

ESTIMATES COMMITTEE

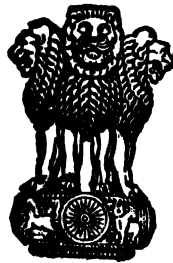
1956-57

SIXTY-EIGHTH REPORT

MINISTRY OF DEFENCE

ORDNANCE FACTORIES

(STORES, PLANT & MACHINERY AND PRODUCTION)



सत्यमेव जयते

LOK SABHA SECRETARIAT
NEW DELHI
March, 1957

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**COMPOSITION OF THE ESTIMATES COMMITTEE—
1956-57**

1. Shri Balvantray Gopaljee Mehta—**CHAIRMAN.**

MEMBERS

2. Shri B. S. Murthy
3. Shrimati B. Khongmen
4. Shri Nageshwar Prasad Sinha
5. Shri B. L. Chandak
6. *Shri Amarnath Vidyalkar
7. Shri Venkatesh Narayan Tivary
8. Shri Satis Chandra Samanta
9. Shri Raghavendrarao Srinivasrao Diwan
10. Shri M. R. Krishna
11. Shri Jethalal Harikrishna Joshi
12. **Shri Bhawani Singh
13. Shri P. Subba Rao
14. Shri P. N. Rajabhoj
15. Shri Vishnu Ghanashyam Deshpande
16. Shri Satyendra Narayan Sinha
17. Pandit Dwarka Nath Tiwary
18. Shri C. R. Narasimhan
19. Shri Raghubir Sahai
20. †Pandit Algu Rai Shastri
21. Shri Abdus Sattar
22. Shri Lakshman Singh Charak
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24. Shri Radheshyam Ramkumar Morarka
25. Shri Mangalagiri Nanadas
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27. Shri Y. Gadilingana Gowd
28. Shri Jaswantraj Mehta
29. Shri A. E. T. Barrow
30. Shri Choithram Partabrai Gidwani.

SECRETARIAT

Shri S. L. Shakhder— *Joint Secretary.*
Shri A. R. Shirali— *Deputy Secretary.*
Shri C. S. Swaminathan— *Under Secretary.*

* Resigned on the 20th November, 1956.

** Died on the 6th October, 1956.

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

INTRODUCTION

Shri Balvantray G. Mehta
Chairman, Estimates Committee.

LOK SABHA SECRETARIAT,
NEW DELHI.

No. 79(a)/EC. I/56

Dated the 29th March, 1957.

Dear Mr. Speaker,

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

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

With regards,

Yours sincerely,

Sd/- BALVANTRAY MEHTA.

Shri Ananthasayanam Ayyangar,
Speaker, Lok Sabha.

The Report may be corrected* and then laid on the Table and circulated to Members.

Sd/- M. Ananthasayanam Ayyangar.
9-5-57.

(*This has reference to the corrections intimated by the Ministry of Defence as a result of factual verification).

STORES

(a) Introductory

1. The Estimates Committee in their Fifty-sixth Report on Army Stores examined generally the various problems pertaining to Defence stores. In this Report, therefore, the special features of stores in Ordnance Factories only will be dealt with.

(b) Expenditure on purchase of stores

2. The value of stores bought for the Ordnance Factories during the last four years is as under:

1952—53	Rs. 934 lakhs
1953—54	Rs. 611 lakhs
1954—55	Rs. 477 lakhs
1955—56	Rs. 454 lakhs

3. The percentages of stores which were imported and that which were obtained indigenously for the last four years are indicated below:

Year	Imported	Indigenous
1952—53	8%	92%
1953—54	14%	86%
1954—55	12%	88%
1955—56	3%	97%

4. The question of self-sufficiency in regard to Defence stores in general including the functioning and composition of the Imported Stores and Raw Materials Screening Committee, has already been dealt with in the Committee's Fifty-sixth Report on Army Stores. The Committee recommend that the stores required by the Ordnance Factories should also be brought within the scope of the Equipment Committee suggested therein.

(c) System of Provisioning of Stores*(i) Service Items*

5. Until recently, provisioning action for stores was taken by the Director-General of Ordnance Factories only on receipt of firm demands from the Services who were required to communicate their forecast requirements of Defence stores and firm demands on a year-to-year basis about 18 to 22 months and 10 months, respectively, before the commencement of the year to which the demand pertained. Thereafter, the Director General of Ordnance Factories placed extracts on various factories which undertook estimating of material requirements therefor, by preparing a detailed statement showing the stock of material and dues and extra quantity, if any, required. This procedure resulted in stores not being received in time and was therefore modified in June, 1956. Under the new procedure, requirements of recurring items are required to be conveyed by the Services on a three year pro-

gramme basis, 12 months ahead on 1st April preceding the first year of requirement, covered in the programme. The Committee are glad to note that this system which, they understand, also exists in the United Kingdom has at last been introduced though the necessity of long-term planning had long been accepted. At the same time they hope that the Services will be enabled to forecast their requirements on a realistic basis for the period now prescribed.

The Stores requirements are classified for purposes of local purchase and central purchase after consulting the surplus lists circulated by other Ordnance Factories. Provisioning for items procured through Central Purchase Agencies is made on the basis of six months requirements as assessed with reference to firm demands from the Services and other indentors. Indents are then to be placed in advance of the period of utilisation. In certain cases, provisioning has been allowed on the basis of 12 months' requirements also. Further, to avoid over-provisioning, provisioning is not to be made on the basis of the entire demand of the Services but on the basis of what the Director-General of Ordnance Factories realistically expects to produce out of that demand, during a particular provisioning period.

6. For general purpose stores and maintenance stores provisioning is normally to be made on the basis of the monthly average consumption during the preceding 36 months except in certain cases where provisioning is authorised on the basis of technical knowledge after taking into account the life of the stores required. In addition, provision for 1 to 4 months' requirements (depending on whether the materials are indigenously procured or imported and are easy or difficult to obtain) has been allowed as safety margin, except in the case of general purpose stores and stores the demands for which are of non-recurring nature.

7. Provision for local purchase items is required to be made on the basis of known requirements for three months, orders being placed three months in advance of the period of utilisation. In exceptional cases, such provisioning has been authorised on the basis of six to twelve months' requirements also.

8. The Committee consider that provisioning action, which is taken at present only on receipt of firm demands, is taken rather late considering the time that is actually required for the stores to materialise. They, therefore, suggest that the question of the Director-General of Ordnance Factories and Superintendents of Ordnance Factories being permitted to initiate action sufficiently early on the basis of the preliminary forecasts to the extent of 50% of the demands indicated therein and, if possible, even more, in case of repetitive items, may be examined.

9. Further, the Committee suggest that the question of the provisioning required to be done at present by Ordnance Factories on a six monthly basis on receipt of firm demands, being altered so as to cover the entire demand for the year of utilisation, after taking into account the action taken as recommended earlier on preliminary forecasts may also be examined.

10. The successful working of the stores provisioning procedure requires (1) strict adherence to the time schedule of the communication of demands by the Services and (2) avoidance of wide variations between the forecasts

and firm demands, neither of which, the Committee understand, obtain in adequate measure at present. Further, a realistic assessment of the requirements of stores based on the production potentialities of the factories during the particular provisioning period is also essential so as to avoid over-provisioning. In this connection it is of interest to reproduce the following from the final report of the Stockholdings Committee appointed by Government:—

“Owing, however, to the system of ordering the entire materials required against an order and the failure to ascertain production possibilities, there are many instances in which the materials held in factories are in excess of what could be utilised in production during the provisionings period.

In order to remedy this situation, the Committee recommend that in future, before a demand or an indent for procurement of material is placed by the Provision Office of a factory, the requirements of the material, as calculated, should be referred to the production authorities at the factory to ensure that the quantity assessed would probably be utilised in production during the provisioning period. In instances where production is in the early stages of manufacture or a store is under development the production authorities should reduce the quantity of material to be ordered and cater for only that quantity which could be utilised during the provisioning period.”

11. The Committee would also invite attention to the following significant observations of the Committee mentioned earlier:—

“It is the general impression of the Committee that provisioning of stores and progressing of their utilisation are regarded unimportant and do not receive in factories the attention they deserve.”

12. The Committee would suggest that the importance of sound provisioning should be impressed on all concerned, including the Services, the Director-General of Ordnance Factories and the Superintendents of Ordnance Factories.

(ii) *Provisioning for Emergency*

13. The Committee understand that there is no prescribed procedure for provisioning of stores during emergencies, as distinct from provisioning during peace time. They, however, learn that during the last war, vast relaxations were allowed, which might be inevitable if any emergency arises in future. The Committee feel that the Government should examine the feasibility of laying down a specific procedure for stores provisioning in emergencies with such relaxations as are considered necessary, in order to obviate any hasty action in this respect.

(iii) *Provisioning for Civil Trade Items*

14. The Committee were informed that, under the existing orders, provisioning for civil trade items was generally made against firm orders only except for certain prescribed items for which ex-shelf holdings were authorised. They feel, however, that the business value of quick execution in all cases, especially civil trade items, should be appreciated and that the Superintendents etc. should be given well-defined powers for making certain.

safe provision of stores in anticipation of orders. Further, to meet the changing needs, they suggest that these powers should also be periodically reviewed so as to keep them at proper levels according to the volume of work done and difficulties encountered, if any.

(d) Procurement

(i) Local Purchase

15. The Superintendents of Factories are empowered to make provision by local purchase of items of stores, costing not more than Rs. 5,000/-* per item based on known requirements for three months at a time. Similar items costing upto Rs. 10,000/- require the sanction of the Director-General of Ordnance Factories.

(ii) Procurement through Central Purchase Agencies

16. The Director-General of Ordnance Factories on receipt of demands for stores from the factories, duly concurred in by the Factory Accounts Officer, makes a statement of case for approval by the Deputy Financial Adviser (Factories). The demand concurred in by the Deputy Financial Adviser is then placed on Director-General, Supplies and Disposals in most cases.

In respect of steel, procurement is based on quotas allowed by the Iron and Steel Controller.

In order to avoid delay in procurement of materials, Superintendents of Factories have now been authorised to place indents directly on the Director-General, Supplies and Disposals for items costing upto Rs. 1 lakh per item, with a copy to the Director-General of Ordnance Factories while the Director-General of Ordnance Factories and the Superintendents have also been permitted to place orders on the Regional Directors of the D.G.S. & D.'s organisations in Calcutta, Bombay, etc. in respect of a limited number of items. In respect of imported items, however, the Factories are required to submit their demands to the Director-General of Ordnance Factories for consideration, for obtaining foreign exchange and for indenting on the D.G.S. & D. or elsewhere.

17. The Committee were told that it might be advantageous if the Director-General of Ordnance Factories was authorised to enter into rate contracts which could be operated by the Superintendents in the case of items which are particularly required by the Ordnance Factories only and not by other Government Departments and for which the D.G.S. & D. does not go in for rate contract. The Committee suggest that this suggestion may be had examined carefully with a view to its implementation to the extent possible.

*This limit has been raised to Rs. 10,000/- with effect from 19th March, 1957.

(iii) *Purchases made through local purchase and D.G.S. & D.*

18. The value of raw materials purchased locally and centrally during the last four years is given below:—

(In lakhs of Rupees)

Year	Value of Purchase		Total value	Percent-ages of (3) to (4).
	Central	Local		
1952-53 . . .	737.05	117.18*	854.23	13.7 %
1953-54 . . .	417.58	106.72*	524.30	20.4%
1954-55 . . .	326.36	92.38*	418.74	22.1%
1955-56 . . .	348.77	89.55*	438.32	20.4%

*These figures include the values of purchases made under the D.G.O.F.'s local purchase powers also.

Thus, local purchases account for about 20% of the total purchases. This percentage is likely to be substantially increased in view of the recent increase of local purchase powers from Rs. 5,000/- to Rs. 10,000/-. The Committee have recommended in their 56th Report that there should be a periodic review of the local purchase powers. At the same time the question of delegating more powers of local purchase to the Director-General of Ordnance Factories and Superintendents consistent with the Government's policy of central purchase may also be considered after taking into account the Committee's recommendation that the Ordnance Factories should be managed by an autonomous Board.

(e) Delay in procurement and appointment of Liaison Officer

19. The Committee were told that, under the present central purchase procedure, the D.G.S.& D. is normally expected to take about 8 months for deliveries in ordinary cases and four months for operational/immediate requirements. It was stated that in actual practice, however, it had taken longer time, particularly in difficult cases such as timber, textiles, special papers, paints, et.. A Liaison Officer was consequently posted with the D.G.S. & D. Delhi and, as a result, considerable improvement is reported to have taken place. The Committee view with concern the necessity of posting a Liaison Officer to expedite procurement by the D.G. S. & D. when it is clearly his function to arrange for purchases with as much expedition as possible.

(f) Storage

20. The Committee were informed that with the recent provision of additional storage accommodation and disposal of some of the surplus stores, almost all the stores in the Ordnance Factories were under cover. The stores are held locally by each Ordnance Factory to meet its own requirements of

stores and there are no central stores depots to serve various Ordnance Factories. It was explained that since each factory generally procures its own requirements of stores directly, except items costing over Rs. 1 lakh, the existing arrangement was considered quite satisfactory. Moreover, it was felt by the authorities that the problem of storage accommodation would also arise under any other arrangement.

21. The Committee feel that in view of the very large stocks of materials/components held in the Ordnance Factories, which are surplus to current production and are held only as war reserve stocks, the feasibility should be examined of centralising at some places the custody of those stores which are required by most factories and are in excess of their annual requirements as well as of stockpile items. They feel that under this arrangement considerable factory stocks might be transferred to central stocks and storage accommodation therefor could perhaps be found, from out of the existing storage accommodation in the Ordnance Factories. Further, it might also serve to eliminate, to a great extent, the present disparities of stores-in-direct-charges levied in different Ordnance Factories and also improve the tone of stores administration in the Factories.

(g) Stock Verification

22. The verification of stores in Ordnance Factories is carried out by an independent Director-General of Ordnance Factories' stock verification cell, stationed in each Factory. Such stock verification is required to be carried out for all items and for the entire stock every financial year.

23. The Committee were informed that such verification had been conducted according to the rules in the last three years, with the exception of scattered and bulky stores, such as steel scrap, etc. in regard to which they were told that stock verification would result in sheer waste of money in as much as the cost of verification would be only a little less than the value of the scrap but would far exceed any possible discrepancy.

24. The Committee learn that the question of granting relaxation from annual verification in certain cases to the Engineer-in-Chief is under detailed examination by the Ministry of Defence, *vide* reply of the Ministry of Defence to para 13 of Fourteenth Report of the Public Accounts Committee (reproduced at page 85 of their Nineteenth Report). They suggest that the feasibility of similar relaxation in respect of Ordnance Factory Stores, where possible, may also be considered. At the same time, they would stress that scrap items should not be allowed to accumulate for long periods and that their disposal should be effected as quickly as possible.

25. The Committee find that the position regarding stock verification in the Ordnance Factories has been the subject of adverse comments in successive Audit Reports, Defence Services. The discrepancies revealed in stock verification during the last three years in these factories were stated to be as under:

Year	Value of	
	Surpluses	Deficiencies
	Rs.	Rs.
1952-53	19,39,079	18,69,058
1953-54	20,91,758	11,14,047
1954-55	14,59,926	7,32,586

The Committee are not happy that such surpluses and deficiencies should be noticed during stock verification and feel that they reveal lack of sufficient attention to stores accounting including receipt, issue and storage. They, therefore, recommend that effective steps should be taken to improve the position in these respects.

(h) Stock Holdings

26. The value of stocks at the end of each of the last four years for all the Ordnance Factories taken together, and the value of issues during each of these years are given below:—

(In lakhs of Rupees)

Year	Value of stocks at the close of the year	Value of material utilised during the year.
1952-53 . . .	4159·19	2156·04
1953-54 . . .	4278·54	1801·18
1954-55 . . .	4168·08	1800·59
1955-56 . . .	3929·11	1652·59

Thus, the overall stock holdings in the Ordnance Factories amount to about 2½ times the annual consumption of stores. From an analysis of the figures of the last year (1955-56) the Committee find that the balance of holdings of stores in the following factories is very much disproportionate to their annual utilisation.

(In lakhs of Rupees)

Name of the Factory	Value of material utilised during 1955-56	Value of closing balance on 1st April 1956	Percentage of column 3 to 2
Ordnance Factory, Khamaria . . .	169·76	636·42	374·9%
Gun & Shell Factory, Cossipore . . .	74·86	342·28	457·2%
Ordnance Factory, Muradnagar . . .	23·83	95·89	402·4%
Ordnance Factory, Bhusawal . . .	7·31	44·28	605·8%
Ordnance Factory, Kanpur . . .	67·38	293·31	435·3%
Ordnance Factory, Dehra Dun . . .	17·24	65·37	379·2%
Cordite Factory, Aravankadu . . .	21·73	131·96	607·2%
Small Arms Factory, Kanpur . . .	7·11	78·57	1105·1%
Machine Tool Prototype Factory, Ambernath . . .	10·56	63·72	603·4%
Ordnance Factory, Wadala . . .	4·02	12·29	305·7%

27. It was explained to the Committee that since the Ordnance Factories had to remain prepared to step up production in an emergency to many times the normal peace time production, the total stock holding had to be larger and would bear little relationship to the peace time production requirements. It was further pointed out that the reserve stocks to be held for stepping up production in an emergency are calculated with reference to various considerations, *e.g.*, the period allowed for stepping up production from peace to war requirements, wastage rates, the strength of the Armed Forces, the duration of the emergency, etc.

28. It was also argued that the figures of the stock holdings were high as they included considerable processed and semi-processed component stores whose value included not only the cost of the raw materials but also labour and overhead charges.

29. The Committee were concerned to learn that the Baldev Singh Committee had pointed out that the question regarding the period for which reserves were to be held had not been given sufficient thought and that they had been cut down only on financial grounds. However, while appreciating the necessity for maintaining stores at adequate levels to meet the requirements of emergencies, they feel that in assessing such requirements, due consideration should be paid to the possibility of service stores becoming obsolete due to rapid advancements in this field, the position of availability of raw materials, their life, frequency and quantity of their turnover, etc. In this connection, it would be pertinent to mention that, quite apart from heavy surpluses in Ordnance Factories, stores of considerable value are also scrapped annually in the Ordnance Factories due to obsolescence and change in process of manufacture, etc., the figures for which during four years ending 1954-55 are given below:—

Year	Value of stores scrapped due to obsolescence and change in process of manufacture etc.
	(Rs. in lakhs)
1951-52	34·20
1952-53	38·09
1953-54	16·50
1954-55	60·85

Further, in view of the fact that over 90% of the stores purchased in the last two years were obtained indigenously, the Committee would suggest that the justification for holding heavy stocks which naturally carry with them the risk of losses on account of obsolescence, deterioration, surpluses, etc. in addition to the heavy outlay as well as additional expenditure on their care, custody and maintenance, should also be re-examined. They further suggest that the stocks should be held only within such margins as may be determined from time to time in the light of prevailing circumstances.

(i) Stock-pile

30. The Ordnance Factories hold stock-piles of essential raw materials of strategic and non-perishable nature, against the possibility of stoppage of imports during an emergency. The quantum of this stockpile is related to the urgency of requirements of the three Services which are within the competence of the Ordnance Factories to manufacture. The value of the stock-pile at the end of each of the last three years is given below:—

Date	Value of stock-pile:
1-4-54	Rs. 486.86 lakhs
1-4-55	Rs. 496.82 lakhs
1-4-56	Rs. 479.86 lakhs

31. The Committee were informed that the stocks of stock-pile are kept separate from current stocks and are periodically turned over.

They appreciate that stock-piling of essential requirements in anticipation of emergencies is absolutely necessary but would reiterate the need for a careful appraisal of the situation from time to time to guard against excessive stock-piling and consequent losses, and at the same time to provide for delays in receipt of stores and strategic materials especially those imported.

(j) Stores in Transit between Factories

32. The value of stores in transit between Factories at the end of the last three years, as shown in the statement of Assets and Liabilities of the Ordnance Factories, was as under:

Date	Value
	Rs.
1-4-1954	1,50,80,291
1-4-1955	1,56,05,180
1-4-1956	1,16,46,044

33. It was stated that these figures represented the cost of stores which, though charged off from the accounts of the Issuing Factory, were not taken on charge by the consignee Factory due to the stores not having reached their destination at the time of preparation of accounts or being under re-inspection. This figure is, therefore, in the nature of a suspense head.

34. In this connection, the Committee would invite a reference to para 4 of the Audit Report on Commercial Appendix to the Appropriation Accounts of the Defence Services for the year 1949-50 in which the extent of stores worth Rs. 1.61 crores in transit on 31-3-50 was adversely commented upon. The Committee find that the position in this regard has not materially improved since then. They feel that the exhibition of such a heavy amount

under a suspense head in the annual accounts of the Ordnance Factories without adequate explanation, is not proper. Since the annual accounts of the Ordnance Factories take time before finalisation, after the close of a year they consider that it may perhaps be possible to link all or a majority of the stores in transit, in the stores accounts of the consignee factories before the finalisation of the annual accounts.

The Committee, therefore, suggest that the latest position regarding the linking of the stores in transit may also be reflected in the annual accounts, by means of a foot-note.

(k) Expenditure on care and custody of stores

35. The expenditure on the care and custody etc. of stores as well as the percentage ratio of this expenditure to the value of stores at the end of each year in the Ordnance Factories during the three years upto 1954-55 was as follows:—

(In lakhs of Rupees)

Year	Expenditure on care & custody	Value of material at the end of year	Percentage ratio of (2) to (3)
1952-53	88·18	4648·50	1·9%
1953-54	98·41	4765·40	2%
1954-55	108·97	4664·91	2·3%

36. The percentage of expenditure on care and custody of stores has thus gradually increased from year to year. While the value of stocks at the end of 1954-55 has increased by about Rs. 16 lakhs only, as compared to that of the year 1952-53, the expenditure on care and custody thereof during the same period has shot up by about Rs. 21 lakhs. In this connection, it would also be pertinent to mention that the percentage at which Stores Indirect Charges (which arise mainly on account of the establishment employed on store keeping and are calculated on the value of direct material issued to Production Sections in an Ordnance Factory) were levied to Production, increased markedly in the case of several Ordnance Factories over the years, as will be seen from the statement given at Appendix I. In twelve out of twenty Ordnance Factories during the year 1955-56, this percentage went upto over 5% reaching a maximum of 30·75% in Small Arms Factory, Kanpur. The reasons for the very high percentage of stores indirect charges were stated to be the limited number of items or items involving low consumption of stores, produced in those Factories. Further, the employment of surplus staff on cleaning of stores and the holding of large stocks not required for current production were also cited among other contributory factors.

37. The Committee are not satisfied that the reasons given above adequately explain the gradual increase in the overall percentage ratio of stores keeping. They feel that the staff employed on the care and custody of stores is on the high side and that there is scope for reduction in stores keeping establishment, even on the basis of present holdings. This was corroborated by the representatives of the Ministry of Defence also when they admitted the employment of surplus staff on cleaning the stores. They have also suggested elsewhere an examination of the feasibility of bringing down the stock holdings in the Ordnance Factories as well as of maintaining central stocks. The Committee, therefore, recommend that the feasibility of reducing the expenditure on care and custody of stores should be considered.

(1) Surplus Stores

(i) Procurement for Declaration

38. Surpluses in the Ordnance Factories are worked out on the basis of known orders and instructions for maintaining was reserved and stock-piles as well as the requirements of stores for maintenance purposes. All Stores and waste products in excess of these requirements for the provisioning period are taken as surplus. These are then classified by a Technical Officer as serviceable or otherwise.

39. Items of stores which are considered surplus in one Ordnance Factory are circulated to other factories through the medium of a 'Mutual Aid List' to ascertain whether any factory requires them. The list is published every six months. After an item has appeared in the 'Mutual Aid List' it is circulated by the factory concerned to the other Branches of Defence Services to indicate within six weeks whether the item is required by them. Thereafter, the surpluses are reported to the Director-General of Ordnance Factories who then decides whether the article should be retained or declared surplus either wholly or in part. After the disposal of an article is decided upon, the same is reported to the D.G.S. & D. (or Iron and Steel Controller in the case of items of iron and steel). The declarations of surpluses for disposal are required to be concurred in by the associated Finance.

(ii) Powers of Disposal of Surplus Stores

40. Factory Superintendents are empowered to arrange disposal of surplus stores valued at not more than Rs. 5000/- in respect of one category and Waste Products and Scrap (except Iron & Steel which is disposed of by the Iron and Steel Controller) irrespective of the value. Disposal of surplus stores valued at more than Rs. 5000/- is arranged by the D.G.S. & D./Iron & Steel Controller.

(iii) Extent of Surplus

41. The value of surplus stores with the Ordnance Factories on 1-4-56 stood at Rs. 625 lakhs. This works out to about 16% of the total stock holdings on that date. The Committee regret to find such a heavy accumulation of surplus stores with the Ordnance Factories. The reasons and split

up figures of surplus stock of the major items above Rs. 1 lakh in some of the Ordnance Factories shown in the Preliminary Report of the Stock Holdings Committee are as follows:

Value of surplus stock of major items above Rs. 1 lakh in seven Ordnance Factories	War Surplus	Split up of the surplus figures	
		Reduction in target or cancellation of demand by Services	Other causes
423.05 lakhs	51.92 lakhs (i.e. 12%)	350.35 lakhs (i.e. 83%)	20.78 lakhs (i.e. 5%)

Reduction in targets or cancellation of demands by the Services accounts for most of the surplus stores. The Committee hope that with the introduction of the new provisioning procedure, and its correct implementation, such surpluses would not arise in future. Since the holdings of surpluses involve considerable expenditure in the shape of store-keeping charges and deterioration of stores due to prolonged storage, the Committee would suggest that expeditious action may be taken for the declaration and disposal of these surpluses, after ensuring that they are really surplus to the requirements.

(iv) *Extent of Declaration*

42. The book value of surplus stores, declared by the Ordnance Factories to the D.G. S. & D. during the three years ending 1954-55 and those disposed of by the D. G. S. & D. during the same period are given below:

(In lakhs of Rupees)

Year	Value of declarations pending with the D.G.S.& D. at the beginning of the year	Book value of declarations issued	Value of stores disposed of
1952-53	23.69	8.85	21.98
1953-54	10.56	37.09	36.91
1954-55	10.74	45.87	33.21
1955-56	23.40	..	..

The value of stores declared to the D.G.S.& D. during the nine months of the year 1955-56 was a little over Rs. 125 lakhs.

43. In this connection, it would be pertinent to reproduce the remarks contained in para 8 of the Final Report of the Stock Holdings Committee on Ordnance Factories:

“The Committee consider that the disposal action by the factories is capable of being speeded up. It is suggested that an item be circulated through the ‘Mutual Aid List’ only once and simultaneously notified to the other Defence Indentors. By adopting this procedure, it should be possible for a factory to ascertain within a period of three months whether an item is required by other factories or Defence indentors, instead of the period of some 8-10 months which is taken at present.”

44. The Committee understand that the following losses were incurred on the disposal of stores:

1950-51	. . . . .	Rs. 126 lakhs
1951-52	. . . . .	Rs. 39 lakhs
1952-53	. . . . .	Rs. 13 lakhs
1953-54	. . . . .	Rs. 19 lakhs

45. The Committee recommend that the disposal action in the Factories should be speeded up so as to avoid such losses in the light of the remarks of the Stock Holdings Committee.

(m) Committee for examination of Stock-Holdings in Ordnance Factories

46. A Departmental Committee was constituted by the Government of India in December, 1953 to investigate the present level of stock holdings in Ordnance Factories and to recommend measures to reduce them.

The Committee made various recommendations regarding the procedure for provisioning of stores, declaration of surpluses, revaluation of stocks etc. It also examined the stock holdings of those items of stores, whose individual value was Rs. 1 lakh and more and recommended for disposal stores worth Rs. 201.06 lakhs in their preliminary Reports and Rs. 219 lakhs in their Final Report which was submitted as far back as September, 1954. It was mentioned in para 42 that Rs. 125 lakhs worth of stores were declared for disposal in the first 9 months of 1955-56. The Committee hope that action to declare the remaining surpluses would be taken at an early date.

47. The Committee have in their 56th Report recommended the appointment of a Stores Inquiry Committee to examine various problems pertaining to Defence Stores. The Committee would suggest that the stores requirements etc. of Ordnance Factories also should be brought within the scope of that inquiry.

II

PLANT AND MACHINERY

(a) Extent

48. The total number of machines installed in all the Ordnance Factories on 1-4-1956 was 17,561 while the capital investment thereon was of about Rs. 1409.50 lakhs.

(b) Condition

49. The Committee were informed that about 23% of the machinery in the Ordnance Factories was over 20 years old and about 62% was between 10-20 years old while the balance *i.e.* about 15% only was installed during the last ten years. They were also informed that a substantial portion of it—even in tool rooms—was old and worn out. This was mainly due to the fact that the machines had heavy wear and tear during the war years, consequent on working two or even three shifts, more or less continuously and also because it had not been found possible to replace them or to carry out their thorough overhaul. Further, the plant mainly located in prewar factories was to old designs and was incapable of producing some of the modern types of weapons and ammunition. Even the processes were stated to be comparatively ancient while the recent increasing pace of technological advance in the machine tool industry had rendered machine tools/equipment falling within the age-group of fifteen years and above as outmoded. The percentage of such outmoded equipment in each of the Ordnance Factories is given in Appendix II. In particular, the Committee were surprised to learn that the rolling plant at Ordnance Factory, Kanpur was over 80 years old, that it broke down frequently and that the question of its replacement was still under detailed examination by the Ministry of Defence, in consultation with the Ministry of Iron and Steel.

50. The Committee feel very much concerned at the present condition of the Plant and Machinery in the Ordnance Factories, particularly in view of the rapid technological progress, made in recent years in advanced countries, resulting in modernisation having been effected in layouts and machinery in their Factories. In this connection the following observations from the Report of the Engineering Capacity Survey Committee are pertinent :

“Taking the case of the tools of production, it must be appreciated that in many instances, today’s models of machine tools will produce on an average one-and-half to three times the amount that ten-year old machine tools can produce, to make no mention of the fact that the quality of the product is also better. As compared to machine tools 20 years old, the performance will be even greater.”

51. The Committee regret to note that no phased programme was undertaken to replace old Plant and Machinery even after attainment of independence. They understand that the Baldev Singh Committee in its Report submitted in December, 1954 had pointed out that some of the machines in the Ordnance Factories were fit only for scrap. The Committee consider this very unsatisfactory as it affect production in a matter which concerns the very security of the country.

(c) Extent of Replacements

52. The extent of replacements and provision of new Plant and Machinery etc. in the Ordnance Factories from New Capital and from the proforma Renewal and Reserve Fund during the last five years and the credits afforded to the latter on account of depreciation charged on plant and machinery in the Factories during the same period were as under :—

(In lakhs of Rupees)

Year	*Amount spent on replacement and provision of new plant and machinery		Contribution to R/R Fund on account of depreciation on Plant and Machinery
	New Capital	Renewal/ Reserve Fund	
1951-52	132.35	2.96	75.24
1952-53	184.09	1.47	87.36
1953-54	203.17	5.56	84.30
1954-55	85.90	17.33	90.17
1955-56	80.23	21.40	..

53. The very low expenditure on replacement etc. of plant and machinery during these years as compared to the annual depreciation credited to the R/R Fund, which itself was depressed for the reasons explained in para 56 has already been commented upon in the Committee's Fifty-Fourth Report on Finance. The Committee were informed that the annual depreciation on Plant and Machinery, which was credited to the proforma R & R Fund, was not made available for replacement but funds were separately earmarked for the purpose from year to year depending on the 'ways and means' position. They feel that in order to maintain the working efficiency of the Ordnance Factories at proper levels, there should be some correlation between the amount of annual depreciation charged on the Plant and Machinery to that spent on replacement etc. To this end they have suggested in an earlier Report the resuscitation of the R/R Fund or at least provision of larger funds for the purpose.

54. The Committee understand that an expenditure of about Rs. 40 crores approximately on New Projects as well as replacement -cum-modernisation of Plant and Machinery in Ordnance Factories, is envisaged during the period of the Second Five Year Plan. They hope that every effort will be made to expend this amount in the light of the remarks contained in para 71 of their Fifty-Fourth Report on Ordnance Factories—Organisation and Finance, so as to replace the entire over-age as well as inefficient machinery and at the same time modernise it.

*The above figures represent actual expenditure incurred during these years including supplies from Switzerland for the new major projects at M.T.P.F. and O.F., Khosaria.

(d) Provision for New Plant and Machinery**(i) Procedure**

55. The demand for plant and machinery, new as well as on replacement account, is initiated by the Superintendents of the Factory concerned, supported by a proforma containing information regarding the necessity of the machine and other connected particulars. The demand is then required to be scrutinised at the Headquarters of the Director-General of Ordnance Factories who has thereafter to obtain the concurrence of the Associated Finance before an indent can be placed on the purchase organisation. The Committee understand that in the past, generally, 6 to 18 months elapsed after a proposal was made by the Superintendent before it was finally approved for purchase. A typical case concerning the Ordnance Factory, Dehra Dun, might be mentioned in this connection. The Superintendent concerned proposed in September, 1951 the purchase of some machinery for the Factory while the need for it was accepted only in September, 1952 and actually received only in June, 1956. The Committee consider such delays reprehensible and recommend that the need to be prompt and businesslike in such matters should be impressed on all concerned.

56. It was represented to the Committee that considerable time was taken in replying to the various queries of Finance and in convincing them as to the need of the machines. Finance was reported to have generally insisted on being supplied with corroborative data in support of the technical opinion of the Ordnance Factories and also taken the line that unless a machine had been depreciated to 'nil' value, it was not ripe for replacement, while actually the existing depreciation rates based on the life expectancy of 40 to 42 years had no relation to the actual life of the machines. While hoping that the Committee's recommendation in their 54th Report for a revision of the depreciation rates of machines on a realistic basis, would go far in preventing differences of opinion in this particular matter, the Committee would recommend that there is also need for greater understanding and co-operation between Finance and the executive authorities.

(ii) Data regarding breakdowns etc.

57. In regard to the furnishing of corroborative data in support of technical opinion required by Finance, it was stated that the records of breakdowns, rejections due to machine faults, cost of repairs etc. were not generally maintained in the past and consequently it was either difficult or not possible to supply them. The Committee regret to learn about the non-maintenance of such a vital record in the past. They feel that such information, quite apart from being required by Finance, is all the more necessary for the executive and administrative authorities themselves to enable them to determine the working efficiency of the particular machines and the need for their replacement. They, therefore, recommend that such particulars should be kept in respect of all machines in future.

(iii) Financial Concurrence

58. As mentioned earlier, the administrative authorities were not happy about the present system of obtaining financial concurrence for the replacement of Plant and Machinery. It was argued that a technical organisation like Ordnance Factories should be competent to provide replacement of its

plant and machinery and make reasonable provision of new plant within the framework of the budget allotted to the organisation over which there should be no further financial scrutiny. In this connection, the following comments of the Deputy Financial Adviser (Factories) contained in the Financial Reviews for the years 1952-53 and 1953-54 are pertinent :

“In recent times, and in the paper filed by him before the O.F.R.C., D. G. O. F. has urged the resuscitation of the R/R Fund on the score that with the present system of budgetary and financial control the funds allowed to him for replacement of plant and machinery are severely restricted. The factual position is that no proposal by the D.G.O.F. during 1952-53 of plant and machinery was rejected for the reason that sufficient funds for the purpose were not available in the budget of the year. On the other hand out of an annual budget of Rs.1·5—1·75 crores for Plant and Machinery during each of the two years of the Review, the actual expenditure varied between Rs. 80 to 105 lakhs. It would thus be evident that what is wanted is a better planning in the programme for the replacement, modernisation, etc. of machinery.”

It would appear from the above that financial concurrence was not the only impediment in the way of replacement of old and provision of new plant and machinery and that a planned programme on the part of the administrative authorities in this direction was also called for. The Committee have already stressed the need for such a plan.

(iv) *Technical Scrutiny of proposals for Replacements.*

59. At present the proposals for replacement submitted by the Superintendents are examined in the Director-General of Ordnance Factories' Office mainly with reference to the proforma required to be submitted with the proposals. The Committee would suggest that the proposals for purchase of plant and machinery, new as well as on replacement account, should be scrutinised expeditiously by a Committee of Technical Officers at the Headquarters Office of the Director-General of Ordnance Factories with reference to the condition of Plant and Machinery as further determined, if necessary, by a visit to the Factory concerned, so that some uniformity in replacements etc. may also be maintained. It would perhaps facilitate matters if a representative of the associated Finance was also associated with this Committee.

(e) **Repairs and Overhaul of Machinery**

60. The Committee understand that each factory has a maintenance section — both electrical and mechanical — for repair and overhaul of its plant and machinery. The annual expenditure on this account during the last five years was as under :

Year	Expenditure on repair and maintenance
	(Rs. in lakhs).
1951-52	54·07
1952-53	57·09
1953-54	60·04
1954-55	59·16
1955-56	56·40

Thus, the annual expenditure on repairs etc. of plant and machinery amounts to as much as 4% of the value of the machinery. Further, while the amount of idle time payments on account of breakdown of machinery alone was not available separately, the total amount in respect of idle time payments 'within control' which includes that on account of breakdown of machinery during the three years upto 1954-55 was as follows :—

	Rs.
1952-53	83,509
1953-54	3,92,114
1954-55	9,27,693

During the period from September, 1955 to November, 1956 the corresponding figures were as high as Rs. 20.05 lakhs.

61. The Committee have already commented on the worn out condition of the plant and machinery in the Ordnance Factories. However, it is necessary and important that all the machinery should at least be maintained in perfect condition to the extent possible. They would suggest that there should be a systematic plan for the repair, maintenance and overhaul of plant and machinery and that it should be adhered to by the Factories.

(f) Purchase of Plant and Machinery

(i) Procedure

62. After concurrence by finance, the demand for machinery is placed on the purchasing organisations viz., Director-General, Supplies and Disposals, India Stores Department, London and Indian Supply Mission, Washington, as the case may be. The purchasing agencies call for tenders which, after a preliminary scrutiny by them, are forwarded to the Director-General of Ordnance Factories/User Factory, along with their remarks. In case of price variation over permissible limits or acceptance of tender other than the lowest, financial concurrence has again to be obtained and communicated to the purchasing agency which enters into the necessary contract with the suppliers.

(ii) Powers of the Director General of Ordnance Factories and Superintendents of Factories.

63. The local purchase powers of the Director General of Ordnance Factories and Superintendents of Factories in respect of Plant and Machinery are as follows :—

Director General of Ordnance Factories. Upto Rs. 10,000/- (for items which have been previously concurred in by D.F.A. Fys.)

Superintendents Below Rs. 5,000/- (for items which have been previously concurred in by D.F.A. Fys.)

64. The Committee feel that a review of the powers of the executive and administrative Heads of an industrial organisation like the Ordnance Factories in the matter of plant and machinery is called for, as with the present high prices the present power would purchase very little and consequently would offer little scope for the exercise of those powers by the authorities. They recommend that these officers should be delegated powers commensurate with their status and responsibilities, and that there should also be a periodical review of these powers with reference to their exercise as well as the prevailing market prices. They would, at the same time, stress that the exercise of these powers by the Superintendents should be regulated in such a way as to bring about standardisation of equipment in all the Factories as far as possible.

(iii) *Imported Machinery*

65. The Committee understand that the supply of imported machinery takes two to three years after an order for the purchase of machinery is placed on the purchasing agency while in the case of special machinery the period might extend to 3 to 4 years. Sometimes, delivery of machinery is stated to have been delayed even beyond these periods. The main reasons for this long period in procurement were stated to be the heavy bookings on the foreign manufacturers in their own country.

66. The Committee further understand that about 70 per cent. of the plant as well as almost all the heavy machinery and precision equipment required in Ordnance Factories is obtainable only by import. Indigenous capacity was stated to exist for very simple types of machines, such as drills, centre lathes, medium capacity hydraulic presses, lifting tackle etc. In addition, general purpose machine tools required for tool rooms and other production shops of Ordnance Factories were said to have been included in the programme of the Machine Tool manufacturers in India who might be able to meet the bulk of these requirements.

67. The Committee are very much concerned at the dependence on foreign manufacturers for the supply of Plant and Machinery required in the Ordnance Factories most of which needs replacement and renovation. They suggest that suitable steps in consultation with the National Industrial Development Corporation and private manufacturers should be taken to establish the manufacture of heavy machinery etc. in the country in collaboration with foreign manufacturers, if necessary, as well as at the Machine Tool Prototype Factory, as early as possible.

(g) *Idle Machinery*

68. As mentioned elsewhere, there was a steep fall in the demand of service stores in 1952. This resulted in rendering a substantial capacity of plant and machinery in the Ordnance Factories idle. The Committee are glad that efforts have been made to utilise this spare capacity for alternative civil trade work, but they understand that even then the spare capacity in the Factories has not been utilised to the full as the specialised machinery in the Ordnance Factories is single-purpose machinery and cannot be utilised for production of items other than service ones. The percentage of such machinery was stated to range from nil in some factories to more than 50 per cent. in others, depending on the fluctuating work-load. While the Committee appreciate that the existence of some idle capacity in the Ordnance Factories during peace time is inevitable and has to be accepted as a premium

for War Risk Insurance and that its full utilisation is possible in an emergency only, the requirements of which are many times the peace time requirements, they feel that there might still be some scope for its utilisation on a larger scale in peace time than at present. They would, therefore, suggest that a Committee of experts drawn from public as well as private sectors, be appointed to examine the extent of idle capacity in the Ordnance Factories with a view to suggesting its utilisation to the maximum extent possible. The Committee feel that this Committee could also offer suggestions (i) regarding the utilisation in an emergency of machinery existing in private sector and the rest of public sector and similar to that existing in Ordnance Factories and (ii) on the feasibility as well as the economics of installing in future multi-purpose machinery, which could be switched over to other types of production during lean periods of service production, thereby eliminating the problem of idle labour and machinery.

(h) German Reparation Machines

(i) Introduction

69. The dispersal of the German Reparation Machinery received in India was the responsibility of the Reparations Directorate of the late Directorate General of Industries and Supplies at Calcutta.

70. 2,774 machines were received by the Ordnance Factories between 30th November, 1949 and July 1954 but of them, only 1,815 were subsequently found useful for utilisation in Ordnance Factories and the rest, *viz.* 959 machines, were found completely unsuitable for the purpose.

71. The Committee were informed that the initial selection of the machines was made from lists circulated by the Reparations Directorate, which contained merely nomenclatures, borne on the despatch and shipping vouchers the details of which did not always tally with the items offered. It was further explained that the indenting of requirements from these lists, without prior inspection in a large number of cases, due either to the short time allowed for inspection or inadequate information regarding the location of plant, inevitably led to the allocation of a larger number of machines than were found, on closer inspection, to be suitable for utilisation in Ordnance Factories. Further, the Committee were informed that while inspection facilities were available for the selection of these machines and in fact were utilised to the extent possible, only cursory inspections were carried out on account of the difficult conditions of storage of these machines. The initial allocation of these machines to the various Factories was stated to have been made by the Assistant Director General (Production) on the basis of the uses to which they had been put before and according to the main head. In addition, Factories were also asked to make selections in certain cases.

72. While appreciating the difficulties pointed out above, the Committee feel that sufficient attention was not bestowed by the Ordnance Factories on the selection of the German Reparation Machines.

73. The Committee might mention that in para 67 of the Committee's First Report, presented in December, 1950, the appointment of an Expert Committee had been recommended for determining the quality and usefulness of the machinery received from reparations and for making all future releases in accordance with the recommendations of that Committee. In reply it was stated that the machines were being 'disposed' of in batches

and before disposal, representatives of Ministries decided upon the allocation on the basis of the best use to which these machines could be put. The Committee feel that had the recommendation been implemented, particularly, since most of the machines were received in the Ordnance Factories after it was made, the present unfortunate situation might not have arisen.

(ii) *Delay in Overhauling the Machines*

74. Machines were received in the Ordnance Factories between 30th November, 1949 and July, 1954. The Committee were informed that out of the 1815 machines found useful for Ordnance Factories, 1327 machines were overhauled and installed in the Ordnance Factories upto 31st July, 1950 ; 328 machines had been overhauled and were in the process of installation while the remaining 160 were being progressively taken up for overhaul. They were also informed that the limited maintenance and overhaul facilities available in the Ordnance Factories were utilised to overhaul, repair etc. these machines in addition to carrying out the overhaul of the existing plant which had undergone very heavy wear and tear during the war years. The Committee deplore the long delay extending over 2 to 6 years which took place in overhauling and installing these machines in the Ordnance Factories, and the somewhat casual manner in which this task was attended to by the authorities concerned, particularly when the allotment of these machines to the Ordnance Factories had itself been made on a priority basis. They feel that the overhaul of these machines should also have been taken up on a priority basis and speeded up by providing special or separate repair sections or even by securing the services of outside agencies for this purpose. In this connection, it would be pertinent to reproduce the remarks of the Deputy Financial Adviser (Factories) on this subject, contained in the Financial Reviews for the years 1952-53 and 1953-54 which corroborate the remarks made earlier by the Committee :

“During the year 1949-50, the D.G.O.F. obtained from the Reparations Directorate, under the Supplies & Disposals Organisation, a large number of German Reparation Machines with a view to instal them for use in Ordnance Factories. A total of 2,864 machines were indented and of these 2,705 machines were received upto 31st March, 1954. Upto the same date the work of repairing and installing the machines for use in Ordnance Factories had proceeded as follows :—

No. of machines repaired and installed	913
No. of machines repaired but not installed	256
No. of machines transferred to other Departments	35
No. of machines found unsuitable for use in Ordnance Factories	828
No. of machines awaiting repairs/under repairs	673

The above figures would show that after a lapse of some 2 to 3 years subsequent to their receipt, the number of machines repaired and installed in factories was about $\frac{1}{3}$ of the total received. *No proposals involving additional establishment for speeding up the repair of the remaining machines were received from the D.G.O.F. during the two years of the review, with the exception of one for the post of an A.W.M. at the Clothing Factory, Shahjahanpur*".

75. The Committee were surprised to find that the overhaul of the remaining 160 machines has not been accorded any priority even now. In reply to an inquiry regarding the time by which this work would be finished the Director General of Ordnance Factories expressed his inability to indicate the time-limit and stated that it was being done by the Ordnance Factories along with normal maintenance. The Committee cannot but deprecate this attitude of complacency and indifference on the part of the authorities. They would recommend that immediate action be taken to overhaul the rest of the machinery by providing separate repair sections if necessary.

(iii) *Delay in declaration of unsuitable Machines*

76. Out of the 959 machines found unsuitable for the Ordnance Factories, 128 were stated to be completely unserviceable, being unfit even for overhaul. These latter machines were stated to have been declared in January, 1956, for disposal to the D.G.S. & D., who had disposed of 33 numbers for Rs. 45,810/- . In regard to the remaining 831 numbers of serviceable surplus machines, it was stated that the same were being put up to the D.G.S. & D., for disposal in batches. Here again the Committee deplore the slow rate at which these machines are being declared to the D. G.S. & D. for disposal. They regret to note that it took between 2 to 7 years to declare about 13 per cent. of the surplus machinery to the D.G.S. & D. In this connection, the following remarks of the Deputy Financial Adviser (Factories) contained in the Financial Reviews for 1952-53 and 1953-54 are also pertinent :

"The action to dispose of large number of machines, which are unsuitable for use in Ordnance Factories, is also required to be taken urgently because the longer the machines remain in Ordnance Factories, where they are not required, the less would be the value likely to be obtained by their sale."

77. The Committee recommend that urgent steps should be taken to dispose of the remaining machines by quick means by adopting a suitable special procedure, if necessary, e.g., by circulating the lists of machines directly to other undertakings, the Chambers of Commerce, leading industrialists, etc. as well as allowing them facility to inspect them.

(iv) *Conclusion*

78. It would be clear from the foregoing that the entire project of the receipt and utilisation of the German Reparation machinery was neither planned properly nor was any systematic action taken to use them at least in so far as the Ordnance Factories are concerned. in the first place the

selection of machines for the Ordnance Factories was done apparently without giving much thought to the use to which they could be put. Secondly, even though most of the machines were said to be new, about 35 per cent. of them were found completely unsuitable, some even for repairs and overhaul. Thirdly, no attempt was made to overhaul and instal the machines quickly. Lastly, even the machines which were not found suitable were not declared for disposal promptly. This delay in installation as well as in disposal has resulted in the deterioration of the machinery due to long storage extending over 2 to 7 years and consequent loss to Government on account of lesser price fetched in disposal as well as due to expenditure to the tune of Rs. 1,69,000/- incurred on their storage upto 1-4-56. Even now of the machines still left, about 120 were stated to be in the open without any covered accommodation. Further, by not making these machines promptly available to other industrial undertakings, either in the public or in the private sector, their utilisation has been delayed while the foreign exchange expended in importing the machines which these machines might well have replaced, could have been saved. The Committee consider all this very unsatisfactory and feel that there has been some carelessness and neglect in the matter. They, therefore, recommend that a comprehensive inquiry should be conducted in the matter and responsibility fixed as well as action taken against those found guilty.

III

PRODUCTION

(a) Introductory

79. It has already been mentioned in an earlier Report that the Ordnance Factories were originally established in India not as self-contained units of production but as subsidiaries to the Royal Ordnance Factories in U.K. which supplied them with most of the essential ingredients of production and that the equipment produced by them was of a comparatively older type. However, during the last world war, the number as well as the scope of these factories was increased considerably. But even then they were not fully equipped to meet the requirements of the Defence Services of an independent country with vast responsibilities. In addition, the needs of the expanding Navy and Air Force had also to be considered. Although the nuclear weapons have, to a certain extent, overshadowed old military concepts, they have not in any way superseded the need for such weapons, even in countries possessing the nuclear weapons, much less in a country like India. It is, therefore, of importance to provide for the development and production of modern conventional weapons so as to meet the entire requirements of the Defence Forces and at the same time to reduce to the extent possible, the dependence on foreign countries in this vital matter.

80. The Committee were informed that since 1947, the policy of Government had been to be self-sufficient as far as possible, with regard to essential defence stores and that with this end in view, the requirements of the Services were under constant examination and steps were taken to initiate production of stores at present obtained from abroad. The establishment of Small Arms Factory at Kanpur, the addition of plant for the manufacture of modern ammunition in the Ordnance Factory, Khamaria and the setting up of the Machine Tool Prototype Factory at Ambernath were stated to be major steps in this direction, taken so far. While appreciating the measures taken so far, the Committee regret to note the various irregularities which took place during the execution of certain projects and which have already been adversely commented upon by the Public Accounts Committee in their Fourteenth Report.

(b) Expansion during the Second Five Year Plan Period

81. In para 54, the Committee have already referred to the expansion plans of the Ordnance Factories during the Second Five Year Plan period. They hope that efforts will continue to be made in the direction of achieving self-sufficiency as well as effectiveness in the matter of Defence equipment. They would suggest that during the execution of all future projects the irregularities pointed out by the Public Accounts Committee in connection with the Ambernath and Khamaria projects referred to in para 80 above, should be fully borne in mind, so as to avoid their recurrence.

(c) Procedure for undertaking manufacture in Ordnance Factories

82. The orders for service stores together with the design particulars are placed by the Services on the Director General of Ordnance Factories who allocates the work to one or more factories depending on the nature of the job and also instructs the factory concerned regarding provision of components and materials required in manufacturing from other factories or outside as the case may be. The Committee were informed that work was distributed as far as possible in such a way as to make proportionate distribution in relation to the capacity available, subject always to retaining a nucleus of skill in each place and also avoiding a split up of a small order into uneconomic production quantities. Further the coordination of the production activities of all factories including those producing similar stores was undertaken at the D.G.O.F's. Headquarters office, where information regarding the work-load on each major operation booked in each factory was stated to be available. For this purpose, there is in the D.G.O.F's. office a production group which is also responsible for planning as well as progressing of the orders. Each Factory, in its turn, has its own planning-*cum*-production Office, the main functions of which are to prepare a detailed scheme for allocation of manufacture of stores etc., to one or more shops depending on the nature of the job, to liaise with the Drawing Office, the Rates and Estimates Section, the Provision Section for placing the demands for materials etc. Further, it progresses the receipts of materials and components from outside including other Ordnance Factories as well as the manufacture of production tools and equipment and watches the progress of actual manufacture in shops when necessary tools and materials are made available.

83. The Committee understand that normally it takes a month for the Production Group in the Director General of Ordnance Factories' Office to place extracts on the Ordnance Factories after the receipt of service requirements. Further, on receipt of extracts the planning officers in the Ordnance Factories take five to six months in the case of operational orders and nine to ten months in the case of normal orders, to issue manufacturing orders on the shops, as it involves the completion of preliminaries like provisioning of materials as well as planning, calling for missing particulars placing inter-factory demands etc.

84. The Committee feel that there is scope for reducing this time-lag and recommend that measures should be devised for the purpose.

85. The Committee understand that in a few factories, the production office is divided into three groups *viz.*, pre-production planning, issue of manufacturing documents and progress watching, while in most factories the Production Group controls planning as well as progressing. They were told that although technically the Director General of Ordnance Factories was responsible for watching the timely execution of orders placed on Ordnance Factories, the work to a large extent had actually been delegated to the factories in view of the magnitude of the work and the limited staff available at the D.G.O.F's. Office for the purpose. In this connection, it was pointed out to them that due to the very large number of orders for different types of stores which the Ordnance Factories were called upon to handle simultaneously the necessity for expanding the facilities of production planning and progress watching had been keenly felt and that proposals for having separate planning and progress office, attached to each factory as well as at D.G.O.F's. headquarters was under consideration. The Committee recommend that these proposals should be examined and necessary action taken expeditiously.

86. The Committee were informed that the actual manufacture of an item of Defence Stores took 2 or more years in the case of ammunition and 3 to 5 years in the case of other Ordnance items after manufacturing orders were placed on shops. It was explained by the Director General of Ordnance Factories that on enquiry from Bofors, the internationally famed gun makers, he learnt that it took them about seven years from the time they conceived of the idea of a new gun to the time they produced it on a large scale. After making allowance for the time taken for design, planning, prototype manufacture etc., the actual establishment of production in their case also would take not less than three years, while in the case of the Ordnance Factories, it would be four or five years. The Committee consider that there is scope for reducing the time taken by the Ordnance Factories in establishing production and therefore suggest that a careful examination of the various processes involved therein should be carried out to clear the bottlenecks and eradicate other cause of delays.

(d) Outstanding Orders

87. The total number of orders lying outstanding in the Ordnance Factories as on 1-4-1956 was of the order of 10870 a few of which are even 10 years old. Their break-up, showing the year, since when they are outstanding, is given below:—

1945-46	.	.	.	.	.	.	2
1946-47	.	.	.	.	.	.	3
1947-48	.	.	.	.	.	.	19
1948-49	.	.	.	.	.	.	392
1949-50	.	.	.	.	.	.	495
1950-51	.	.	.	.	.	.	966
1951-52	.	.	.	.	.	.	1388
1952-53	.	.	.	.	.	.	1990
1953-54	.	.	.	.	.	.	2094
1954-55	.	.	.	.	.	.	2095
1955-56	.	.	.	.	.	.	1426
TOTAL							10870

The following reasons were attributed for the delay in completion of these orders :—

- (a) Abnormal delay in the supply of complete drawings and specifications.
- (b) Suspension of manufacture placed by the Indentors.
- (c) Changes in Priorities of manufacture.
- (d) Delay in obtaining material.
- (e) Inadequate planning and progressing staff for dealing with manufacture of a very large number of items.
- (f) Limited capacity for the design and manufacture of tools, gauges and fixtures required.
- (g) Difficulties in production and at times inadequate appreciation of these difficulties by the Production authorities.
- (h) Placing of petty orders on Ordnance Factories.

88. The Committee have discussed the difficulties at (d), (e) and (f) earlier at their proper places. The other important reasons are discussed below :—

(a) *Abnormal delay in the supply of complete drawings and specifications*

89. Under the existing system, the indenter places an indent on the Director General of Ordnance Factories for the manufacture of an article and sends a copy thereof to the technical directorate concerned, which is required to supply within a fortnight, paper particulars to the manufacturers to guide the manufacture. It was explained that normally in 90% of the cases the particulars were supplied within the time limit, but in 10% cases they were delayed either because the technical directorate did not have them or because some amendment had been made by the indenter.

90. The Committee have already recommended in para 42 of their Fifty-sixth Report on Army Stores that the indentors should be made responsible for obtaining the necessary particulars and for supplying them to the Ordnance Factories. They hope that this change will be given effect to at an early date and at the same time a procedure devised to pinpoint the responsibility of the various authorities, including the technical directorate, for the delays, if any, in this matter.

(b) *Suspension of manufacture placed by the indentors*

91. The Committee understand that manufacture of some items was held up on account of suspension orders placed by the indentors. They feel that such cases should arise only in exceptional circumstances and that they should be investigated by higher authorities to examine in particular whether the original order was justified and also the reason for the suspension.

(c) *Changes in priorities of manufacture*

92. The Committee learn that priorities of manufacture are changed often by indentors. As an instance it was explained that in the case of ammunition whose average life was ten years, it had sometimes happened that large quantities of ammunition, which were considered to be good at the earlier year's review, were on test found to be unsuitable next time and hence the manufacture of that item originally given low priority had to be accorded high priority. The Committee realise that for operational needs, such instances might arise but deplore their frequent occurrence in normal times. They suggest that there should be a thorough test-check of such cases, in particular, to see whether the case was due to faulty material used, defective storage etc. so as to enable remedial measures to be taken in future.

(g) *Difficulties in production and at times inadequate appreciation of these difficulties by the production authorities*

93. The Committee were informed by the DGOF that due to lack of experience, the production personnel did not always appreciate all the snags and pitfalls in the development of manufacture, particularly of new and complicated items, all at one time and realise them only one after another. They feel, however, that this would indicate insufficient attention being paid to

preliminaries before production was undertaken, since the development of manufacture of all new and complicated stores would ordinarily and in fact should first be carried out on an experimental basis and mass production only after all the processes have been fully finalised. For this purpose they would suggest that such experimental orders should be kept apart from other orders and that their progress should be watched separately.

(h) *Placing of petty orders*

94. Another reason which contributed to the delay in execution of orders was stated to be the placing of a large number of petty orders on Ordnance Factories, which required the same amount of planning and paper work as was necessary for large orders, for which the Ordnance Factories were actually equipped. These orders were generally stated to relate to components and spare parts required for the Army's old equipment *e. g.* Teleprinters which had gone out of use in the country of its origin and of which the parts were not obtainable from the original manufacturer. In this connection the Committee were glad to learn that it has recently been decided by the Production Board to relieve the Ordnance Factories of these jobbing orders and that the Master General of Ordnance had been asked to set aside one of his Electrical and Mechanical Workshops entirely for the purpose. They hope that this decision will be implemented expeditiously and will go a long way in improving the position in the Ordnance Factories.

While on the subject, the Committee suggest that the aim of gradual replacement of outmoded equipment, within the limitations of available resources, should constantly be kept in view by the Defence Services, with a view to achieving the maximum operational efficiency.

Progress Reports

95. Quite apart from the measures suggested above, which it is hoped would considerably improve the position regarding the extent of outstanding orders in the Ordnance Factories, the Committee suggest that a central watch by means of Progress Reports should be kept by the Director General of Ordnance Factories over the extent and volume of orders (Priority as well as others) lying unexecuted with the Ordnance Factories for over six months. These Progress Reports should specify the reasons for the delay in execution of orders and should be submitted quarterly to the Director General of Ordnance Factories, who should closely scrutinise these reports to see that the causes of delays are removed as far as possible so that production could be expedited. Further, similar reports at half-yearly intervals should also be scrutinised by the Controller General, Defence Production and Defence Production Board to enable them to initiate necessary action.

(e) **Rejections**

96. The manufacturing rejections in the Ordnance Factories are classified as avoidable and unavoidable—the latter being inherent in the technique of manufacture with the plant and machinery available. The unavoidable rejections are also included in the standard estimates and any rejections over and above these are required to be explained and regularised to the satisfaction of the Audit authorities. The value of abnormal (avoidable) rejections as shown in the annual accounts for the years 1952-53, 1953-54 and 1954-55 was Rs. 2.7, 1.90 and 5.90 lakhs respectively. In this connection it was

explained that rejections were high during the period of development of new stores or in the manufacture of complicated stores for which either a special technique was required or the necessary plant or machinery was not available. Since the Ordnance Factories are progressively taking up new items of production, the rejections are bound to be high, particularly for those items of which the Ordnance Factories have not acquired the technique or skill. While appreciating the difficulties of production of new items in the initial stages, the Committee hope that it might, perhaps, be possible to reduce these abnormal rejections by establishing the production of new items on an experimental basis in co-operation with the Technical Development Establishment etc.

97. In regard to unavoidable rejections, the Committee understand that these rejections, which were included in the estimates on the basis of past experience, were not met with in the case of all items. They do not, however consider this arrangement to be satisfactory since it does not allow the exercise of proper control over unavoidable rejections. They, therefore, suggest that the percentage of unavoidable rejections should be specifically laid down by the technical authorities as far as possible and that they should also be periodically reviewed.

(f) Statistical Quality Control Section

98. In connection with the rejections, the Committee were informed that with the setting up of Statistical Quality Control Section in the Headquarters office of the Director General of Ordnance Factories a mention of which has already been made in para 37 of their Fifty-fourth Report, the rejections were expected to be brought down appreciably. They were further told that so far this section had been responsible in substantially reducing the rejections in the case of grenades and that good results were expected in other cases also. The Committee feel that this indicates that wasteful processes were being followed in the Ordnance Factories and that the setting up of the Statistical Quality Control Section was an overdue reform. They suggest that stern action should be taken against all those guilty of these wasteful processes. Further, the Committee hope that Statistical Quality Control Section would succeed in progressively reducing the rejection and insuring greater and effective control over production costs and bringing about marked improvements in the quality of products of the Ordnance Factories.

99. The success of the Statistical Quality Control Section depends a great deal on an efficient system of costing. For this purpose, the Committee suggest that there should be full cooperation between these two branches. They have already suggested in an earlier report that the work off interpreting the costing data to the Director General of Ordnance Factories and the Superintendents to enable them to initiate prompt action thereon, might well be entrusted to the Statistical Quality Control Section.

(g) Extent of idle time payments (within control).

100. It has already been mentioned in para 60 that the extent of idle time payments within control amounted in the last three years to about Rs. 14 lakhs while during the period from September 1955 to November 1956 it amounted to over Rs. 20 lakhs. The Committee understand that these payments accrue on account of (a) Machine breakdown, (b) belt faults, (c) shortage of materials or tools etc. They feel that these are avoidable causes

which reflect on the efficiency of the Ordnance Factories. The Committee have recommended earlier measures for reducing such idle time on account of machine breakdown, for want of materials etc. They suggest that special measures should be initiated to reduce the expenditure on idle time payments.

(h) Total value of Production and its analysis

101. The total value of production including the civil trade work, in all the Ordnance Factories during the last three years, was as follows :—

Particulars	1953-54	1954-55	1955-56
	(In lakhs of rupees)		
(1) Cost of issues to Army	1153·37	1192·96	892·71
(2) Cost of issues to Navy Air, Force and M.E.S.	47·39	65·22	66·74
(3) Cost of issues to Civil undertakings	167·93	392·66	445·93
(4) Cost of capital works	27·18	21·74	41·29
(5) Differences between opening and closing balances	63·53	(—)35·87	60·97
	1459·40	1636·71	1507·64

102. The Committee understand that the annual production in the Ordnance Factories meets about 40 to 50% of the requirements of Army and about 20 to 30% of Navy and Air Force respectively. In connection with the measures taken for the improvement of this position, it was explained that a survey of the main items of imported ammunition for the three services had been carried out to see which of these items could in the near future, be manufactured in Ordnance Factories and that a plan had been drawn up for the increased production of those items in the Ordnance Factories. The implementation of this plan was stated to require import of fresh plant in some cases and addition of balancing capacity in others. The Committee feel that these measures were overdue and recommend that every effort should be made to implement the plan without any further delay. They further recommend that similar plans for other types of Defence stores still imported should be drawn up expeditiously and implemented.

(i) Manufacture of MT Vehicles, Armoured Cars, Tanks etc.

103. The Committee learn that almost all the requirements of ordinary Mechanical Transport and Armoured Vehicles (including tanks etc.) for the Defence forces amounting to about Rs. 9 crores yearly are at present met by imports. As regards soft vehicles (*i.e.* ordinary lorries and trucks), the

Ministry of Defence were stated to be in close consultation with the Ministry or Heavy Industries for the development of their indigenous manufacture and that some progress has been made in this respect by Premier Automobiles and Hindustan Motors, which were able to manufacture only 50 to 60% of the value of these vehicles. For the manufacture of jeeps M/s. Mahindra and Mahindra were stated to have a programme therefor, for which the Ordnance Factories would help them. The Committee were further informed that 90% of the major soft vehicles would be manufactured in India within four or five years. As regards Armoured Vehicles, it was stated to have been decided to set up a plant for their manufacture in India and it was hoped that within five years or so a considerable portion of tanks etc. would be manufactured in the country. The Committee welcome the efforts made in this direction and hope that more vigorous steps would be taken to achieve self-sufficiency as far as possible.

(j) Association of private sector with Defence Production

104. The Committee have already emphasised in para 24 of their Fifty fourth Report on Ordnance Factories (Organisation and Finance) that the Government Ordnance Factories cannot by themselves meet all the requirements of Defence stores particularly in an emergency and that for this purpose it is necessary to develop the industrial potential in the country, both in the public and private sectors, which could be drawn upon when necessary. They were informed that attempts were being made in consultation with the Development Wing of the Ministry of Heavy Industries and the Production Ministry to locate indigenous capacity for manufacturing of Defence Stores, which were being imported as well as for establishing alternative sources of supply, and that, for this purpose, educational orders were being placed with the manufacturers. The Committee find, however, that only nine educational orders (*vide* Appendix III) of such items as Razor open, Hones Razor, Paper white fine etc. were placed on the D.G.S. & D. for supply from the private sector during the five years, 1951-1956. Further, even in the case of all but one of these orders, which pertain only to purely civilian orders, the orders have not been renewed and in certain cases not even completed. It was explained that the list was not the correct index of the amount of development work being got done through the private sector, because in a large number of cases no educational order as such was placed but necessary assistance and advice was rendered by the Technical Development Organisation to the private firms/factories in developing new stores processes. However, the Committee do not consider that the question of encouraging production of Defence Stores in the public and private sectors has received adequate attention so far. They feel that there is considerable complacency in this matter and that it needs to be overcome.

105. The Committee recommend that more energetic steps should be taken to enlist the active support of all the production units in the country to share in the Defence production. What these units can do was amply demonstrated during the last war. The Committee feel that the Defence Production Board together with its Advisory Committee and the Defence Production and Supply Committee have a very important role to play in this matter and that they should keep a close watch over the existing, developed or potential productive capacity in the civil sector and also ensure full co-ordination and co-operation by entrusting to the latter whatever can be undertaken by it, without entering into any competition. In this connection, the Committee suggest that the feasibility of getting the steel required by the Ordnance Factories, manufactured in the new steel factories which are being set up, should also be examined. *

(k) Mobilisation Plan and stepping up of Production during emergencies

106. It is important to be ready at all times with plans to mobilise the entire resources of the country in an emergency, in which changes, if any, could be incorporated from time to time, as and when necessary. The Ordnance Factories as well as the civil production units, referred to earlier, have a very decisive role to play in these plans.

107. The Committee understand that while the Baldev Singh Committee had recommended in December, 1954 the drawing up of an overall Mobilisation plan, so far only the first draft of the plan in respect of ammunition only had been prepared by the Director General of Ordnance Factories and discussed by the Defence Production Board. They deprecate strongly the complacency in this vital matter. Further, the Committee have already referred to the fact that the Baldev Singh Committee had pointed out that the reserves required to be maintained in the Ordnance Factories to step up production in an emergency had been cut down only on financial grounds and that the question had not been given sufficient thought. They would recommend that utmost priority should be given to the drawing up of an all comprehensive Mobilisation plan and that it should be ensured that the plan is kept upto date in the light of new developments.

(l) Production of Civil Trade Items

108. The circumstances leading to the large scale production of civil trade items in the Ordnance Factories have already been referred to in para 23 of the Committee's Fifty-fifth Report on "Ordnance Factories—Staff Matters and Training". The value of production of civil trade items which cover a wide field *e. g.* Small Arms, Ammunition, Chemicals—Optical and Scientific Stores, Small tools, Machine Tools, Metals, forgings, castings, miscellaneous Engineering stores, wood work items etc. during the last three years was as under :—

	(Rs. in lakhs)
1953-54	167.93
1954-55	392.66
1955-56	445.93

109. The Committee are glad to note the increase in the volume of civil trade production in Ordnance Factories which forms about 30% of the total production in the Ordnance Factories. They have recommended elsewhere that the feasibility of increasing it should be examined by a Committee of Experts. However, the extent to which civil production should be undertaken in Ordnance Factories is a matter for high level decision to which the Defence Production Board should devote its attention. It needs no emphasis to point out that this decision has to steer clear of the two extremes of rigidity and refusal to undertake civil work and of undertaking more such work than can safely be done so as not to jeopardise defence production. Once this decision has been given, it should be the duty and responsibility of the Director General of Ordnance Factories and the Superintendents to ensure that the capacity so set aside is booked in a business like manner and utilised fully and efficiently to secure maximum production.

110. The question regarding the organisation for civil trade work at the headquarters of the D.G.O.F. as well as at lower levels has already been discussed in para 36 of the Committee's 54th Report. The Committee would, however, suggest that a watch should be kept over the extent of civil trade work brought in by the officers in charge of civil trade so as to ensure that they do not become mere appendages of doubtful utility.

111. The cost of production of civil trade items in common with service items, is worked out as indicated in Appendix VII of the Committee's Fifty-fourth Report on Ordnance Factories. However, to attract civil trade, the Ordnance Factories have been permitted to quote a price lower than the price thus arrived at. Thus, under the existing orders, the Ordnance Factories can, if necessary, issue quotations for civil orders on the basis of a lower 'minimum' price, which is arrived by at excluding 25% of the 'variable' overheads from the *minimum* cost of production of the Factories. The Committee realise that such concessions are inevitable in the case of civil trade items since the Ordnance Factories would have certain idle capacity normally reserved for production of defence stores. They hope, however, that it would be possible for the Factories, to compete with others on a fair basis in this matter. At the same time they suggest that measures to reduce the actual cost of production by reducing overheads should still be devised.

112. *Publicity and appointment of agents.* —A sum of about Rs 20,000/- *i. e.*, 05% of the value of civil trade production is spent annually on publicity of civil trade items produced by the Ordnance Factories. The Committee suggest that every effort should be made to give publicity to civil trade items produced in Ordnance Factories by opening showrooms at selected centres, intensive and extensive advertisements etc.

113. *Commission Agents.* —The Committee learn that four Commission Agents have so far been appointed for the sale of mathematical instruments produced in the Ordnance Factories and that it is proposed to increase this number further. They further understand that rates of commission allowed by the Ordnance Factories are not attractive and do not compare well with those offered by other manufacturers. The Committee suggest that the question regarding the rates of commission as well as the number of commission agents may be examined afresh to see whether any improvements could be made so as to increase the production and sales to the extent possible.

IV

MISCELLANEOUS

(a) Inspection

(i) Staff

114. The number of inspection staff of various categories in the Ordnance Factories was stated to be as under :—

	G.O.	N.G.O.	Non-Industrial	Industrial
Factory Inspection Staff	15	75	113	1041
Army	42	659*	..	3125
Navy	4	12	..	..
Air Force	4	34	..	93
TOTAL	65	780	113	4259

*including non-industrial.

(ii) Procedure

115. The inspection of material required for the production of stores is partly done by the factory inspection staff and partly by the service inspection staff. As regards inspection of finished product as well as stage inspection during manufacture, the Committee understand that the entire inspection of non-service and non-lethal items of workshop manufacture is carried out by the Works Inspection staff of the Factory while in the case of service and lethal stores, the final inspection rests with the Service Inspectorate. Stage inspection, however, is done in some cases by the Factory Inspection staff and in others by the Service Inspectorate. By agreement with the Service Inspectorate the stage and process inspection is also in certain cases undertaken by the Factory's own inspectors.

The Committee understand that in the past there was duplication of inspection at certain stages, and that there was no uniformity of inspection in the matter of stage inspection by the three Services. While the Air Force were more inclined to concern themselves only with the final product and leave the stage inspection to the Factory staff, the Army and Navy carried out intermediate inspection as well. This the Committee understand caused friction and delay. They were informed, however, that the question of bringing about uniformity in this matter by transferring intermediate inspection of all items of manufacture to the Factory staff (with the services having a right to carry out percentage checks at key points considered necessary by them) was being examined by the authorities. The Committee hope that this might make for economy without leading to any lowering in inspection standards.

(b) Standardisation of equipment and rationalisation in Ordnance Factories

(i) Standardisation

116. The Committee learn that although the scope of standardisation of arms and ammunition is limited because the role of the three Services, *viz.* Army, Navy and Air Force, is quite different from one another, some efforts have been made to standardise specific items of ammunition such as artillery fuses, etc. Standardisation to a greater degree is, however, envisaged in general engineering stores, signal equipment etc. The Committee are glad to learn that 72 items of this category have more or less been standardised.

(ii) Rationalisation

117. As already stated, Ordnance Factories produce a large variety of stores and are also expected to produce different types of jobs simultaneously and to switch over from production of one type to another on the same plant. Since the Ordnance Factories cannot concentrate on mass production of a limited number of types of stores, the scope of introduction of rationalisation therein is limited. The Committee, however, understand that to the extent possible, rationalisation is being introduced, has already been achieved in respect of a few items of small arms, fuses, artillery equipment and ammunition etc. They hope that efforts will continue to be made to achieve further progress in this respect.

(c) Design and Development of new items of Defence Stores

118. The Machine Tool Proto-type Factory at Ambernath was established in 1953 mainly for design, development and proto-type fabrication of new items of Defence Stores. The Committee understand that since then the design and development of only seven new service weapons has been undertaken so far in the factory. In addition, the design, development and fabrication of about 14 machine tools has also been undertaken in this factory during this period. The Committee feel that the pace of development of service weapons is not very heartening, especially since this factory was primarily established for that purpose. It was explained by the Ministry of Defence that the design and development work of new service armament stores was highly specialised, complex and time consuming and that every new project undertaken might not give the desired results in design in the first attempt. Further the paucity of experienced designers in the country for this highly specialised work, was also stated to be another contributing factor for the slow progress in this field. The Committee have already recommended the provision of training schemes for designers to fulfil the needs of Ordnance Factories and other industries, in para 96 of their Fifty-fifth Report. They recommend that the feasibility of expanding the design and development activities in the Machine Tool Proto-type Factory consistent with the requirements of the Services, should be examined and that for this purpose, the full co-operation of the Factory Staff and the Technical Development Establishment should be ensured by suitable means.

APPENDIX I

Levied Percentage of S.I. Charges in Various Ordnance Factories

Factory	1951-52	1952-53	1953-54	1954-55	1955-56
Metal & Steel Fy., Ishapore	*	7.05	7.25	6.00	6.00
Rifle Factory, Ishapore	4.37	5.75	5.87	2.89	1.75
Gun & Shell Factory, Cossipore	5.81	5.79	6.75	7.50	11.5
High Explosives Fy., Kirkee	6.89	3.63	2.49	6.87	5.34
Gun Carriage Fy., Jubbulpore	*	8.74	8.40	11.50	14.32
Ammunition Factory, Kirkee	2.02	2.35	3.90	3.89	4.64
Cordite Factory, Arvankadu	*	1.38	1.21	0.54	2.58
Ordnance Factory, Khamaria	*	4.25	4.00	5.69	7.00
Clothing Factory, Shahjahanpur	1.31	1.31	1.19	1.20	1.26
Ordnance Factory, Katni	0.96	3.00	5.75	2.50	1.30
Ordnance Factory, Kanpur	3.98	4.85	9.50	11.50	10.75
Small Arms Factory, Kanpur	*	5.11	18.24	22.53	30.75
Ordnance Factory, Ambernath	*	1.82	2.75	3.07	1.16
Ordnance Factory, Muradnagar	6.89	9.75	12.75	16.78	21.40
Ordnance Factory, Dehra Dun	3.77	4.82	5.50	9.00	9.50
Harness & Saddlery Fy., Kanpur	6.48	4.90	8.27	5.28	5.22
Ordnance Factory, Bhusawal	4.87	3.88	3.97	5.94	10.30
Machine Tool Proto-type Fy., Ambernath	*	*	*	*	19.33 (Average of 3 quarters)
Ordnance Parachute Fy., Kanpur	0.53	1.28	1.41	0.99	1.34
Ordnance Factory, Wadala	*	1.00	0.90	3.90	4.87

*Not available.

APPENDIX II

Statement showing the percentage of out-moded equipment in Ordnance Factories

Name of Factory	Percentage
Ordnance Fy., Ambernath	4·5
Ordnance Fy., Kanpur	28·7
Machine Tool Proto-type Fy., Ambernath	Nil
High Explosives Fy., Kirkee	30·1
Harness & Saddlery Fy., Kanpur	9
Ordnance Fy., Katni	11·3
Small Arms Fy., Kanpur	43·8
Ammunition Factory, Kirkee	32·3
Gun Carriage Fy., Jubbulpore	18·6
Rifle Factory, Ishapore	72·4
Gun & Shell Factory, Cossipore	43·6
Metal & Steel Factory, Ishapore	17·3
Ordnance Factory, Muradnagar	10·8
Ordnance Factory, Dehra Dun	11·8
Cordite Factory, Arvankadu	75·5
Ordnance Factory, Khamaria	9·5
Ordnance Factory, Bhusawal	3
Ordnance Parachute Factory, Kanpur	20·4
Ordnance Clothing Fy., Shahjahanpur	26·7

} Sewing
Machi-
nes have
been in-
cluded.

APPENDIX III

Details of Educational Orders placed on the Private Sector

Indent No. & date	Indentor	Store	Qty on Demand	Value of Indent	Remarks.
				Rs. A. P.	
1. S.I/54/Z-4 dt. 18-6-54	D. O. S.	1. Test Set Portable	20	3680 0 0	Supplies not yet completed.
		2. Tester Ohmmer	20	3000 0 0	
				6680 0 0	
2. So05/Z-2/53-54 dt. 21-10-53	C. O. D. Agra	Battery Charger	15	60,000 0 0	A/T yet to be placed by DGS & D
3. T/I CF/39/52-53 dt. 28-5-52	C. O. D. Kanpur	Felt Hats Gorkha	1000	15,937 8 0	A/T issued D/P is 31-1-57
4. T/KA/41/55-56 dt. 24-3-55	Do.	Razor Opn	500	1406 4 0	The indent has been mandated to DS&D Calcutta.
5. T/KA/46/56-57 dt. 9-1-56	Do.	Hones Razor	500	Approx.	Supply not completed.
				5156 0 0	
6. T/KG/57/55-56 dt. 23-6-56	Do.	1. Fire Extinguisher Foam Type.	20	43040 0 0	
		2. Refills	800	38,400 0 0	
7. T/KA/32/57-58 dt. 15-9-55	Do.	Hones Razor	250	2922 0 0	Order has not yet been placed.
8. T/48/IGC/56-57 dt. 22-10-56	Do.	Razor Safety Blades	3600	2250 0 0	Do.
9. OF/U/9999-G/SP-2, dt. 27-12-56.	D.G.O.F.	Paper white Fine	375 Reams	3920 0 0	The indent has not yet been covered.

APPENDIX IV

Summary of Conclusions/Recommendations

S. No.	Ref. to Para No. of the Report	Summary of conclusions/Recommendations
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1	4	The Committee recommend that the stores required by the Ordnance Factories should also be brought within the scope of the Equipment Committee as suggested in their 56th Report on Army Stores.
2	5	The Committee are glad to note that the system of conveying requirements of recurring items by the Services on a three year programme basis has at last been introduced. At the same time they hope that the Services will be enabled to forecast their requirements on a realistic basis for the period now prescribed.
3	8	The Committee suggest that the question of the Director General of Ordnance Factories and Superintendents of Ordnance Factories being permitted to initiate action in the matter of provisioning of stores sufficiently early on the basis of the preliminary forecasts to the extent of 50 % of the demands indicated therein and, if possible, even more in case of repetitive items, should be examined.
4	9	The Committee suggest that the question of provisioning required to be done at present by Ordnance Factories on a six monthly basis on receipt of firm demands being altered so as to cover the entire demand for the year of utilisation, after taking into account the action taken on preliminary forecasts, should be examined.
5	12	The Committee would suggest that the importance of sound provisioning should be impressed on all concerned, including the Services, the Director General of Ordnance Factories and Superintendents of Ordnance Factories.

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6	13	The Committee feel that the Government should examine the feasibility of laying down a specific procedure for provisioning of Stores in emergencies with such relaxations as are considered necessary in order to obviate any hasty action in this respect.
7	14	The Committee feel that the business value of quick execution in all cases, especially civil trade items, should be appreciated and that the Superintendents etc. should be given well defined powers for making certain safe provision of stores in anticipation of orders. Further to meet the changing needs, they suggest that these powers should also be periodically reviewed so as to keep them at proper levels according to the volume of work done and difficulties encountered, if any.
8	17	The Committee were told that it might be advantageous if the Director General of Ordnance Factories was authorised to enter into rate contracts which could be operated by Superintendents in the case of items which are particularly required by the Ordnance Factories only and not by other Government departments and for which the D.G.S. & D. does not go in for rate contract. The Committee suggest that this suggestion may be had examined carefully with a view to its implementation to the extent possible.
9	19	The Committee view with concern the necessity of posting a Liaison Officer to expedite procurement by the D.G.S. & D. when it is clearly the function of the D.G.S. & D. to arrange for purchases with as much expedition as possible.
10	21	The Committee feel that in view of the very large stocks of materials/components held in the Ordnance Factories, which are surplus to current production and are held only as war-reserve stocks, the feasibility should be examined of centralising at some places the custody of those stores which are required by most factories and are in excess of their annual requirements as well as of stock-pile items. They feel that under this arrangement considerable factory stocks might be transferred to central stocks and storage accommodation therefor could, perhaps, be found from out of the existing storage accommodation in the Ordnance Factories.

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| 11 | 24 | The Committee suggest that the feasibility of granting relaxation from annual verification in respect of Ordnance Factory Stores, where possible, may be considered. At the same time, they would stress that scrap items should not be allowed to accumulate for long periods and that their disposal should be effected as quickly as possible. |
| 12 | 25 | The Committee are not happy that surpluses and deficiencies should be noticed in Ordnance Factories during stock verification and feel that they reveal lack of sufficient attention to stores accounting, including receipt, issue and storage. They, therefore, recommend that effective steps should be taken to improve the position in these respects. |
| 13 | 29 | While appreciating the necessity for maintaining stores at adequate levels to meet the requirements of emergencies, the Committee feel that in assessing such requirements, due consideration should be paid to the possibility of service stores becoming obsolete due to rapid advancements in this field, the position of availability of raw materials, their life, frequency and quantity of their turnover, etc. In this connection, it would be pertinent to mention that, quite apart from heavy surpluses in Ordnance Factories, stores of considerable value are also scrapped annually in the Ordnance Factories due to obsolescence and change in process of manufacture, etc. |

Further, in view of the fact that over 90% of the stores purchased in the last two years were obtained indigenously, the Committee would suggest that the justification for holding heavy stocks which naturally carry with them risk of losses on account of obsolescence, deterioration, surpluses, etc. in addition to the heavy outlay as well as additional expenditure on their care, custody and maintenance, should also be re-examined. They further suggest that the stocks should be held only within such margins as may be determined from time to time in the light of prevailing circumstances.

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14 31 The Committee appreciate that stock-piling of essential requirements in anticipation of emergencies is absolutely necessary but would reiterate the need for a careful appraisal of the situation from time to time to guard against excessive stock-piling and consequent losses, and at the same time to provide for delays in receipt of stores and strategic materials especially those imported.

15 34 The Committee feel that the exhibition of such a heavy amount pertaining to value of stores in transit under suspense head in the annual accounts of the Ordnance Factories, without adequate explanation is not proper. Since the annual accounts of the Ordnance Factories take time before finalisation, after the close of a year, they consider that it may perhaps be possible to link all or a majority of the stores in transit, in the stores accounts of the consignee factories before the finalisation of the annual accounts.

The Committee, therefore, suggest that the latest position regarding the linking of these stores in transit may also be reflected in the annual accounts, by means of a foot-note.

16 37 The Committee feel that the staff employed on the care and custody of stores is on the high side and that there is scope for reduction in stores-keeping establishment, even on the basis of present holdings. They recommend that the feasibility of reducing the expenditure on care and custody of stores should be considered.

17 41 The Committee hope that with the introduction of the new provisioning procedure and its correct implementation such surpluses would not arise in future. Since the holdings of surpluses involve considerable expenditure in the shape of store-keeping charges and deterioration of stores due to prolonged storage the Committee would suggest that expeditious action may be taken for the declaration and disposal of these surpluses after ensuring that they are really surplus to the requirements.

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18	45	The Committee recommend that the disposal action in the Factories should be speeded up so as to avoid losses in the light of the remarks of the Stock Holdings Committee.
19	46	The Committee hope that action to declare the remaining surpluses would be taken at an early date.
20	47	The Committee would suggest that the stores requirements etc. of Ordnance Factories also should be brought within the scope of the Stores Inquiry Committee as recommended in their 56th Report.
21	50—51	The Committee feel very much concerned at the present condition of the Plant and Machinery in the Ordnance Factories, particularly in view of the rapid technological progress made in recent years in advanced countries, resulting in modernisation having been effected in lay-outs and machinery in their factories. They understand that the Baldev Singh Committee, in its Report submitted in December, 1954, had pointed out that some of the machines in the Ordnance Factories were fit only for scrap. The Committee consider this very unsatisfactory as it affects production in a matter which concerns the very security of the country.
22	53	The Committee feel that in order to maintain the working efficiency of the Ordnance Factories at proper levels, there should be some correlation between the amount of annual depreciation charged on the Plant and Machinery to that spent on replacement etc. To this end they have suggested in an earlier Report the resuscitation of the R/R Fund or at least provision of larger funds for the purpose.
23	54	The Committee hope that every effort will be made to expend the amount envisaged in the Second Five Year Plan in the light of the remarks contained in para 71 of their Fifty-fourth Report on Ordnance Factories, Organisation and Finance, so as to replace the entire over-age as well as inefficient machinery and at the same time modernise it.

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- 24 55 The Committee understand that in the past generally 6 to 18 months elapsed after a proposal for new plant or machinery was made by the Superintendent of a Factory and before it was finally approved for purchase. In a typical case the proposal was made in September, 1951 and the machinery was actually received in June, 1956. The Committee consider such delays reprehensible and recommend that the need to be prompt and business-like in such matters should be impressed on all concerned.
- 25 56 While hoping that the Committee's recommendation in their 54th Report for a revision of the depreciation rates of machines on a realistic basis, would go far in preventing differences of opinion, the Committee would recommend that there is also a need for greater understanding and co-operation between Finance and the executive authorities.
- 26 57 The Committee regret to learn that records of breakdowns, rejections due to machine faults, cost of repairs etc. were not generally maintained. They feel that such information, quite apart from being required by Finance, is all the more necessary for the executive and administrative authorities themselves to enable them to determine the working efficiency of the particular machines and the need for their replacement. They, therefore recommend that such particulars should be kept in respect of all machines in future.
- 27 59 The Committee would suggest that the proposals for purchase of plant and machinery, new as well as on replacement account, should be scrutinised expeditiously by a Committee of Technical Officers at the Headquarters Office of the DGOF with reference to the condition of Plant and Machinery further determined, if necessary, by a visit to the Factory concerned, so that some uniformity in replacements etc. may also be maintained. It would perhaps facilitate matters if a representative of the associated Finance was also associated with this Committee.
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28	61	The Committee feel that there should be a systematic plan for the repair, maintenance and overhaul of plant and machinery and that it should be adhered to by the Factories.
29	64	The Committee feel that a review of the powers of the Executive and Administrative Heads of an industrial organisation like the Ordnance Factories in the matter of purchase of plant and machinery is called for, as with the present high prices the present power would purchase very little and consequently would offer little scope for the exercise of those powers by the authorities. They recommend that these officers should be delegated powers commensurate with their status and responsibilities, and that there should also be a periodical review of these powers with reference to their exercise as well as the prevailing market prices. They would, at the same time, stress that the exercise of these powers by the Superintendents should be regulated in such a way as to bring about standardisation of equipment in all the Factories as far as possible.
30	67	The Committee suggest that suitable steps in consultation with the National Industrial Development Corporation and private manufacturers should be taken to establish the manufacture of Heavy Machinery etc. in the country in collaboration with foreign manufacturers as well as at the Machine Tool Proto-type Factory as early as possible.
31	68	The Committee suggest that a Committee of experts, drawn from public as well as private sectors, be appointed to examine the extent of idle capacity in the Ordnance Factories with a view to suggesting its utilisation to the maximum extent possible. The Committee feel that this Committee could also offer suggestions: (i) regarding the utilisation in an emergency of machinery existing in private sector and the rest of public sector and similar to that existing in Ordnance Factories and (ii) on the feasibility as well as the economics of installing in future multipurpose machinery, which could be switched over to other types of production during lean periods of service production, thereby eliminating the problem of idle labour and machinery.

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- 32 72-73 The Committee feel that sufficient attention was not bestowed by the Ordnance Factories on the selection of the German Reparation Machines. They feel that had the recommendation contained in para 67 of their First Report been implemented, particularly since most of the machines were received in the Ordnance Factories after it was made, the present unfortunate situation might not have arisen.
- 33 74-75 The Committee deplore the long delay extending over 2—6 years which took place in overhauling and installing the German Reparation machines in the Ordnance Factories, and the somewhat casual manner in which this task was attended to by the authorities concerned, particularly when the allotment of these machines to the Ordnance Factories had itself been made on a priority basis. They feel that the overhaul of these machines should also have been taken up on priority basis and speeded up by providing special or separate repair sections or even by securing the services of outside agencies for this purpose. They would recommend that immediate action be taken to overhaul the rest of the machinery by providing separate repair sections, if necessary.
- 34 76-77 The Committee deplore the slow rate at which German Reparation machines are being declared to the D. G. S. & D. for disposal. They recommend that urgent steps should be taken to dispose of the remaining machines by quick means by adopting a suitable special procedure, if necessary *e.g.* by circulating the lists of machines directly to other undertakings, the Chambers of Commerce, leading industrialists, etc. as well as allowing them facility to inspect them.
- 35 78 The entire project of the receipt and utilisation of the German Reparation machinery was neither planned properly nor was any systematic action taken to use them at least in so far as the Ordnance Factories are concerned. The Committee consider all this very unsatisfactory. They feel that there has been some carelessness and neglect in the matter. They therefore, recommend that a comprehensive inquiry should be conducted in the matter and responsibility fixed as well as action taken against those found guilty.
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36	81	The Committee suggest that during the execution of all future projects the irregularities pointed out by the Public Accounts Committee in connection with the Ambernath and Khamaria Projects should be fully borne in mind so as to avoid their recurrence.
37	85	It was pointed out to the Committee that proposals for having separate planning and progress office, attached to each factory as well as at D.G.O.F.'s headquarters were under consideration. The Committee recommend that these proposals should be examined and necessary action taken expeditiously.
38	86	The Committee consider that there is scope for reducing the time taken by the Ordnance Factories in establishing production and therefore suggest that a careful examination of the various processes involved therein should be carried out to clear the bottlenecks and eradicate other causes of delays.
39	90	The Committee have already recommended in para 42 of their Fifty-sixth Report on Army Stores that the indentors should be made responsible for obtaining the necessary particulars and for supplying them to the Ordnance Factories. They hope that this change will be given effect to at an early date and at the same time a procedure devised to pinpoint the responsibility of the various authorities including the technical directorate, for the delays, if any, in this matter.
40	91	The Committee understand that manufacture of some items was held up on account of suspension orders placed by the indentor. They feel that such cases should arise only in exceptional circumstances and that they should be investigated by higher authorities to examine in particular whether the original order was justified and also the reason for the suspension.
41	92	The Committee learn that priorities of manufacture are changed often by indentors. They realise that for operational needs such instances might arise but deplore their frequent occurrence in normal times. They suggest that there should be a thorough test-check of such cases, in particular, to see whether the case was due to faulty material used, defective storage, etc. so as to enable remedial measures to be taken in future.

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The Committee were informed that due to lack of experience the production personnel did not always appreciate all the snags and pitfalls in the development of manufacture, particularly of new complicated items, all at one time and realise them only one after another. They feel, however, that this would indicate insufficient attention being paid to preliminaries before production was undertaken, since the development of manufacture of all new and complicated stores, would ordinarily and in fact, should first be carried out on an experimental basis and mass production only after all the processes have been fully finalised. For this purpose they would suggest that such experimental orders should be kept apart from other orders and that their progress should be watched separately.

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The Committee were glad to learn that it has recently been decided by the Defence Production Board to relieve the Ordnance Factories of jobbing orders and that the Master General of Ordnance at Army Hqrs. has been asked to set aside one of his Electrical and Mechanical Workshops entirely for the purpose. They hope that this decision will be implemented expeditiously and will go a long way in improving the position in the Ordnance Factories.

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The Committee suggest that the aim of gradual replacement of outmoded equipment, within the limitations of available resources, should constantly be kept in view by the Defence Services with a view to achieving the maximum operational efficiency.

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The Committee suggest that a central watch by means of Progress Reports should be kept by the Director General of Ordnance Factories over the extent and volume of orders (Priority as well as others) lying unexecuted with the Ordnance Factories for over six months. These Progress Reports should specify the reasons for the delay in execution of orders and should be submitted quarterly to the Director General of Ordnance Factories who should closely scrutinise these reports to see that the causes of delays are removed as far as possible so that production coul

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		be expedited. Further, similar reports at half yearly intervals should also be scrutinised by the Controller General Defence Production and Defence Production Board to enable them to initiate necessary action.
46	96	While appreciating the difficulties of production of new items in the initial stages, the Committee hope that it might perhaps be possible to reduce these abnormal rejections by establishing the production of new items on an experimental basis in co-operation with the Technical Development Establishment, etc.
47	97	The Committee suggest that the percentage of unavoidable rejections should be specifically laid down by the technical authorities as far as possible and that they should be periodically reviewed.
48	98	The results achieved by the Statistical Quality Control Section indicate that wasteful processes were being followed in Ordnance Factories and that the setting up of the Statistical Quality Control Section was an overdue reform. They suggest that stern action should be taken against all those guilty of these wasteful processes. Further, the Committee hope that the Statistical Quality Control Section would succeed in progressively reducing the rejections and in securing greater and effective control over production costs and bringing about marked improvements in the quality of products.
49	99	The Committee suggest that for the success of the Statistical Quality Control Section there should be full co-operation between the Statistical Quality Control Section and costing sections.
50	100	The Committee feel that the causes leading to idle time payments (within control) are avoidable and reflect on the efficiency of Ordnance Factories. They suggest that special measures should be initiated to reduce the expenditure on idle time payments.
51	102	It was explained to the Committee that a survey of the main items of imported ammunition for the three Services, had been carried out to see which of these items could in the near future,

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be manufactured in Ordnance Factories and that a plan had been drawn up for the increased production of those items in the Ordnance Factories.

The Committee feel that these measures were overdue and recommend that every effort should be made to implement the plan without any further delay. They further recommend that similar plans for other types of Defence stores still imported should be drawn up expeditiously and implemented.

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The Committee welcome the efforts made in connection with the manufacture of Mechanical Transport vehicles, etc. and hope that more vigorous steps would be taken to achieve self-sufficiency as far as possible.

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The Committee do not consider that the question of encouraging production of Defence Stores in the public and private sectors has received adequate attention so far. They feel that there is considerable complacency in this matter and that it needs to be overcome.

The Committee recommend that more energetic steps should be taken to enlist the active support of all the production units in the country to share in the Defence production. The Committee feel that the Defence Production Board together with its Advisory Committee and the Defence Production and Supply Committee have a very important role to play in this matter and that they should keep a close watch over the existing, developed or potential productive capacity in the civil sector and also ensure full co-ordination and co-operation by entrusting to the latter whatever can be undertaken by it, without entering into any competition. In this connection the Committee suggest that the feasibility of getting the steel required by the Ordnance Factories, manufactured in the new steel factories which are being set up, should also be examined.

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The Committee recommend that utmost priority should be given to the drawing up of an all comprehensive Mobilisation plan and that it should be ensured that the plan is kept up-to-date in the light of new developments.

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55	109	The Committee are glad to note the increase in the volume of civil trade production. They suggest that Defence Production Board should decide about the extent of civil production in a way as not to jeopardise defence production and at the same time ensuring the utilisation of spare capacity to the fullest extent.
56	110	The Committee suggest that a watch should be kept over the extent of civil trade work brought in by the officers in charge of civil trade so as to ensure that they do not become mere appendages of doubtful utility.
57	111	The Committee suggest that measures to reduce actual cost of production by reducing overheads in Ordnance Factories should be devised.
58	112	The Committee suggest that every effort should be made to give publicity to civil trade items produced in Ordnance Factories by opening show rooms at selected centres, intensive and extensive advertisements, etc.
59	113	The Committee suggest that the question regarding the rates of commission as well as the number of commission agents may be examined afresh to see whether any improvement could be made so as to increase the production and sales to the extent possible.
60	114	The Committee were informed that the question of bringing about uniformity in the matter of inspection of all items of manufacture was being examined by the authorities. They hope that this might make for economy without leading to any lowering in inspection standards.
61	117	The Committee understand that to the extent possible rationalisation is being introduced in the Ordnance Factories. They hope that efforts will continue to be made to achieve further progress in this respect.
62	118	The Committee feel that the pace of development of service weapons is not very heartening since this Factory (MTPF) was primarily established for that purpose. They recommend that the feasibility of expanding the activities in the Machine Tool Proto-type Factory consistent with the requirements of the Services should be examined and that for this purpose the full co-operation of the factory Staff and the Technical Development Establishment should be ensured by suitable means.