative Reports of the individual Mints depicting the activities of their main departments might be appended to the Consolidated Report which should be placed before Parliament. The Committee feel that this would, apart from pooling the information at one place, facilitate a comparison of the working efficiency of the Mints.*

(b) Shifting of Bombay Mint

117. The Bombay Mint which was commissioned in 1829 and had at that time a daily coinage output of about 1.5 lakh pieces of rupees has now a capacity of about 10 lakh pieces of coins. However, while the Calcutta Mint which was established about the same time was shifted to Alipore in 1951, due to shortage of accommodation in its old premises, the Bombay Mint continues to be housed in its old building. The representative of the Ministry stated in evidence that the shifting of the Bombay Mint to a spacious site would disrupt the life of about 2,000 workers (who came from distant localities scattered all over the city) and also entail several other difficulties. The question of constructing quarters for the staff had not also made much headway due to non-availability of suitable land for the purpose. As such, the present time was not considered opportune for shifting the Mint to another place, and the question was kept open.

118. *The Committee feel that the existence of such industrial units in the heart of the city and consequently also their residential area aggravates the problem of congestion and tends to further the growth of slums. They, therefore, suggest that the economics of shifting the Bombay Mint from its present location in a very busy area to a more commodious site might be examined.*

NEW DELHI;
April 1, 1959
Chaitra 11, 1881 (S)

BALVANTRAY G. MEHTA,
Chairman,
Estimates Committee.

APPENDIX I

Statement showing the extent of work done regarding the medals, weights and measures etc. in the Alipore and Bombay Mints

I. STATEMENT SHOWING THE REVENUE REALISED BY THE ALIPORE AND BOMBAY MINTS ON ACCOUNT OF SUPPLY OF MEDALS DURING THE LAST 3 YEARS

	1955-56	1956-57	1957-58
	Rs.	Rs.	Rs.
Alipore	2,89,266	3,88,671	47,663
Bombay	18,163	19,462	16,331

II. STATEMENT SHOWING WORK DONE REGARDING MELTING ETC. OF GOLD AND SILVER AT ALIPORE AND BOMBAY MINTS DURING THE YEARS 1955-56-1957-58

(Figures in Tolas)

	Bombay			Alipore		
	1955-56	1956-57	1957-58	1955-56	1956-57	1957-58
1. Gold melting for the Public.	9773	4651	11249	10393	6234	852
2. Gold refined for:						
(a) Mines	611676	593635	511934	..	..	..
(b) Public	208112	238393	216184	..	..	..
3. Gold received for exchange or casting.	156582	245036	234546	..	..	..
4. Reserve Bank gold for exchange or casting.	65593	..	..	..	..	..
5. Silver melted for the public.	20325	19220	11478	4535887	14411062	13065521

III. WORK DONE AT THE BOMBAY AND ALIPORE MINTS IN CONNECTION WITH THE MANUFACTURE OF METRIC WEIGHTS AND MEASURES DURING 1957-1958

Sl. No.	Bombay Mint	Alipore Mint
1	22 sets of Metric Reform Standards	62 Treasury sets of metric weights.
2	21 sets of Secondary Standard Weights.	25 working standard metric weights.
3	5 sets of Secondary Standard Measures.	
4	250 sets of Metric Bullion Weights	

APPENDIX II

Comparative Cost of Manufacture of 1000 pieces of coins (exclusive of cost of metal) in the three Mints during the years 1955-56, 1956-57 and 1957-58

	Alipore			Bombay			Hyderabad		
	1955-56	1956-57	1957-58	1955-56	1956-57	1957-58	1955-56	1956-57	1957-58
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Pure Nickel $\frac{1}{2}$ Rupee . . .	69.42	56.29	..	8.50	8.50	..	..	..	..
” ” $\frac{1}{4}$ ” . . .	38.77	34.43	..	..	4.88	..	..	..	..
” ” 25 nP. . . .	..	..	116.43	..	..	4.88	..	..	..
Cupro Nickel $\frac{1}{2}$ anna . . .	14.02	..	..	8.00	..	..	..	..	..
” ” 10 nP. . . .	..	21.85	33.44	..	10.00	10.00	..	..	..
” ” 5 nP. . . .	..	23.58	24.45	..	9.00	9.00	..	..	..
” ” 2 nP. . . .	..	18.08	18.31	..	8.00	8.00	..	..	..
Bronz 1 nP. . . .	..	10.78	8.85	..	6.00	6.00	..	9.11	6.44

APPENDIX III

Terms and Conditions of Appointment of M/s. Associated Engineers (India).

The Consulting Engineers were to prepare *inter alia* detailed designs, drawings, specifications, estimates and schedule of quantities to enable tenders to be invited for the constructions of foundations, buildings, process plant and all other necessary services for a Refinery and to call for tenders for the supply and erection of all such buildings and plants and to examine and advise on all tenders, to supervise the execution of the work until completion, to supervise the operation of the plant after the erection thereof has been completed for a period of not less than 3 months until it is working satisfactorily.

Under the said agreement, subject to the terms and conditions mentioned there, remuneration of the Consulting Engineers was fixed on the basis of the percentage scale given below based on the total actual cost of the work :—

<i>Actual cost of the works</i>	<i>Percentage Fee</i>
Rs. 25 lakhs to Rs. 40 lakhs	5.8%
Rs. 40 lakhs to Rs. 60 lakhs	5.4%
Rs. 60 lakhs to Rs. 80 lakhs	5.2%
Over Rs. 80 lakhs	5.0%

In addition to the above, the Consulting Engineers were entitled also to the reimbursement of certain actual expenditure *viz.*, (a) travelling expenses of Partners of the Consulting Engineers and staff engaged by them on the works whilst travelling between India and the U.K., (b) printing and reproduction of documents, drawings and records and the purchase of maps, (c) the cost of any assistance in arbitration proceedings and of any legal advice taken or sought on behalf of the President, (d) fees for any 'specialists' services or laboratory investigation required, and (e) the salaries, allowances, office, travelling and all out-of-pocket expenses incurred by the Resident Engineer and his staff engaged upon the work. These salaries and allowances of the Resident Engineer and his staff were subject to the prior approval of the President.

APPENDIX IV

Summary of conclusions and recommendations

Serial No.	Paragraph No.	Recommendations
1	2	3
1	6—7	<p>(i) The Committee find that apart from the control exercised from the Ministry there is no central coordinating and controlling authority in charge of the working of the Mints with the result that there is absence of uniformity among them even in matters like the system of maintaining accounts. They feel that such a central control and direction would facilitate planning of production and distribution of work among the Mints, introduction of modern techniques, uniformity in standards of work, welfare measures etc.</p> <p>(ii) Since the Mints are industrial undertakings, the Committee feel that it would be desirable if coordination of work and centralization of authority in the Mints is provided by organising them on commercial lines under the company form of management.</p>
2	8	The Committee suggest that in view of the capacity and scope for undertaking the manufacture of a variety of products in the Mints for the State Governments, private parties etc. and of the experience of the Ministry of Commerce & Industry in running industries, the control of the Mints might with advantage be transferred to the latter Ministry so as to enable it to utilize the capacity in the Mints to the maximum advantage.
3	9	The Committee suggest that a Board of Management, consisting of the Mint Master and other senior officers of the Mint, should be constituted in each Mint for assisting the Mint Masters in the exercise of their powers, functions and responsibilities relating to the administration of the Mints.
4	14	The Committee feel that since gold and silver coins are no longer minted, a rigid control over bullion transactions at every stage is probably not warranted.

they, therefore, recommend that a system of combined bullion keeping and registering be introduced not only in the Silver Refinery at Calcutta but in the Mints also and economies effected.

- 5 15 The Committee consider that the system of appointing Deputy Bullion Keepers and Assistant Bullion Keepers from amongst the nominees of Bullion Keeper is likely to be a source of nepotism. They recommend that this practice be stopped and recruitment to these posts made in the normal manner,
- 6 17 The Committee recommend that the strength of security staff at the various Mints particularly at Alipore and Hyderabad might be reviewed with a view to achieving economy.
- 7 18 The Committee feel that it would be desirable to set up an Advisory Committee consisting of representatives of the Reserve Bank of India, Ministry of Finance, Mint Masters, representatives from institutions of Arts etc. on the lines of the Advisory Committee in the Royal Mint, London.
- 8 19 (i) The Committee observe that while separate Production Accounts have been compiled in the case of Alipore Mint, no such Accounts have been attempted for the Bombay and Hyderabad Mints, though Balance Sheet and Profit & Loss Accounts have been drawn up. The difference in practice is difficult to understand since Production Accounts are usually prepared in all the manufacturing units even if run as Government Departments.
- (ii) The Committee are surprised that the Ministry of Finance as the supervising or coordinating authority did not consider it necessary to obtain Production Accounts in respect of Bombay and Hyderabad Mints.
- (iii) The Committee recommend that the Bombay and Hyderabad Mints should also compile a Production Account every year.
- 9 22 The Committee regret that the Ministry did not find it necessary to calculate the capital output ratios with a view to assessing the comparative productivity of capital in the three Mints.

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10	23	As the productivity of capital in Alipore Mint is abnormally low, the need for expert enquiry in respect of all Mints so as to increase their productivity by extending the scope of production to items other than coins, is evident.
11	26	The Committee suggest that the trends of expenditure should be constantly analysed specially after the present high production tapers off, so as to control disproportionate increases particularly in salaries and overheads, whenever noticed.
12	29	It is evident that the profits and losses as exhibited in the Profit and Loss Accounts, at present, do not in any way reflect the efficiency of the working of the Mints. The Committee do not quite appreciate the advantages of maintaining accounts in this manner. They would suggest that the question might be reviewed in consultation with C. & A.G. of India with a view to evolving a system which while suiting such establishments, would exhibit their working faithfully. The practice followed in other countries in this regard might also be studied before finalising the procedure.
13	30	The Committee feel that, from the point of view of economy, efficiency and uniformity in procedure, it would have been advantageous if the officer who examined the accounts of Alipore Mint, had been entrusted with similar work in respect of the other Mints as well. At this stage, they would suggest that improvements brought about in the accounts of Alipore Mint as a result of the recommendations made by that officer might be studied for adoption in the Bombay and Hyderabad Mints also.
14	32	The Committee are surprised that the importance of Costing has not been realised even by senior executives although it has been recognised universally as a means of controlling costs in industrial units.
15	34	The Committee regret that the work relating to the introduction of costing should have been interrupted in this manner and left unfinished due to the promotion of the person concerned. They feel that it should have been possible to foresee the promotion before deputing him for this job. Further, even if the promotion could not be foreseen or helped it should have been possible to allow the person to complete his work by giving him suitable protection under the usual rules.

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16	35	The Committee regret the delay in introducing costing in the Government of India Mints, especially at Bombay and Hyderabad, more so when they are under the Ministry of Finance. They feel that there should be uniformity in such matters in similar organisations so that a comparative study of their costs etc. could be made. The Committee recommend that immediate steps be taken to introduce a uniform system of costing in all the Mints.
17	38	The Committee fail to understand why there should be so much disparity in working hours in different industrial units under the Government. They therefore recommend that steps should be taken to bring about uniformity in this matter as early as possible.
	Foot note	
18	39	The Committee suggest that the question of the existence of Hyderabad Mint as a separate unit as also the feasibility of its merger with one of the other two bigger Mints be examined.
19	41	The Committee feel that after the work relating to the circulation of one rupee H.S. currency notes was stopped w.e.f. 1-8-53 there was no need for maintaining the Currency Note Section in the Mint and that its work could have been transferred to the Reserve Bank of India.
20	42	<p>(i) The Committee regret that no attempt was made to put the idle capacity of Hyderabad as well as of other Mints prior to 1956, to alternative uses.</p> <p>(ii) The Committee feel that there might be considerable scope for undertaking in the Mints, a variety of work on behalf of private parties, Government departments and adjacent countries. They, therefore, recommend the appointment of a team of experts to examine the feasibility of undertaking additional items of work in the Mints so as to utilise the spare capacity therein.</p>
21	43	The Committee would suggest that with a view to maintaining efficiency in the Mints, the staff rendered idle on account of fall in production of coins etc. might be segregated and accounted for separately as was being done in the case of Ordnance Factories when they faced a similar problem.
22	45	The Committee would suggest that efforts be made to reduce the overheads to a reasonable figure in the three Mints and thereby reduce the cost of production.

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23	46	<p>(a) The Committee are surprised that the Ministry of Finance, as the controlling Ministry, did not consider it necessary to obtain accurate and comparative figures of costs for controlling expenditure and ensuring efficiency in the Mints. They recommend that this be done and efforts made to reconcile the costs of production of coins in the two Mints.</p> <p>(b) The Committee suggest that the propriety of including the cost of construction of colony in the overheads of Alipore Mint be examined.</p>
24	48	<p>The Committee feel that in view of the wide variations in the costs of production of coins from Mint to Mint and even from month to month in the same Mint, there is scope for bringing them down if closer control is exercised. They, therefore, suggest that the production costs in the three Mints be regularly analysed and compared from month to month with a view to securing economy and avoiding wasteful expenditure.</p>
25	49	<p>(i) The Committee recommend that the feasibility of utilising cheaper substances and economical processes with a view to reducing cost of production of coins, should be constantly explored.</p> <p>(ii) The Committee hope that decisions regarding the use of cheaper metals for coins of lower denominations would be expedited.</p>
26	51	<p>The Committee feel that the practice of laying down permissible limits of operational losses is general and is meant only to provide a yard-stick to the supervisory staff for judging the operational efficiency of the Units concerned. They, therefore, recommend that the maximum limits for operational losses in the various processes in the Mints should be fixed as early as possible.</p>
27	52	<p>The Committee recommend that statistical quality control methods might also be introduced in the Mints so as to reduce wastages and to secure greater and effective control over production costs and also to improve the quality of products.</p>
28	55	<p>The Committee suggest that with a view to increasing the durability of the dies, a comparative study of the properties of die steel and the technique employed in the manufacture of dies in foreign countries might be undertaken in collaboration with the National Metallurgical Laboratory.</p>

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29	56	The Committee recommend that the question relating to the manufacture of die steel in India be taken up with the Ministry of Steel, Mines and Fuel.
30	59	The Committee regret that the design, etc., of the brass two-anna coins which were counterfeited on a large scale, was such that it did not make a counterfeiting difficult.
31	60	The Committee feel that the extent of counterfeiting in coins can be appreciably reduced if proper investigations into the nature of counterfeit coins as well as into the methods employed by counterfeiters are carried out on the one hand and the designs of coins and composition of metals used in their manufacture are made more complicated and intricate on the other. They suggest that the techniques employed in other countries in this matter might also be studied for adoption in this country.
32	61	The Committee feel that it would be desirable if a Central Research Cell is established in the Mints to study not only their common problems but also the latest techniques in foreign countries with a view to increasing efficiency and economy in the Mints. They hope that with the amalgamation of the Assay Department with the Mints which they have recommended in para. 96, it might be possible to centralise at one place all research work connected with the Mints.
33	65	The Committee regret the dependence on imported metals for the coinage of the country. Apart from the important consideration of conserving foreign exchange, it is desirable that indigenous metals are used for coins to the extent possible. The Committee, therefore, urge that the possibilities of utilizing indigenous metals in the manufacture of coins might be examined in collaboration with the National Metallurgical Laboratory, Jamshedpur.
34	66	The Committee suggest that the question of supply of nut coke be taken up with the Hindustan Steel Ltd.
35	68	The Committee feel that since the main function of the Mints is to manufacture coins, they should not be burdened with the responsibility of holding stocks of precious metals (<i>viz.</i> , gold and silver, etc.) for which considerable security arrangements are required. They, therefore, suggest that the feasibility

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		of relieving the Mints of this responsibility by transferring these stocks to the Reserve Bank of India might be examined.
36	72	<p>(i) The Committee consider it surprising that base metals, which are stores for all practical purposes, should have been excluded from the requirements of rules regarding cent per cent annual verification all these years. They suggest that the circumstances in which the rules were not observed in this case be examined and responsibility fixed therefor.</p> <p>(ii) They also hope that the procedure for cent per cent verification of all such stores would be finalised expeditiously.</p>
37	75	The Committee recommend that the scope of economy in regard to the posts of Deputy Works Managers at the Alipore and Bombay Mints should be examined.
38	78	<p>(i) The Committee consider that the staff employed in the Engraving Department in the Alipore and Bombay Mints is on the high side and that there is a scope for its reduction. They, therefore, suggest that the strength of engravers might be reviewed.</p> <p>(ii) They further suggest that the feasibility of centralising the work relating to the Die, Engraving and Medal Departments in one Mint to the extent possible, might also be examined.</p>
39	80	The Committee feel that there is scope for examining outmoded methods of work and staff placing in the Mints with a view to economy and efficiency of the workers in the mints. They suggest that this matter might be investigated by a Committee of Technical Experts.
40	81	The Mints are industrial units and as such there should be a scientific and uniform basis to determine staff strength with a view to ensuring their optimum utilisation and preventing over-staffing. The Committee, therefore, consider that norms of work should be laid down for the various categories of staff as far as practicable.
41	82	The Committee recommend that the team of technical experts suggested in para 80 might be asked also to conduct a job analysis in the various departments in the Mints to fix norms of work and to review comprehensively the staff strength in the Mints in the light of those obtaining in foreign countries.

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- 42 83 The Committee suggest that the feasibility of introducing Attendance-Bonus Scheme etc. in the Mints might be examined.
- 43 84 The Committee feel that the 'suggestions' scheme can be made really effective and successful, if inducements for bringing forward good suggestions are offered to the individuals concerned, as is done at Chittaranjan Locomotive Works, etc. They suggest that the introduction of similar schemes in the Mints might be considered.
- 44 86 The Committee feel that the Mints should devise, with the co-operation of workers, proper safeguards to prevent and eliminate causes of accidents. They recommend that the scope of the existing Works Committees might be enlarged suitably so that they might function as Safety Committees also.
- 45 88 The Committee regret to note that even after about three years of the inclusion of the schemes of construction of quarters in the Second Five Year Plan, there has been little progress in the matter, particularly at Bombay. They recommend that steps be taken to expedite the construction of quarters at both places.
- 46 89 The Committee feel that the system of physical search must be taking long time and is also irksome. They, therefore, suggest that the possibility of installing metal detectors in the Mints like those in the customs department in India and U. K. might be examined.
- 47 95 The Committee do not feel convinced by the reasons advanced for according an independent status to the Assay Department. They feel that the purpose of ensuring an objective check on the correctness of coins etc., could as well be served by creating a separate special cell in the Mints for the assay work.
- 48 96 The Committee feel that considerations of economy which led to the merger of the Assay Department with the Mints in 1932, are paramount even now and that a similar reorganisation would result in the reduction of the post of Master, Assay Department and Silver Refinery Project. They, therefore, recommend that the administrative control of the Assay Department be transferred to the Mint Masters.
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49	99	The Committee recommend that the schedule of charges in the Assay Department be revised so as to correspond to reasonable costs, in so far as the work done for the Government Departments is concerned.
50	100	The Committee recommend that the scope for increasing the volume of work received from private parties, etc., be examined by offering better facilities and by making suitable publicity.
51	103	The Committee doubt whether adequate thought was given to the details of the Silver Refinery Project while appointing the consulting Engineers who had to be paid about Rs. 2.4 lakhs for services which were later found to be redundant.
52	107	The Committee observed that the purpose for which the Silver Refinery Project was conceived, was not served by it. The refinery which was planned to have been commissioned in 1951 has not gone into operation yet. There have been a series of unfortunate delays at every stage of the project. The consultants were appointed after two years of the approval of the scheme.
53	109	The Committee cannot help feeling that the planning, including location and execution of the entire scheme of the Silver Refinery Project, was not undertaken with the care it deserved. They wonder whether, in view of the subsequent developments, the expenditure on this project was at all necessary. They recommend that a comprehensive enquiry be conducted into the reasons for delay, rise in costs, siting, etc., of the Silver Refinery Project and responsibility fixed therefor.
54	111	The Committee feel that most of the expenditure on staff could have been avoided, had the custody of Q. A. coins not been transferred from the Mints till the commissioning of the Silver Refinery Plant. They suggest that the premature transfer of the custody of Q. A. coins might be examined with a view to fixing responsibility therefor.
55	113	<p>(i) The Committee hope that early decision in the matter of alternative uses of the Silver Refinery, Alipore would be taken.</p> <p>(ii) The Committee suggest that the demand for electrolytic copper in the country might be assessed and</p>

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- taken into account while examining the economics of converting the Silver Refinery into a Copper Refinery and the feasibility of adapting it to the demand as also of providing additional capacity in the country, if necessary, considered.
- 56 115 The Committee, suggest that the feasibility of merging the two refineries (*viz.*, Calcutta and Bombay) together and bringing them under one management might be examined.
- 57 116 The Committee suggest that a consolidated report for all the Mints containing comprehensive information regarding their activities, might be prepared every year. They also suggest that the Annual Administrative Reports of the individual Mints depicting the activities of their main departments might be appended to the Consolidated Report which should be placed before Parliament. The Committee feel that this would, apart from pooling the information at one place, facilitate a comparison of the working efficiency of the Mints.
- 58 118 The Committee feel that the existence of industrial units in the heart of the city and consequently also their residential area, aggravates the problem of congestion and tends to further the growth of slums. They, therefore, suggest that the economics of shifting the Bombay Mint from its present location in a very busy area to a more commodious site might be examined.
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APPENDIX V

Analysis of recommendations contained in the Report and the Estimated Economy likely to result from their Implementation

I. CLASSIFICATION OF RECOMMENDATIONS

A. Recommendations for improving the Organisation and Working of the Mints :—	
(S. Nos. 1—3, 5, 7—8, 10, 12—13, 16—21, 23, 26, 27, 31, 32, 35, 36, 40, 42—44, 46, 47, 49, 53—57 of the Summary of Recommendations)	34
B. Recommendations for effecting Economy which includes Suggestions for increasing production :—	
(S. Nos. 4, 6, 11, 22, 24, 25, 28, 29, 33, 37, 38, 39, 41, 48, 50 of the Summary of Recommendations)	15
C. Miscellaneous :—	
(S. Nos. 9, 14, 15, 30, 34, 45, 51, 52, and 58 of the Summary of Recommendations)	9
TOTAL	58

II.—ANALYSIS OF MORE IMPORTANT RECOMMENDATIONS DIRECTED TOWARDS ECONOMY

Serial No.	No. as per Summary of Recommendation	Particulars
1	4, 48	For combined bullion keeping-cum registering staff; merger of Assay Department with Mints.
2	6, 37, 38, 39 and 41	For reviewing of Staff Strength in various departments of the Mints.
3	11, 20, 22, 28 & 50	For increasing production, optimum utilisation of the capacity of Mints, higher capital output ratio and for reducing overheads.
4	25, 29 & 33	Use of cheaper substances and indigenous materials etc.

III. ECONOMY

It is not possible to calculate the money value of the economies suggested in the Report.

