

ESTIMATES COMMITTEE

1956-57

FIFTY-FIFTH REPORT

MINISTRY OF DEFENCE—
ORDNANCE FACTORIES
(STAFF MATTERS AND TRAINING)



LOK SABHA SECRETARIAT
NEW DELHI
March, 1957

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C O R R I G E N D A

Fifty Fifth Report of the Estimates Committee on the Ministry of Defence, Ordnance Factories - Staff Matters and Training.

Contents Page, Item I(J)(iv): *for '181-9' read '18-19'*

Page 2, line 4 from below: *for '10' read '33 1/3%'*
35

Page 7, para 17, line 23: *for 'moral' read 'morale'*

Page 10, heading above para 24: *for 'Surplus' read 'Surpluses'*

Page 14, para 30, line 5 from below: *for 'specilised' read 'specialised'*

Page 16, para 34, heading of col. 4 of the table: *for '2 to 3' read
'3 to 2'*

Page 19, sub-para 37, line 4: *for '113.8' read '1 : 3.8'*

Page 21, line 8, col. 4: *for '12.7' read '12.4'*

Page 23, line 7: *for 'provided' read 'provides'*

Page 33, line 3: *for 'wilingly' read 'willingly'*

Page 34, para 77, line 3: *for 'via voce' read 'ex va voce'*

Page 43, line 9: for 'emphisis' read 'emphasis'

Page 53, Item 3, col. 5: for '1 : 82.5' read '1 : 28.5'

Page 62, S.No. 5, line 10: for 'fesibility' read 'feasibility'

Page 62, S.No. 7, line 4 from below: for 'suiatble' read 'suitable'

Page 75, S.No. 64, line 1: for 'aff' read 'staff'

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ESTIMATES COMMITTEE

1956-57

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

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

*Resigned on the 20th Nov. 1956.

**Died on the 6th October, 1956.

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

INTRODUCTION

I, the Chairman of the Estimates Committee having been authorised by the Committee to submit the Report on their behalf, present this Fifty-fifth Report on the Ministry of Defence—Ordnance Factories—on the subject of 'Staff Matters Training'.

2. The Committee wish to express their thanks to the Officers of the Ministry of Defence for placing before them the material and information that they wanted in connection with the examination of the estimates. They also wish to thank Shri S. L. Kirloskar and Shri D. S. Mulla for giving evidence and making valuable suggestions to the Committee.

BALVANTRAY MEHTA,
Chairman,
Estimates Committee.

NEW DELHI;

Dated the 22nd March, 1957.

STAFF MATTERS

(A) Strength of staff and expenditure thereon

1. The number of staff employed in connection with the Ordnance and Clothing Factories in India under the various categories as on 1st April, 1956, was as under:—

Name of Establishment	Gazetted Officers	Non-Gazetted Officers	Non-Industrial Staff	Industrial Staff	Min. of Defence Security corps Personnel.
1. Ordnance Factories	262	1,472	12,899	50,492	1,854
2. Director General of Ordnance Factories	51	337 (Ministerial)			
3. Controller General of Defence Production	15*	51 (Ministerial)	22		
4. Deputy Financial Adviser (Factories)	6	19	8		
5. Controller of Defence Accounts (Factories) and his sub ordinate Officers . .	48	1,882	179		
6. Inspection Staff :					
(a) Factory Inspection	15	75	113	1,041	
(b) Service Inspection	50	705 (including non-Industrial).		3,218	
	447	4,541	13,221	54,751	1,854

*Of these 4 Gazetted Officers and 24 other staff are employed on work relating to Ordnance Factories.

The factory-wise distribution of the staff at (1) above, and the scales of pay applicable to them, are shown at Appendices I-A and I-B.

Expenditure on Pay and Allowances

2. As already mentioned in para 73 of the Report on 'Organisation and Finance' on Ordnance Factories the expenditure on pay and allowances of staff at 1, 2 and 6(a) above, which is booked under Main Head 5-A of Major Head 56 of Defence Services—Effective—Army, during the last three years was as follows:—

1953-54	Rs. 884.63 lakhs
1954-55	Rs. 929.11 lakhs
1955-56	Rs. 923.62 lakhs

It will thus be observed that as a production unit even in peacetime the Ordnance Factories employ staff and labour in strength next only to the Railways.

(B) Classification of staff

The personnel of the Ordnance Factories are divided into the following broad categories:

- (i) **Gazetted** Asst. Works Managers, Works Managers, Superintendents, Labour Officers, Security Officers, etc.
- (ii) **Non-Gazetted** Chargemen, Asstt. Store Keepers, Store Keepers, Asst. Foremen and Foremen.
- (iii) **Non-Industrial establishment** Clerical staff, supervisors etc.
- (iv) **Industrial** Unskilled, Semi-skilled, Skilled and Highly Skilled.

(C) Recruitment.

(i) Gazetted Officers.

3. The recruitment to the category of the Asst. Works Managers who belong to a Central Service Class I is generally made through a competitive examination held by the Union Public Service Commission, common to other all India Engineering Services. They undergo training for a period from 3 to 4 years on selected lines such as mechanical engineering, chemical engineering, administration etc. In exceptional cases, direct recruitment to the post of Asst. Works Managers is also made, through the U.P.S.C.

Under the existing rules, 20% (temporarily increased to $\frac{10}{16}$) of the posts in the Gazetted ranks are reserved for departmental promotions from the rank of foreman and below. The Committee understand that in actual fact, over 40% of the Gazetted appoint-

ments are held by non-gazetted personnel. This, it was explained, was due to the difficulties experienced in getting 'qualified' direct recruits in sufficient numbers.

(ii) *Special Recruitment*

4. The Committee were told that there was a great shortage of experienced senior officers in the Ordnance Factories and that the position had become critical due to increasing number of defections from among them, and that at the present rate, the vacancies might not be filled up for a long time which would make the position very critical. They were also told that attempts had been made to tap the open market through the U.P.S.C. but that they had not met with encouraging results, in spite of relaxations having been permitted in the requisite qualifications. The Committee consider this particularly unfortunate and they have discussed the possible explanation in a later section. They suggest that in the light of the recommendations made in para 17 special steps be taken to fill the shortages among the Senior executives in the Ordnance Factories, by means of special recruitment in various age-groups so as to attract experienced persons from private industry also.

(iii) *Non-gazetted Staff and Supervisors*

5. Recruitment to the post of Supervisors A and B Grade is made through the Apprentice Training Scheme, a reference to which will be made later, in the Chapter on 'Training'. The candidates for the scheme are appointed by the Director General, Ordnance Factories on the recommendations of a Central Selection Board after an interview and a written test in general knowledge conducted by a local Selection Board, appointed in each Factory where the training is to be given. After the prescribed period of training, the trainees are absorbed as Supervisors Grade A and B from whom the higher non-gazetted posts of Chargeman, Assistant Foreman and Foreman are filled in the normal chain of promotion. In exceptional cases, non-gazetted staff are also recruited direct by the Director General, Ordnance Factories without the intervening apprenticeship. It has recently been decided that upto 33 1/3% of recruitment for future vacancies in the posts of Supervisors 'B' will be made by promotion.

6. The Committee were given to understand that the papers for the written examinations are set centrally but are examined locally and that only those selected from among the successful candidates appear before the Central Board. They feel that the existing system of valuation of examination papers locally might result in lack of uniformity in the standards of valuation which is so very essential in engendering a sense of confidence among the candidates, and therefore, suggest that the examination of the papers may also be undertaken on a central basis.

7. The Committee further find that there are no psychological tests for selection to the Apprentice Training Scheme while such

tests exist for selection of artisans under the Artisan Training Scheme. They recommend that these tests should also be held for selection to the Apprentice Training Scheme for the purpose of finding out the aptitude of the candidates for these jobs, so as to prevent defections, withdrawals etc. during the period of training and consequent loss to Government.

8. The Committee were informed that the Director General, Ordnance Factories can, at his discretion, fill up vacancies of apprentices upto a maximum of 20% in a year. It was explained that this power was a legacy of the past and was meant to allow a certain number of departmental people to be selected even though they might not quite fulfil the age and educational qualifications. The Committee learn that there are no precise rules which govern the conditions of eligibility for selection through this channel. They feel that such a system of selection is not very conducive to the creation of confidence among the employees and the public outside. They, therefore, recommend that a set of rules defining the conditions of eligibility of departmental men for selection to Apprentice Training Scheme, e.g. seniority, experience, etc. should be laid down and published among the staff, and that the departmental candidates should be selected by a prescribed procedure subject to their fulfilling, as far as possible, these conditions.

(iv) *Other Non-Industrial Establishment*

9. Recruitment of class IV staff is made by Factory management locally. Recruitment to the other posts in non-Industrial Establishment is made by reporting vacancies to zonal headquarters. If no posting is made from there within five weeks, the posts are filled by recruitment through local Employment Exchanges. To meet urgent requirements and in special cases, the Director General, Ordnance Factories has special powers to recruit technical staff directly.

(v) *Industrial Establishment*

10. Recruitment in the Industrial Establishment is normally made direct by the Factories concerned on the basis of trade tests, held according to prescribed specifications or by adjustment of surpluses in other defence installations through zonal headquarters or through the nearest Employment Exchange. At present direct recruitment has been stopped, in view of the surplus labour in the Ordnance Factories and hence deficiencies in one Factory are met only from the surpluses in other Factories.

(vi) *Powers of the Director General, Ordnance Factories and Superintendents in the matter of creation of posts and recruitment*

11. *Creation of Posts:* The Director General, Ordnance Factories is authorised at present to sanction the creation of temporary posts (except Gazetted posts) upto a period of 2 years, while no powers in this respect have at all been vested in the Superintendents of Factories.

The Committee feel that in an industrial concern like the Ordnance Factories the Executive head is in a better position to decide his own requirements of industrial personnel in relation to the workload. They are, therefore, of the view that there should not be so much centralisation in respect of the creation of posts. They, therefore, suggest that the feasibility of granting more powers to the Superintendents in this respect commensurate with their status, to be exercised in consultation with the Factory Board which would include the financial representatives, should be considered.

12. *Recruitment:* The Director General, Ordnance Factories is empowered to recruit all staff pertaining to non-Gazetted and non-Industrial (other than Class IV) categories. The recruitment is made through two selection Boards—one for Non-Gazetted and the other for non-Industrial posts—at the headquarters of the Director General, Ordnance Factories.

The Superintendents of Ordnance Factories are empowered to recruit class IV and industrial staff only in the manner indicated in paras 9 and 10 above.

Here again, the Committee would like to caution against excessive centralisation. They were told, however, that powers to recruit non-industrial staff, other than class IV, could not be delegated to the Superintendents as it might result in situations when junior men might get promotions in one Factory while senior men in the same grade, in the next-door Factory, might still be awaiting their promotions. It was explained that formerly when non-industrial staff like Supervisors etc. were appointed locally on factory to factory basis, such complaints were frequent and that these powers had been centralised only to put an end to such situations.

13. The Committee feel, however, that this system of centralised recruitment, besides making the members of the Board or the staff concerned go long distances for interviews etc., is bound to result in frequent and distant transfers, which in the case of lower staff, will undoubtedly cause hardship. They therefore suggest that the feasibility of making recruitment to certain categories of non-gazetted posts as well as of non-industrial establishment on a regional basis and of delegating authority to regional boards to be set up for this purpose may be considered. Similarly, transfers among these categories may, apart from those on voluntary basis or on disciplinary grounds, also be made on some regional basis.

(D) Quota for Scheduled Castes/Scheduled Tribes.

14. A statement showing the number of employees belonging to scheduled castes/scheduled tribes in the Ordnance Factories is given

in Appendix II. It will be seen that the representation of these classes in the Gazetted and Class III posts is far below the reserved quota which is 12½ per cent. Although the Committee appreciate the difficulty of the authorities in finding suitable Scheduled Castes/Tribes candidates, they would urge that effective measures should be taken to step up their recruitment by keeping in touch with the various representative organisations of Scheduled Castes/Tribes with a view to giving wide publicity to the vacancies. In addition such measures as for example prescribing slightly lower standards of selection for them and by trying to make good the deficiency by giving them subsequently extra training or by recruiting them in large number in areas where suitable candidates may be available may also be considered. In this connection, the Committee would also invite reference to para 28 of their Twenty-fourth Report.

(E) Departmental Promotions

15. The position in respect of Gazetted and non-gazetted and supervisory categories has already been stated earlier. The promotions to the former are made on the recommendations of a Departmental Promotion Committee consisting of the Director General, Ordnance Factories, the Controller General of Defence Production, and a member of the Union Public Service Commission, while those to the latter are made by the Director General, Ordnance Factories on the basis of the recommendations of Departmental Promotion Committees at various levels:

As regards promotions to Supervisory category, the Committee suggest that conditions of eligibility for such promotions may be laid down and widely publicised among the staff.

As regards promotions within the industrial categories, the Committee understand that the same is regulated by means of trade tests.

(F) Resignations etc.

16. The Committee understand that the Ordnance Factories were finding it difficult to recruit experienced officers for holding senior posts in spite of the relaxation of requisite qualifications and that senior officers were leaving the Ordnance Factories. They understand that a similar tendency existed among the non-gazetted and supervisory staff also. The number of officers and supervisory staff who have left the Ordnance Factories during the last five years is given below:

Gazetted:

Superintendents	10
Works Managers	8
Asst. Works Managers	19
Asst. Works Managers (under training)	4
	41

Non-Gazetted and Supervisory.

Foremen	16
Asst. Foremen	13
Chargemen	11
Supervisors 'A' & 'B' and equivalent posts	<u>158*</u>
	<u>198</u>

17. The Committee consider it very disturbing that a depletion in the strength of the experienced staff in the Ordnance Factories should take place in this manner and that it should even affect the Superintendents of the factories. They understand that this drift was mainly due to the poor pay-scales and unattractive service conditions in the Ordnance Factories. They were also informed that the pay-scales for equally qualified men offered by the Iron and Steel Factories being set up in the public sector were very high as compared to those obtaining in the Ordnance Factories. To give one instance which was narrated to the Committee, the pay-scale of Works Managers in the Ordnance Factories is Rs. 600—1150 while that in the Rourkela and Bhilai Projects is Rs. 1300—1600. The Committee view this position with great concern and do not see why there should be so much disparity in a basic matter like pay-scales in the undertakings administered by two sister Ministries of the same Government. They understand that similar disparities also exist in the other categories of staff mentioned above. They recommend that immediate steps should be taken to examine the whole pay structure of the various comparable posts in all Government undertakings and to bring about uniformity therein as far as may be possible so that certain Government Departments and concerns might not benefit at the expense of others, which besides causing personnel difficulties would have a very serious effect on the efficiency and moral of the staff working in the concerns affected by this exodus and would be particularly dangerous in the case of Ordnance Factories since they affect the very security and safety of the country.

18. The Committee understand that the following features of service conditions in Ordnance Factories also serve to make service in Ordnance Factories rather unattractive:—

- (i) Slow rate of promotions as compared to other Government Departments; and
- (ii) Absence of pension scheme in Ordnance Factories.

The Committee are not happy with the rapid promotions being given in certain expanding departments but are inclined to think that it would be desirable to ensure that there should be uniformity in prospects in various similar services.

19. The Committee consider that the various problems referred to by them in this section have to be tackled realistically and from the point of view of the national good and not from the narrow good of

*only from 1954 to date.

a particular Ministry or Industry. They, therefore, suggest that this question should be tackled at a very high level and that the Cabinet itself should give a policy decision in this matter so that a certain amount of equality of opportunity and prospects exists in all the Ministries and industries in the country. They further suggest that, armed with this policy decision, the Home Ministry should take action to see that it is effectively implemented by all concerned.

(G) Foreigners.

20. There are at present 24 foreigners (excluding those on leave preparatory to retirement/leave pending termination of service) employed in the various Ordnance Factories. The details of their employment factory-wise are as follows:

Metal and Steel Factory, Ishapore	2
Ordnance Factory, Bhusawal	1
Cordite Factory, Kirkee	3
Gun Carriage Factory, Jubbulpur	2
Cordite Factory, Aruvankadu	2
Harness and Saddlery Factory, Kanpur	1
Ordnance Factory, Khamaria	3
Ordnance Factory, Kanpur	1
Machine Tool Prototype Factory, Ambernath	7
Ordnance Factory, Muradnagar	1
Ordnance Factory, Dehra Dun	1
TOTAL	24

Of these 24 foreigners, 14 are pre-war or war-time employees and are permanent in regular Ordnance Factories Service. The other ten foreigners *viz.* those at Ordnance Factory, Khamaria and Machine Tool Prototype Factory, Ambernath were originally employed in connection with the work of setting up new factories with the assistance of the Swiss firm, Messrs. Oerlikons. On the expiry of the agreement with the firm, these persons were engaged on contract for specified periods.

21. The Committee learn that the permanent foreign employees will be replaced by suitable Indian Officers when the former retire from service. As regards the foreign technicians engaged on contract, arrangements are stated to have been made to post suitable Indian Officers as understudies to them so that they may acquire knowledge and experience under the guidance of these technicians and may ultimately replace them on expiry of the term of their engagement. The Committee were told that by 1960, the Swiss experts, employed on contract are expected to be replaced by Indians, if the understudies progress well but that the other foreigners might not be able to leave by then.

22. In this connection, it would be relevant to refer to Clause 3 of the Agreement signed in 1949 for the setting up of the Machine Tool Prototype Factory with the Swiss Firm Messrs. Oerlikons, which is reproduced below:

“The Company undertakes forthwith to commence to train at their factory in Switzerland sufficient number of Indian workers and officers required for running or otherwise being employed in connection with the said Prototype Factory or the installation thereof and also the said school. The Company will undertake this training without charging of fees but the Government will bear all expenses relating to the passage, maintenance and remuneration of the personnel deputed by Government for training. The foreign technical personnel required for the Prototype Factory and School in the initial stages shall be replaced by competent Indian personnel as they become available; such replacement shall be completed within a period not exceeding 36 months and the Company shall take all steps in that behalf.”

It will be seen from the above that the foreign technical personnel were to be replaced by Indians within a period not exceeding 36 months and it would have been quite legitimate to expect that all the foreign technicians would have been replaced by Indians long back as this agreement was signed in May, 1949. The reasons for reengagement of these personnel were stated to be that experience had shown that Indian Officers did not have the necessary experience for performing the functions of these foreigners (*e.g.* weapon and machine tool design, Principal of the Artisan Training School, pattern making instructor *etc.*) and would not have it adequately for many years to come and that it was in the interests of the Government to retain these technicians in their service. The Committee regret to observe that the replacement of these technicians would not be possible before 1960 *i.e.* eight years beyond the scheduled time. They hope that there would be no further delay in this matter and what is more important that a sufficient number of Indians will be fully trained and given necessary experience for this by that time.

(H) Surplus/Idle Staff

(i) *The problem.*

23. During the war and also for some time after partition, the Ordnance Factories were working to their capacity employing a large number of staff. The peak war strength of industrial employees in fourteen out of the then sixteen Ordnance Factories (for which figures were furnished) rose to 1,14,335. The strength of these personnel in all the Ordnance Factories even on 1st September, 1952 was about 58,471. However, on account of the very substantial reduction in the requirements of arms, ammunition *etc.* by the Defence Forces in 1952, the Ordnance Factories were faced with

serious shortage of work and consequently a large number of persons were rendered surplus. The problem then arose as to how to utilise the spare capacity in the Ordnance Factories and keep in their service the workers who had acquired skill and experience in the production of armaments in the Ordnance Factories. It was, therefore, decided that the spare capacity should be utilised for production of items for civil trade as far as practicable. Even though production of civil trade items began on a modest scale in the beginning, at present it provides for employment of over 8000 men. Besides avoiding retrenchment to that extent, this would also enable experienced staff to be retained in the Ordnance Factories and thus facilitate, to some extent, when necessary, a quick stepping up of production during emergencies.

(ii) *Procedure for Working Out and Declaring Surplus*

24. The requirements of labour (direct and indirect) in Ordnance Factories are calculated on the basis of work-load which comprises of items of a recurring (*i.e.* repetitive) as well as non-recurring nature, as under:—

The numbers and types of direct workers, required for the execution of recurring items of production are calculated on the basis of standard estimates which are prepared for every job (recurring as well non-recurring), undertaken in Ordnance Factories. In computing the requirements of direct labour for non-recurring (*i.e.* *ad hoc*) items, this procedure is not followed as it is stated to be very laborious, due to the very large number of *ad hoc* orders handled by certain factories. These requirements are worked out only on the basis of the ratio which the value of work done for principal recurring items during the preceding five years bears to the value of production of *ad hoc* items.

As regards indirect labour, the requirements are assessed on the basis of the total requirements of direct labour for recurring and non-recurring items, referred to above, multiplied by the ratio of indirect to direct labour, prevailing in a particular Factory during the preceding 3 to 4 years under similar work-load conditions.

After thus assessing the total requirements of direct and indirect labour, the net surpluses are determined as the difference between the actual number of labour employed and the estimated number of labour requirements.

In respect of indirect labour, the strength of which is fixed by the Superintendent of Ordnance Factories, it is stated that a check is regularly exercised by the Director General, Ordnance Factories on the basis of expenditure incurred on direct and indirect labour, which is communicated to him monthly for each factory. In addition, there exists for each Section in a factory a Budgetary Committee-

which includes a representative from the Accounts Office and which, it is stated, examines periodically the extent to which the indirect labour charges could be reduced.

25. The Committee feel that the existing procedure of calculating direct labour requirements in Ordnance Factories allows ample scope for a loose and liberal computation thereof. Further, even the checks laid down to control indirect labour do not seem to be effective since the ratio of expenditure on indirect labour charges to direct labour charges has been consistently rising during the last six years. The Committee have recommended elsewhere not only the rationalisation and streamlining of the indirect labour strength in the Ordnance Factories but also the fixation of the strength of the various categories of staff on the basis of scientifically determined norms and workloads.

26. The Committee understand that the extent of surpluses after having been worked out in the manner explained earlier is required to be discussed with the Works Committee in the Ordnance Factory concerned. Ordinarily, the Superintendent of an Ordnance Factory is authorised to take final action on the proposals pertaining to surpluses and retrenchment, if any, modified to the extent possible after consultation with the Works Committee. However, in the last three of four years when the problem assumed huge proportions, final action thereon was actually taken by the Government. The Committee understand that the actual retrenchment of labour is effected in the strict reverse order of seniority. They do not expect that there would be any agreement between the management and the Works Committee in regard to the extent of surplus labour and the procedure to be adopted for retrenching them. They feel, however, that had the Works Committees been working successfully, which would also have required greater co-operation on the part of the labour representatives as well as their leaders, it should have been possible to effect gradual retrenchment of surplus labour by providing simultaneous employment elsewhere.

(iii) *Idle Time Payments*

27. As already mentioned in para 23 above, the existence of surplus labour in the Ordnance Factories was first noticed in 1952. The number of surplus staff in all the factories on 1st April, 1953, 1st April, 1954, 1st April, 1955 and 1st April, 1956 was stated to be 1644, 2038, 4956 and 8527 respectively. The payments booked to Idle-time work orders during the years 1952-53, 1953-54, 1954-55 and 1955-56 which also included wages paid to labour rendered idle temporarily, for short periods on account of breakdown of plant and machinery, shortage of material, periodical repairs etc. was stated to be Rs. 1.60 lakhs, Rs. 10.15 lakhs, Rs. 23.96 lakhs. and Rs. 73.77 lakhs respectively. When it was pointed out by the Committee that these payments did not represent the correct amount paid to the surplus labour, on the basis of their numbers mentioned earlier, which would work out to much more, it was explained by the Ministry of

Defence that in the beginning all idle men were not being clearly shown on idle time but were being used to inflate gangs to share profits as well as for indirect work such as cleaning of Stores, Yards, Estate, Buildings etc. and hence their charges at that time were not booked to idle time but were booked on indirect work orders on which they were employed.

The Committee are surprised to note that this deployment of idle labour on indirect work orders was not detected and stopped by the DGOF in time. Further the unjustified employment of this labour on such work orders not only resulted in exhibiting an incorrect picture of the volume and extent of idle labour in factories and inflating their production costs, but also would have had an adverse effect on other workers. The Committee feel that had the true picture in this regard been presented from the very start, which could possibly have been done if there was some attempt to correlate labour strength and the workload, the solution of this problem might not have been delayed so long.

(iv) Retrenchment and steps taken to provide alternative employment

28. The Committee were informed that in order to avoid retrenchment of surplus staff, the Ordnance Factories in addition to undertaking civil trade work to maximum extent practicable, took the following measures:

(a) Inter-Factory adjustment against available vacancies.

An embargo has been put on promotion/recruitment from outside sources etc. in Ordnance Factories to facilitate adjustment of surpluses. Deficiencies arising out of increased work-load or normal wastage in any factory were met by adjustment of surplus men of other factories against them in equivalent trade/grade to the extent possible. Some of the surplus personnel were trained for higher grade appointments required in Ordnance Factories.

(b) Zonal adjustment

Arrangements were made to adjust surplus men in alternative employment in different Defence installations through Zonal Headquarters.

(c) Absorption in Railways and Private Organisations

By special request, selection teams for Railways, Hindustan Machine Tools (Private) Ltd. etc. visited Ordnance Factories for selecting suitable men from amongst the surpluses for their requirements and offered employment to surplus men. Even semi-Government Organisations, such as Bharat Electronics Ltd., Bangalore, Hindustan

Shipyard etc. were prevailed upon to select these surplus men against their deficiencies.

(d) *Absorption in Other Ministries*

The surplus men were absorbed through Employment Exchanges against vacancies reported to them by Central Government undertakings and private organisations on a high priority basis.

As a result, alternative employment was provided for about 1890 persons between 1st April, 1956 and 31st August, 1956.

29. The Committee understand that efforts were made to find for the remaining surplus labour alternative employment in other undertakings in the public sector but that they were not successful mostly due to the intransigence of the labour concerned and that in consequence action was taken to retrench from the Ordnance Factories 4717 men on 15th September, 1956. They understand, however, that as a result of energetic steps taken by the Defence Ministry, Railway Ministry, Home Ministry etc., alternative employment has since been found for a large number of the retrenched men.

The Baldev Singh Committee had in 1954 strongly advised against the retention of surplus and idle labour within the Ordnance Factories since they had a very corrupt and demoralising influence on the other workers in the Factories. It was, therefore, particularly unfortunate that it took over four years to solve the problems of surplus labour in the Ordnance Factories created by the fall in the requirements of Ordnance Stores by the Services, which began assuming proportions in 1952 but became particularly acute in 1955 and 1956. The Committee feel that had the same energetic steps to find alternative employment for the retrenched men been taken earlier, it should have been possible to extenuate to some extent the demoralising effect of the presence of the idle labour in the Ordnance Factories on the other workers, the drain on the exchequer referred to earlier in para 27 and the large-scale strikes which followed the retrenchment on 15th September, 1956. They hope that the lesson of these incidents will not be lost sight of when similar problems arise in future, e.g. completion of big projects, such as Damodar Valley Corporation, Bhakra Nangal, etc.

(v) *Hidden-surpluses*

30. The Committee were informed that it could by no means be definitely stated that the entire surplus labour in the Factories had been retrenched. The procedure for determining surpluses has already been explained in paragraph 24. This procedure, it is evident still left considerable scope for retaining what might be called hidden surpluses in the Factories due to liberal computation of labour requirements. In this connection, the Committee would refer to the remarks of the Deputy Financial Adviser (Factories) regarding the assessment of surplus labour by the Director General,

Ordnance Factories contained in the Financial Review of the working of Ordnance and Clothing Factories for the year 1954-55.

“According to D.G.O.F.’s assessment, there was no surplus in the first three categories (*viz.*, gazetted, non-gazetted and non-industrial) for the reason that there existed a number of vacancies and the staff was adjusted from time to time so as to correspond with the change in load. D.G.O.F., however, considered that in the last category, *i.e.*, in the industrial establishment, there was surplus to the tune of about 5,000 men. He, however, added that the real surplus in the industrial establishment might even be higher as some surpluses were partially concealed by engaging more men on jobs than what were actually needed. The above assessment of the D.G.O.F. was scrutinised by the financial authorities and it was thought that the exact surpluses in the industrial establishment might be much more than what had been actually assessed and that there might be concealed surpluses even in categories other than that of industrial establishment”.

The Committee cannot over-emphasize the necessity of computing the labour and staff requirements on a firm basis so that there might be no drain on the exchequer due to the employment of idle staff and labour in various categories and also so that it might not result in a lowering of their productivity. This question is also linked up with that of having an efficient system for fixing optimum workloads and norms of work for all categories of staff and labour so as to determine their requirements correctly. In this connection reference is also invited to para 39. While the Committee are fully aware that the entire surplus labour worked out on an exact basis as suggested above, cannot be retrenched as it is necessary to retain specialised skill to facilitate stepping up of production in emergencies, they feel that some measures should be devised to segregate idle staff and labour from others in the Ordnance Factories so as to prevent the lowering of the productivity of all.

(vi) *Recall of retrenched surplus labour in emergency*

31. As mentioned earlier the existence of the surplus labour and their subsequent retrenchment were due to the fall in the requirements of Ordnance Stores by the Defence Services. The Ordnance Factories will, however, be faced with the problem of increasing their production, if and when an emergency arises and, for this purpose, of recruiting labour for employment in the Ordnance Factories as also of quickly training them for the work. The Committee feel that the labour which was retrenched for want of work would provide a very satisfactory source for this purpose. It was explained that most of the retrenched men belonged to the unskilled category. However, with their past experience of the work and conditions in the Ordnance Factories, they should still prove far more useful than raw recruits. The retrenched labour has now been dispersed in a number of industries.

The Committee feel that it would be worthwhile to have some arrangement, including the maintenance of a Register showing full particulars of these men, by which they could be recruited quickly for work in the Ordnance Factories in an emergency.

(i) **Overtime Bonus**

32. The overtime Bonus paid to the Industrial establishment in the Ordnance Factories during the three years up to 1954-55 (for which figures are available) is given below:—

1952-53	Rs. 14.17 lakhs.
1953-54	Rs. 8.72 lakhs.
1954-55	Rs. 20.58 lakhs.

This amount of overtime bonus is in addition to the extra wages paid to them for the period of overtime worked. The Committee are surprised to find that inspite of the existence of surplus labour which has been referred to earlier, overtime on this large scale should be worked in the Ordnance Factories. They consider this situation as very anomalous. The Committee appreciate that overtime is perhaps necessitated by the sudden rush of orders on particular shops, particularly in bottleneck sections, requiring early completion and cannot therefore, be entirely eliminated. However, considering the magnitude of overtime, particularly in 1954-55, the Committee feel that the same could be minimised considerably by a careful planning in placing extracts on Ordnance Factories and training of workers on a variety of jobs so that they could be employed in other shops during emergencies.

(J) **Analysis of Staff**

(i) *Increase in Expenditure on Pay and Allowances*

33. The expenditure on pay and allowances of the staff and labour employed in the Ordnance Factories and the value of out-turn (as shown in the Annual Accounts of Ordnance Factories) during 1951-52 to 1955-56 are given below:—

Year	Total Expdr on pay and Allowances.	Expdr. on pay and all of Ind. Staff.	Value of out-turn
(Figures in lakhs of Rupees)			
1951-52	809.22	580.45	2823.80*
1952-53	868.18	612.25	2930.05*
1953-54	884.63	611.35	2647.46*
1954-55	929.11	636.28	2662.42*
1955-56	923.62	616.30	2388.34*

* (These are inflated figures as the cost of materials manufactured in one factory and taken into use in another has been accounted for in both the Factories accounts.)

It would be observed from the above figures that while the total expenditure on pay and allowances has increased by over Rs. 1.19 crores in 1954-55 and Rs. 1.12 crores in 1955-56 compared to that of 1951-52, the value of production has actually gone down by Rs. 1.61 crores and Rs. 4.35 crores respectively. It would also be observed that even the expenditure on pay and allowances of industrial staff had been rising continuously from 1951-52 to 1954-55 even though the out-turn had been falling. It was explained that part of the increase was due to the setting up of the Machine Tool Prototype Factory in 1953 and the staffing for increased production of Ordnance Factory, Khamaria liberalisation of leave rules and increases in allowances as well as due to implementation of the Kalyanwala Committee Report. Even after making allowance for the continued employment of surplus and idle labour in the Ordnance Factories which accounted for the payment of Rs. 23.96 lakhs in 1954-55 and Rs. 73.77 lakhs in 1955-56, the fact still remains that while the value of production registered a sharp fall, the total expenditure on pay and allowances and on industrial staff continued to rise. While it is true that no absolute and quantitative comparison of the production is possible with these figures since the value of production represents only the cost of production, it is sufficiently clear that the increasing proportion of expenditure on pay and allowances to the total value of production indicates that the productivity of labour and staff is on the decline. The Committee cannot but consider this unsatisfactory and recommend that every possible step should be taken to improve the output and productivity of staff and labour, in all categories viz. gazetted, non-gazetted, supervisory, non-industrial, clerical, industrial etc.

(ii) *Percentage Ratio of Expenditure on Direct Labour and Indirect Labour*

34. The expenditure on Direct Labour and Indirect Labour and the percentage ratio thereof since 1950-51 to 1955-56 are shown below:—

Year	Direct Labour charges	Indirect Labour Charges	% ratio of columns 2 to 3
1	2	3	4
(Figures in lakhs of Rupees)			
1950-51	264.46	267.21	101.04%
1951-52	284.79	295.66	103.7%
1952-53	300.61	311.64	103.6%
1953-54	280.52	330.81	117.9%
1954-55	259.02	377.26	145.6%
1955-56	206.24	410.06	198.8%

Thus, the percentage ratio of expenditure on Indirect Labour to Direct Labour shot up from 101 per cent. to 198 per cent. during six years. While the Committee are aware that here again the increase under indirect labour is partly due to the presence of surplus and idle labour whose numbers increased gradually during this period, they feel that this cause does not fully account for the expenditure on indirect labour being almost twice that on direct labour in 1955-56. In any case, with the retrenchment of surplus labour on 15th September, 1956, it should be possible to make a critical examination of the reasons for the high ratio of indirect labour to direct labour in Ordnance Factories and to initiate steps to streamline and rationalise the indirect labour strength in the Ordnance Factories.

(iii) *Expenditure on supervisory staff and Industrial establishment*

35. The expenditure on supervisory staff and on direct labour and the percentage ratio thereof since 1950-51 to 1955-56 are shown below:—

Year	Supervision charges	Direct Labour charges	% ratio of columns 2 to 3
1	2	3	4
(Figures in lakhs of Rupees)			
1950-51	249·51	264·46	94·3%
1951-52	273·14	284·79	95·9%
1952-53	296·67	300·61	98·6%
1953-54	317·66	280·52	113·2%
1954-55	337·78	259·02	130·4%
1955-56	343·37	206·24	166·5%

The expenditure on supervisory staff and both direct and indirect labour together and the percentage ratio thereof during the same period are also as under:—

Year	Supervision charges	Direct and Indirect Labour charges	%ratio of columns 2 to 3
1	2	3	4
(Figures in lakhs of Rupees)			
1950-51	249·51	531·67	46·9%
1951-52	273·14	580·45	47·0%
1952-53	296·67	612·25	48·4%
1953-54	317·66	611·33	51·9%
1954-55	337·78	636·28	53·0%
1955-56	343·37	616·30	55·7%

Thus, the percentage ratio of expenditure on supervisory staff to Direct Labour shot up from 94 per cent. to 166 per cent., and of that to Direct and Indirect Labour together from 46.9 per cent. to 55.7 per cent. The Committee consider it unsatisfactory that the supervision charges in the Ordnance Factories should be so high as compared to the industrial labour employed in the Ordnance Factories and particularly the direct labour employed on actual production. They, therefore, suggest that urgent steps should be taken to assess the optimum requirement of supervisory staff and to fix the strength at that level. In this connection, they would mention that the ratio of supervision charges to direct labour charges and to direct and indirect labour charges in the Hindustan Aircraft Ltd., is understood to be about 20 per cent. and 14 per cent. respectively only.

(iv) *Clerical Staff vis-a-vis Industrial Staff*

36. The number of clerical staff in all the Ordnance Factories and the expenditure incurred thereon, as well as on industrial staff are shown below for various years:—

Year	No. of Clerical Staff	Exp. of Clerical Staff	Expdr. of Industrial Staff
1	2	3	4
(Figures in lakhs of Rupees)			
1951-52 .	2,741	—	580.45
1952-53 .	2,926	28.47	612.25
1953-54 .	2,836	27.50	611.33
1954-55 .	2,662	29.46	636.28
1955-56 .	32,579	—	616.30
1956-57 .	3,195	—	—

It has already been mentioned earlier that the expenditure on industrial staff has itself been rising out of proportion with the output. While the strength and expenditure on clerical staff have generally kept pace with the industrial staff, it will be observed that the former showed a marked increase in 1955-56 which was not justified by other considerations, since the expenditure on industrial staff was approximately same in 1951-52 and 1955-56 while the clerical staff in the latter year was over 22 per cent. more than in the former year. It was explained to the Committee that paper work had increased in the organisation of the Ordnance Factories in recent years due to hundreds of returns being asked for by various authorities. While they consider this unfortunate in a defence industry,

they see a welcome decrease in the number of clerical staff in 1956-57. However, they suggest that practical steps should be constantly devised and introduced to keep paper work and red tape to the minimum in the organisation of the Ordnance Factories.

(v) *Fixation on norms and work-loads*

37. It is not only desirable but also necessary that the strength of the various categories of staff and labour *e.g.*, supervisors, clerical, industrial etc. in the Ordnance Factories should be determined on a scientific and uniform basis so as to ensure optimum productivity and to prevent over-staffing. In this connection, the Committee observe that the ratio of supervisory staff to the industrial staff varies widely from factory to factory *e.g.*, from 1:42 in Rifle Factory, Ishapore and Harness and Saddlery Factory, Kanpur to 1:10 in High Explosives Factory, Kirkee and 1:6 in Machine Tool Prototype Factory, Ambernath. A statement showing the position in each factory is placed at Appendix III.

Similarly, there is also a wide variation in the ratio of clerical staff to industrial staff from factory to factory *e.g.*, from 1:35 in Ammunition Factory, Kirkee to 1:7 in the Small Arms Factory, Kanpur and 113:8 in Machine Tool Prototype Factory, Ambernath. The detailed position factory-wise is given in the statement at Appendix IV.

38. The Committee were informed that it was not possible to lay down a uniform yardstick for the employment of the different categories of staff in the various sections of even one factory, much less in all the factories. For example, in the case of supervisory staff, it was stated that supervision not only depended on the automaticity of the plant but also on the quantity of work at any time. Further, a nucleus strength was required to be maintained in each factory irrespective of the load of work. The Financial Adviser also confirmed that no uniform relative ratio of the various categories of staff could be laid down as he had also noticed wide variation not only from unit to unit but in the units producing the same type of products.

39. The Committee feel, however, that whatever be the difficulties in laying down a uniform yardstick for the employment of various categories of staff in Ordnance Factories, an attempt should be made to do so particularly as at present, as has been mentioned earlier, the staff in the Ordnance Factories is definitely on the high side and a streamlining is necessary. It should be realised that these Ordnance Factories are industrial units, and that they should be run on business principles as far as possible. The Committee, therefore, recommend that steps should be initiated at an early date to determine on as far a scientific basis as possible the norms and work-loads for the various categories of staff in the Ordnance Factories and to fix their strength on that basis. In this connection they feel that it would also be useful to make a comparative study of the strength of

the various categories of staff in the industrial establishments in the civil sector, both public and private, e.g. Hindustan Aircraft Ltd., Chittaranjan Locomotive Works, TELCO etc.

(vi) *Incentives for improving Output*

40. It has already been pointed out in paragraph 75 of the Report on 'Organisation and Finance' in respect of Ordnance Factories and in paragraph 33 earlier, that the productivity and output of labour as well as of the other categories of staff have been on the decline in the last few years, and that positive steps should be taken to improve the output of the various categories of staff. They were informed that, to provide encouragement to deserving workers, the Government had decided to place a sum of Rs. 1,000 annually at the disposal of the Superintendent of each Factory to be spent at his discretion in rewarding the good workers. It had been stipulated that the amount of reward should not exceed Rs. 50 to one man at a time while the same man could also earn the reward twice in the year. The Committee suggest that this prize bonus scheme should be given wide publicity among the employees so as to derive the best results and hope that it would go far to improve the output. In addition they suggest that other steps such as active association of labour with works and production committees, more congenial surroundings and atmosphere of work such as those existing in new factories like Machine Tool Prototype Factory, educating the labour for fostering discipline, loyalty etc. should also be adopted to improve the labour output, while similar other measures should be adopted for increasing the output and efficiency of the non-industrial establishment including the supervisory and clerical categories.

(K) **Absenteeism**

41. The average percentage of daily absenteeism in each of the Ordnance Factories during the last five years is given in Appendix V. It is noticed that there has been a marked increase in the percentage of absenteeism in most of the Factories, as will be seen from the following figures pertaining to the years 1951-52 and 1955-56:—

S.No.	Factory	1951-52 (July 51 to March 53)	1955-56 (April, 55 March 56)
1	2	3	4
		%	%
1.	Gun and Shell Factory	5.7	9.4
2.	Rifle Factory, Ishapore	6.7	10.5
3.	Metal and Steel Factory	8.2	12.6
4.	Gun Carriage Factory	9.1	13.3
5.	Ordnance Factory, Khamaria	8.9	14.0

1	2	3	4
		%	%
6.	Ordnance Factory, Katni .	8·7	12·4
7.	Ordnance Factory, Dehra Dun .	10·3	11·8
8.	Ordnance Factory, Muradnagar .	7·4	13·4
9.	Clothing Factory, Shahjahanpur	6·5	12·5
10.	Ordnance Factory, Kanpur . .	9·3	15·7
11.	Ordnance Parachute Factory, Kanpur	7·0	10·4
12.	Small Arms Factory, Kanpur .	10·0	14·7
13.	Harness & Saddlery Factory, Kanpur .	7·2	12·7
14.	Ordnance Factory, Ambernath . .	8·7	14·6
15.	Machine Tool Prototype Factory, Ambernath	8·2	17·2
16.	Ammunition Factory, Kirkee .	10·0	10·1
17.	High Explosives Factory, Kirkee	10·4	15·0
18.	Ordnance Factory, Bhusawal	9·5	11·0
19.	Ordnance Factory, Wadala	10·3	*
20.	Cordite Factory, Aruvankadu	9·2	14·1

Thus in 3 Factories the average absenteeism is 15 per cent. and over, in 10 factories it is between 12 per cent. and 15 per cent. and in the remaining 6 factories it is between 9 per cent. and 12 per cent. The Committee feel concerned at this high rate of absenteeism as it affects the production and efficiency of the Factories very adversely. This rise in absenteeism was attributed partly to the liberalisation of Leave Rules and partly to the fact that industrial labour in India was not a distinct class as such but was drawn mainly from agricultural labour who had a tendency to go away during the harvesting season. Nevertheless, the Committee feel that the incidence of absenteeism can be lessened if some incentives are offered for the purpose. They recommend that besides providing housing facilities to the maximum number possible, close enough to the site of work, the authorities should also examine the possibility of introducing a system of high attendance rewards, publicising the names of those having a good record in this matter and similar other measures. They would also suggest that the labour officers should make it a point to visit the absent workers at their houses, wherever possible, so as to find out the cause of absence and to explore ways and means of helping the workers to desist from remaining absent.

(L) Rationalisation/Reduction of grades

42. The classification of personnel employed in the Ordnance Factories has been indicated in para 2. There is at present no Class II Gazetted service on the Factory side. In the non-gazetted cadre, there are a number of grades, *e.g.*, chargemen I & II, Assistant Foremen and Foremen. Further, in the non-industrial establishment, there are the categories of Supervisors Grade 'A' and 'B'. It has to be realised that a hierarchy of supervisory staff is not always conducive to efficiency or productivity of labour. In this connection it is of interest to note that the Baldev Singh Committee had pointed out that there was considerable scope for rationalisation of intermediate supervisory grades in the Ordnance Factories. The Committee understand that certain recommendations for reducing the number of grades have been made by the Director General, Ordnance Factories and that they are under consideration. They recommend that this question as also the desirability or otherwise of introducing a Class II Gazetted service in the Ordnance Factories for some existing categories, *e.g.*, the Foremen so as to serve as an incentive for promotion may be examined and decisions taken and implemented at an early date.

(M) Payment to Workers—Piece Work Rate System

43. Payments to labour in the Ordnance Factories are made on monthly/daily rate system or on piece work rate system.

Under the piece rate system, payment is made on results *i.e.*, a fixed rate is paid for each unit produced, job performed, or operations completed, and not on the basis of daily or monthly rates of workmen.

The job is estimated by a rate-fixer depending upon the machine/plant proposed to be used, tooling proposed to be provided and materials to be used. First the actual operation time for the job is estimated. To this is added tool setting and job setting times. Allowance is also made for fatigue depending on the nature of the job. The total time for one piece or one operation is estimated at the actual working time of the man or machine *plus* the above allowance for tool-setting, job-setting and fatigue. The rate is fixed taking into account the overall time required for estimates as above, for completion of the job and the average rate of pay for the operator of grade and trade suitable for the job. To this basic rate is added a bonus of 25 per cent. which gives the piece work rate for the job. This means that average workers producing articles within the given time which also gives them relief for fatigue, tool setting, job setting etc., automatically earn a bonus of 25 per cent. over their basic wages and if they better this rate of working, they proportionately get more bonus.

44. The Committee learn that about 45 per cent. of the total strength or about 75 per cent. to 80 per cent. of the direct labour strength in Ordnance Factories is governed by the piece work system

of payment. This percentage varies from factory to factory. The Director General, Ordnance Factories expressed the view that he would like to bring all the direct labour in the factories under this system. The Committee fully endorse the views of the Director General, Ordnance Factories in this matter as they consider that the piece work rate system *i.e.*, payment by results, is essential in production units like Ordnance Factories as it provided necessary incentive to improve the production as well as the earnings of the workers and hope that they would be given effect to at an early date. They suggest that the feasibility of extending this system of payment to other categories of employees may also be examined.

45. The Committee understand that in the Chittaranjan Locomotive Works it has been found possible to increase the output by 30 per cent. under a labour incentive scheme, which provides for the payment of bonus according to results, in addition to usual wages, the bonus being calculated on the basis of a scientific formula which takes into account time, fatigue and other considerations, but being restricted to 50 per cent. of basic wages. The Committee suggest that a comparative study of the system mentioned above and that existing in the Ordnance Factories should be undertaken to see in what way the latter could be improved to make it scientific and modern.

46. A matter of great importance in connection with the fixation of piece-work rates is the system adopted by the rate-fixers for this purpose. It is understood that the system in the Ordnance Factories is by no means modern or scientific nor is it based on any scientific time and motion study. This could not but have seriously affected the production costs, in a monopolistic concern and also the earnings of the employees. They would, therefore, recommend that immediate steps should be taken to introduce modern scientific methods of time and motion study by securing, whenever necessary, cooperation from Technical Co-operation Administration and similar other international organisations for this purpose. This question has again been referred to under 'Training'.

(N) Security Officers

47. There are 12 Security Officers posted in the various Ordnance Factories. Of these, seven are Majors, four are Captains while one is a Lieutenant. It was noticed that the charge of the Security Officers of the same rank in terms of Ministry of Defence Security Corps Personnel working under them varied widely, as will be observed from the statement at Appendix VI, which shows the Ministry of Defence Security Corps Personnel and the other personnel working in each factory. At one place Ammunition Factory, Kirkee, High Explosives Factory, Kirkee and Ordnance Factory, Bhusawal, a Major had 301 Ministry of Defence Security Corps personnel under his charge while in another Ordnance Factory, Ambernath and Machine Tool Prototype Factory, Ambernath, a Major had only 47 Ministry of

Defence Security Corps personnel under him. Similarly, the charge of a Captain ranged from 163 personnel in Cordite Factory, Aruvankadu to 53 in Muradnagar. The Lieutenant's charge was also 52 persons. It was explained to the Committee that the grade of the Security Officer depended on the size of the factory and its strength as he had to look after the security of the materials as well as of the personnel. Judging from this standard also, the Committee find that no uniform formula has been adopted for determining the rank of the Security Officers, e.g., a Major's charge ranges from 12,976 to 3,152 personnel and that of a Captain from 5,737 to 2,072 while that of the Lieut. is 1,761 men only. In view of this difference, the Committee recommend that the position may be reviewed so as to bring some sort of uniformity in this respect as far as possible.

(O) Strikes and Discipline

48. The number of strikes in the Ordnance Factories during the last four years was as follows:—

1952-53	7
1953-54	25
1954-55	10
1955-56	32

The man-hours lost on account of strikes during the last four calendar years are as under:—

1953	7,65,564
1954	29,518
1955	92,423·5
1956	8,45,579·5

It will be seen that the man-hours lost were particularly heavy in 1953 and 1956, partly due to disputes relating to pay-scales, but mainly due to the decision to retrench surplus labour, especially in the latter year, when in terms of its effect on out-turn the loss might run into several lakhs. Apart from the presence in factories of labour surplus to requirements and of labour rendered temporarily idle due to breakdown of machinery, want of stores, etc., other factors contributing to lower physical outturn as against the expenditure incurred thereon are the admitted lowering of productivity of labour in the Ordnance Factories and the high figures of absenteeism. The Committee have already referred elsewhere to the measures necessary for improving productivity as well as to secure greater cooperation of labour, and particularly their Unions and leaders for the purpose. It is by no means flattering that the Works Committees on which labour as well as management are represented have not succeeded in reducing strikes or even absenteeism and the not uncommon go-slow tactics of labour. While every measure should be adopted to improve

this position by persuasive as well as educative methods, the Committee consider it necessary that the disciplinary aspect of the labour problem in the Ordnance Factories also needs to be given due attention and that acts of indiscipline should be sternly dealt with. One suggestion which was made for improving discipline in all such Defence installations was that the Army Acts and Laws should be made applicable to the employees working therein. Another suggestion was that it shall be made unlawful for anyone in the Defence installations to participate in any strike as is believed to be the position in U.S.A. A third suggestion was that trade-unionism itself should be prohibited in Defence industries and installations. The Committee were informed by the Ministry that the question of simplifying the procedure for disciplinary proceedings in the case of civilians in the Defence installations was under consideration as a result of the decision of three High Courts that they were governed by Art. 310 and not 311(2) of the Constitution. While hoping that a decision on this question will be expedited the Committee recommend that this question should be comprehensively examined in the light of the remarks made earlier in consultation with Law, Labour and Home Ministries as well as Labour representatives and Members of Parliament well-versed with the problem so as to evolve for the employees in Defence installations a satisfactory disciplinary Code which would take into account the peculiar security considerations attached to them and yet meet in some measure the legitimate aspirations of labour.

(P) Works Committees

49. Every Ordnance Factory has its own Works Committee which comprises of equal number of representatives of workmen and of administration as required under the Industrial Disputes Act. The objects of the Committee are:

- (a) To provide machinery for friendly discussion and joint consultation between the administration and the selected representative of workmen employed by them, for the achievement of maximum cooperation between the employer and employees, and to find out ways and means to increase the standard of efficiency of establishment and improvement of working conditions;
- (b) To provide an agency for the organisation of the welfare of workmen and promotion of educational schemes such as training and apprenticeship schemes for workmen;
- (c) To provide machinery for redress of grievances;
- (d) To provide means for exchange of thought and experience of the workmen of the various groups/Departments/shops etc.

The Committee are also competent to deal with the questions relating to:

- (a) Utilisation of ideas, ability and experience of the workmen.

- (b) **Affording to the workmen a greater share in and responsibility for the determination and observance of the conditions under which they discharge their duties.**
- (c) Training for higher jobs, refresher courses and further education schemes.
- (d) Progressive improvement of office machinery, of work etc.
- (e) Consideration of general grievances and individual grievances regarding working conditions.
- (f) Welfare matters—namely provision of meals, drinking water, lavatories, washing arrangements, accommodation, cloak rooms, ventilation, heating, lighting, sanitation, safety measures, first aid, grain shops, cooperative stores etc.
- (g) Administration of Labour Welfare Funds.
- (h) Recommendations in respect of cases of disciplinary action if and when referred to the Committee by the Officer-in-Charge, Establishment.

50. The Committee understand that in actual practice, the discussions of these Works Committees were mostly confined to amenities in regard to the working and service conditions of workers and their welfare measures and that sufficient attention was not paid by the workers to suggest improvements in production matters. They also learn that the Works Committees did not play any effective role in vital issues such as preventing workmen from going slow, preventing unions from going on any unjustified and irregular strikes or stoppage of work, high absenteeism, etc. The Committee regret to born that the Works Committees have not been as effective and comprehensive in their working, as they were intended to be. They feel that the success of such Committees would depend largely on mutual goodwill, cooperation and understanding which could only be secured by a sympathetic approach to the problems of labour. They therefore, consider that a reorientation of attitude towards the employees is called for, whereby they should be made to realise that they were partners in the national development and production programmes. The Committee hope that the Government would take steps to forge the Works Committees into effective instruments of mutual consultation not merely for removing any grievance of workers but also to inculcate in them an attitude of cooperation with the management and loyalty towards their industry and the nation.

(Q) Welfare Arrangements

(i) *Housing*

51. The Gazetted and non-Gazetted Supervisory Staff in the Ordnance Factories have been provided with quarters to the extent of 80 per cent. but the provision of residential accommodation for the non-Industrial and Industrial workers is not to the same extent

and varies from Factory to Factory, as will be seen from the statement at Appendix VII. It will be observed that in ten Factories less than 25 per cent. of the staff in industrial and non-industrial categories has been provided with accommodation. The Committee regard this state of affairs as not very satisfactory. They consider that accommodation for this category of staff, especially the low paid staff, should have been provided to a greater extent than at present as, in their opinion, production cannot be maintained at proper levels, if adequate residential accommodation is not provided for the staff, particularly because in most cases alternative accommodation within reasonable distance of the Factories which are generally situated far away from cities is not available.

52. The Committee were informed that Government were envisaging construction of additional quarters, mainly for the skilled and semi-skilled workmen, in the factories in the Second Five Year Plan, at a rough cost of Rs. 8.9 crores. They hope that this work will be taken up expeditiously within the overall framework of the plan according to the priority prescribed for this class of expenditure.

(ii) *Educational Facilities*

53. The Ordnance Factories have provided educational facilities to their employees at thirteen places as detailed below:—

Primary School: Metal & Steel Factory, Ishapore, Harness and Saddlery Factory, Kanpur, Ordnance Factory, Ambernath, Ordnance Factory, Bhusawal, Gun Carriage Factory, Jabalpur, Ordnance Factory, Khamaria, Ordnance Factory, Kanpur, Cordite Factory, Arvankadu and Gun & Shell Factory (Dum Dum Br.).

Junior High/Middle School: Gun & Shell Factory, Cossipore, Rifle Factory, Ishapore, Ordnance Factory, Katni, Ordnance Factory, Dehra Dun and Cordite Factory, Arvankadu.

Higher Secondary School Upto Class X: Gun Carriage Factory, Jabalpur, Ordnance Factory, Kanpur and Ordnance Factory, Muradnagar.

54. The Committee were given to understand that at other places, the State Government authorities were approached to put up schools which was generally done. In this connection, they would like to emphasise that it should be ensured that adequate educational facilities exist for the children of the employees of Factories at all places, particularly those liable to transfer from one Factory to another and that the same are not neglected on the plea that education is the responsibility of the States. They recommend that buildings may, wherever possible, be provided by Factory authorities for being used as schools by the State Governments to facilitate matters.

(iii) *Provision of medical facilities*

55. Outdoor and indoor facilities for the treatment of Ordnance Factories' employees exist in all the Ordnance Factories. At present,

there are 13 hospitals with a total bed strength of 512 and 31 dispensaries, to provide medical cover for them. The medical facilities are also available to the families of the employees free and to their relatives on payment of hospital stoppage, prescribed by Government. Maternity and child welfare centres have also been provided in 10 Factories.

56. The Committee learn that a Medical Reorganisation Committee was appointed by Government to examine the question of medical facilities in the Ordnance Factories. It is understood that this Committee has submitted its report to the Government in September, 1956. The Committee hope that final decisions on this report and action thereon will be taken at an early date.

(iv) *Provision of recreation and cultural facilities*

57. Library, cinema shows, sports, radios etc. are provided in the Factories to cater for the recreational facilities of the employees. There are clubs in almost all Factories to cater for the recreational needs of the staff and workmen.

(v) *Provision of Co-operative Credit Societies/Stores*

58. With a view to providing credit facilities as well as articles for consumption at a cheap rate to the employees, Co-operative Societies/Stores have been functioning in all Ordnance Factories. Accommodation is provided for shops run by Co-operative Societies at concessional rent of Rs. 1/8/- per month per shop.

In this connection, the Committee would suggest that steps may also be taken to establish co-operative societies in the Ordnance Factories to impart training in handicrafts to workers and their families in their spare time, to enable them to augment their income.

(vi) *Other Facilities*

59. *Protective Clothing:* Protective clothing and equipment are provided to the Industrial employees and other staff in Ordnance Factories who are exposed to risks/discomforts incidental to the manufacturing operations on which they are engaged or to the work they do or who work in processes requiring special precautions and protection.

Free Issue of ice, lemon etc.

60. Lemon, ice etc. are provided free to the employees of the Ordnance Factories working in the hot sections, such as power houses, boiler rooms, furnaces etc. with a view to safeguarding against heat stroke.

Free Issue of milk

61. Half pint of milk per man per diem is supplied free to painters engaged in lead painting or individuals required to handle lead paints and other men engaged in occupations involving a risk of lead poisoning and also individuals engaged in the treatment of stores with cellulose nitrate dope.

(vii) *Labour Welfare Fund*

62. There is a labour welfare fund in the Ordnance Factories which is made up of the contribution from Government and employees to the following extent:

- (1) During the first year, the Government contribution is Re. 1/- per civilian employee without contribution from employees.
- (2) 2nd and 3rd years—Government grant unconditionally at the rate of As. 8 per civilian employee per annum *plus* an amount equivalent to employee's contribution subject to the limit of As. 8 per civilian.
- (3) 4th year—Government grant is equal to employee's contribution or at Re. 1/- per civilian employee whichever is less.
- (4) 5th Year—same as 4th year provided contribution from employees is forthcoming.

The Committee were informed that the items on which expenditure was to be incurred from this fund were decided by the Works Committees composed of the representatives of labour and administration. Since the amount from this fund is expended for the welfare of the labour only, the Committee consider that with a view to stimulating interest of the employees in their affairs, the management of this fund should be entrusted entirely to the representatives of workmen.

(viii) *Expenditure on Labour Welfare*

63. The amount spent on items of Labour Welfare in the Ordnance Factories (including capital expenditure on buildings for canteen, school etc.) during 1954-55 and 1955-56 was as under:—

1954-55	..	Rs. 39,75,760/-
1955-56	..	Rs. 44,69,879/-

This works out to about 3 per cent. of the total revenue expenditure on Ordnance Factories (under Main Head 5) and nearly Rs. 60/- *per capita* per annum on the total strength of staff (including Gazetted Officers).

(R) Injury Pay

64. The following amounts were paid by the Ordnance Factories on account of injury pay during the years 1952-53, 53-54 and 54-55:

1952-53	Rs. 26,35,632*
1953-54	Rs. 26,10,664*
1954-55	Rs. 27,14,599*

*(The injury pay includes not only the amount of compensation but also the wages for the period the injured men are out of work and the leave and holiday pay for all workmen).

The details of these payments factory-wise are given at Appendix VIII. It is observed that in nine factories over Rs. one lakh were paid on this account every year. In Ammunition Factory at Kirkee the same amounts to over Rs. four lakhs annually.

65. The Committee are very much concerned at the consistently high rate of expenditure on account of injury pay to workers as it clearly indicates that the incidence of injuries in the Factories is quite high and that it has not yet been found possible to reduce it. They suggest that the reasons for this high expenditure on Injury Pay should be carefully investigated and action taken to reduce it. Further, the Committee feel that it would be useful and desirable to secure the maximum co-operation of the workers for the promotion of safety measures in the Ordnance Factories. For this purpose, they suggest that safety committees be constituted, consisting almost wholly of labour representatives in the Factories, to suggest ways and means to prevent frequent accidents. They further suggest that the measures taken by the Safety Committees in the individual factories should be standardised in so far as they are of common applicability and enforced in all the Factories.

II TRAINING

(A) Introduction

66. The present is an industrial age and every industrial undertaking has working in it a large number of men and machines. It is very necessary and important for the success of an industry that the men employed in it should work intelligently and that the machines should be utilised efficiently. The training of personnel for this purpose, not only in the beginning of their career but also throughout their service, so as to have at all times an efficient team of workers, is of great importance for the successful working of every industrial undertaking. As far as the Ordnance Factories are concerned, the need for systematic training of staff, who number 70,000 men even in peace-time is particularly important in view of the security nature of the production.

(B) Training Schemes

67. At present, the undermentioned training schemes are in operation in the Ordnance Factories:

- (i) Training of Asstt. Works Managers (U.T.).
- (ii) Apprentices Training Scheme.
- (iii) Scheme for the training of skilled craftsmen in Artisan Training School, Ambernath.
- (iv) Scheme for the training of Senior Draftsman and Draftsmen at Artisan Training School, Ambernath.
- (v) Scheme for the Training of Senior Planners and Planners.
- (vi) Scheme for the Training of Senior Draughtsman and Draughtsmen.
- (vii) Scheme for the training of Senior Rate Fixers and Rate Fixers.
- (viii) Scheme for the training of Workmen.

68. The Committee were informed that all the Training Schemes were flexible as the programme of training for any particular year was determined after taking into consideration various factors such as the number of vacancies available, the work-load of the Factory, the anticipated wastages, casualties due to resignations, superannuation, promotion etc. of personnel during that particular year and also the anticipated requirements of work-load for the subsequent years as far as can be foreseen.

Both theoretical and practical training is imparted to the trainees recruited under each one of the above Training Schemes.

(C) Training of Asstt. Works Managers

69. On recruitment through the U.P.S.C., the Asstt. Works Managers, who are engineering graduates or possess equivalent qualifications are given training for a period of three years. The training is in operation in all Factories except at Bhusawal and Wadala. The Committee were surprised to learn that there were no special arrangements or even instructors for the training of Asstt. Works Managers and that the trainees underwent some sort of apprenticeship only, for all the three years and worked according to a programme drawn up by the Superintendents of Factories in terms of a general schedule suggested by the Director General, Ordnance Factories. The Committee consider the present arrangement hardly satisfactory. They were informed that centralised training of the Asstt. Works Managers was not considered desirable as the training comprised of several trades and categories which could be satisfactorily done only in different factories. The Committee feel, however, that the feasibility of having a common school where some basic training in common subjects, the more important being organisational matters, personnel management, industrial relations, cost control, planning, production control etc. could be given to these trainees, to be followed by specialised and practical training in various Ordnance Factories should be considered.

70. The Committee also feel that there is scope for reducing the present period of training of Assistant Works Managers *viz.*, three years. In this connection, they would mention that the training period for the officers in different technical branches in the Railways is two years only, while in the C.P.W.D., the recruits are directly put on the jobs without any further training.

(D) Bonds

71. At present, the Asstt. Works Managers (Under training) are required to give an undertaking that they will serve the Ordnance Factories for a period of three years after completion of training. A bond is also executed for 3 years for Rs. 10,000. The Committee would not ordinarily consider this arrangement of taking bonds from Asstt. Works Managers who belong to a Central Service Class I as very satisfactory. At the same time, the fact that Officers of Ordnance Factories have so far resigned in large numbers and gone to other industries has to be faced. The reasons for this have been referred to in paras 17 and 18 of the Chapter on 'Staff'. However, the Committee feel that the present bond is hardly likely to serve any useful purpose. Under the present system, Officers can get useful training and probably continue as unwilling workers for some time and on the strength of the experience gained at the end of the prescribed period, can seek better terms elsewhere. In view of the resulting loss to Government, the training alone having cost approximately Rs. 15,000 to Government and also of the rate at which the Officers have been resigning the Committee feel that more realistic,

practical and long term means including bonds should be devised to bind the Officers to remain in the service of the Ordnance Factories willingly and without holding out threats of resignation. They hope that the suggestions made by them earlier in para 17, when implemented would go far in achieving this aim.

Bonds similar to those taken from Assistant Works Managers are also taken from Apprentices and Artisans under training though of lower amounts, *viz.*, Rs. 4,000 to 6,000 from Apprentices and Rs. 1,000 from Artisans. The resignations from these categories have also been referred to in paras 16 to 19 of this Report. The Committee suggest that an examination of the bonds etc. taken from these and other categories of staff may also be undertaken in the manner suggested above.

(E) Apprentice Training Scheme

(i) *General*

72. This is a permanent scheme to train persons for supervisory and non-gazetted posts in the Ordnance Factories. Recruitment to this scheme is made by the Director General, Ordnance Factories, on the basis of the results of a competitive examination held on an All-India basis, a reference to which has been made earlier in the Report.

(ii) *Location of the Scheme*

73. The apprentices are trained in eleven of the twenty Ordnance Factories.

(iii) *Particulars of Training*

74. The particulars of trades in which the training is imparted and the period of training in each trade is given below:—

<i>Trades</i>	<i>Period of Training</i>
(i) Engineering	} 4 years' training. (The period of training may be reduced to two years in the case of diploma holders in Mechanical or Electrical Engg. for engineering grade.)
(ii) Plumbing	
(iii) Clothing	
(iv) Computers	4 years
(v) Metallurgical	3 years
(vi) Chemical	2½ years
(vii) Filling (Chemical)	2½ years
(viii) Leather Technology.	2½ years

(iv) *Number of Trainees*

75. 509 apprentices have so far been recruited for this training in seven annual batches since 1950 and of them 278 have been absorbed in different Factories after successful completion of train-

ing, while 28 resigned/died during the course of their training and 213 are still under training in different Factories at present. The average intake of apprentices works out to about 73 per year. The approximate cost of training per apprentice was stated to be Rs. 3,000 per year.

(v) *Arrangements for Training*

76. The Committee were informed that there was very little separate instructional staff to attend to the training of apprentices which was mainly looked after by the Superintendents of the Factories concerned. This they feel is not satisfactory since an intensive training, particularly in technical trades requires the undivided attention of the instructional staff who should not only devote themselves wholly to the training work but should also watch the progress of the trainees very closely. Further, they consider that the location of these training schemes in eleven factories is also not conducive to the efficient and economic working of this scheme. The considerations which weighed with the Committee for recommending the centralisation of training for Asstt. Works Managers apply equally in this case. The arguments advanced against centralisation of training, viz., that the training has to be given in various trades and categories are not convincing as the Committee find that the training of artisans in the Ordnance Factories in various trades is centralised at Ambernath and is stated to be working very satisfactorily. Besides, the apprentices after training are also said to be transferable from one factory to other. The Committee feel that the centralisation might also facilitate a shortening of the duration of training course in some trades mentioned above. They, therefore, suggest that the feasibility of centralising the apprentice Training Schemes on regional or zonal basis and also of rationalising the training courses may be carefully considered. Further, until this is done, the feasibility of centralising this scheme under the Principal, Artisan Training School, Ambernath, may also be considered.

(vi) *Test*

77. The proficiency of the apprentices is judged by conducting tests during the period of training and at the end of it by the Selection Board of the Factory concerned. There is also a *via voce* test on current affairs as also in the trade in which the apprentice has received special training and is conducted by the Chairman or member of the Central Selection Board, assisted by one or more members of the local selection board.

(F) **Artisan Training Scheme**

(i) *General*

78. The Artisan Training Scheme was started in 1950 and is meant for training skilled craftsmen for the various trades in the Ordnance Factories.

(ii) *Recruitment*

79. At present, the recruitment to this scheme is made by the Director General, Ordnance Factories, on the results of a competitive examination held on an all-India basis. First a preliminary selection is made on the basis of a written test in four papers, *viz.* English, Mathematics, Elementary Physics and Chemistry, and free hand drawing which takes place at Ambernath, Ishapore, Jabalpur, Kanpur, Cossipore, Aravankadu, Kirkee, Khamaria and Muradnagar. The papers are set by the Principal to maintain uniformity but are valued at the factories concerned. The candidates found suitable in the preliminary selection appear for final selection at the 9 centres mentioned above. This selection is made on the results of a psycho-technical test and interview.

80. The Committee welcome the introduction of psycho-technical tests in this selection to test the aptitudes of the candidates. They would, however, suggest that the valuation of the papers, which is at present done locally in the Factories should also be centralised to bring about uniformity in the standards.

(iii) *Location of the scheme and its duration*

81. The training under this scheme was originally concentrated at Ambaernath and provided for three years of training in the school with its attached workshop and the Machine Tool Prototype Factory to be followed by a two years' period of journeymanship at the M.T.P.F. or any other Ordnance Factory. The annual intake under this scheme then was about 100 students per annum.

With a view to providing for the training of a larger number of students and to increasing the output of skilled men, without lowering the standards, this scheme has been revised since 12/55. Under the revised scheme, two years preliminary training will be imparted in 9 Factories, *viz.*, Gun & Shell Factory, Cossipore, Rifle Factory, Ishapore, Ordnance Factory, Ambernath, Ordnance Factory, Khamaria, Gun Carriage Factory, Jabalpur, Ordnance Factory, Kanpur, Cordite Factory, Arvankadu, Small Arms Factory, Kanpur, and Ordnance Factory, Muradnagar, followed by two years' training in the Artisan Training School and a period of one year of journeymanship in the Machine Tool Prototype Factory and Ordnance Factory, Ambernath. This scheme is designed to increase the annual output to 150 instead of 100 artisans under the old scheme. The Committee were told that the preliminary training in the nine factories under the revised scheme would also be under the direction and control of the Principal, Artisan Training School, who had satisfied himself that there were adequate and uniform facilities for such training in all these Factories.

82. Thus, while under the revised scheme the period of journeymanship after training has been reduced from two years to one year and a preliminary training of two years has been introduced, the total period of training continues to be five years. The Committee

understand that the Rolls Royce Engineers considered that a five-year course for the trainees was more than was strictly necessary, particularly in view of the shortage of skilled workers in the Ordnance Factories and of the need to make up the leeway quickly. They were, however, told that the existing period of five years was considered absolutely necessary for training a fully equipped artisan. In support of this view, it was stated that this was so in U.K. also. The Committee feel that this question should be examined afresh in the light of the recommendation of the Rolls Royce Engineers and with reference to the position as it exists in other industries in India and elsewhere, so as to economise as well as to obtain a quicker out-turn consistent with efficiency. In this connection, they would also like to mention that the period of training in the Hindustan Aircraft Ltd., is only three years. As a practical suggestion, they suggest for consideration that the preliminary training may be reduced by one year and the journeymanhip increased by six months, so as to provide increased practical experience and at the same time to reduce the overall training by six months.

83. The Committee appreciate the efforts of the authorities to meet the shortage of technically trained craftsmen in the Factories by increasing the outturn from the Artisan Training School under the revised scheme. They however, suggest that existing facilities for training might be further utilised by introducing double shift in the Artisan Training School, to meet the requirements of technical persons not only in Ordnance Factories but also in other industries in the public and private sector. They understand that the only difficulty in doing so might be the absence of sufficient hostel accommodation for the trainees. This is an obstacle, which, the Committee feel, could be easily surmounted.

(iv) *Number of Trainees*

84. 528 artisans were recruited so far for this training under the old scheme and out of them 145 have completed training. The recruitment under the revised scheme which commenced in 12/55 has so far been 172 men only. The cost of training per trainee under the old scheme was Rs. 2784 per year. Under the revised scheme, the cost of fundamental training in the Factories for two years is estimated to be Rs. 1440 only per annum while the cost of training at the Artisan Training School will remain at Rs. 2784 annually as at present.

(v) *Tests*

85. The proficiency of the trainees is judged by conducting half yearly and annual examinations by the Artisan Training School and a final gradation test at the conclusion of the 5 years training, comprising of theoretical and practical tests. The final tests are conducted not by the school staff but by independent Machine Tool Prototype Factory personnel.

(vi) Selection as Supervisors

86. The Committee understand that promising and meritorious artisan trainees have a chance of being selected as supervisors also. They consider that the provision of such incentives is not only desirable but essential for maintaining a high standard of efficiency among the trainees.

(G) Training of Draughtsmen at the Artisan Training School

87. A scheme for the training of Draughtsmen has been introduced in the Artisan Training School, Ambernath since 1952 for a period of four years in the first instance. For this scheme, matriculates having workshop experience of at least two years in shops, such as tool room, are taken at the rate of 25 per year and are trained for 2½ years in the design of jigs, fixtures, gauges, tools and less complicated machines and machine tools. This scheme is primarily intended to fill the vacancies of Draughtsmen and Senior Draughtsmen in the Ordnance Factories.

88. This scheme is in addition to the existing permanent training scheme for Senior Draughtsmen/Draughtsmen, a reference to which has been made later in this Chapter. The reasons for the introduction and continuance of this scheme, alongside the existing one were stated to be (i) to supplement the requirements of Draughtsmen which were not met by the existing schemes and (ii) the training given by the Ordnance Factories to the Draughtsmen under the existing scheme was not satisfactory for the requirements of the Machine Tool Prototype Factory and for the design work undertaken by Ordnance Factories on a larger scale.

89. The Committee are surprised to learn about the shortage of Draughtsmen in Ordnance Factories in spite of the existence of Draughtsmen Training Scheme in nine Ordnance Factories. They are led to the obvious conclusion that either the requirements of Draughtsmen were not properly assessed or the training facilities were not fully utilised by the authorities or both. The Committee consider this most unfortunate.

However, in view of the better training facilities for Draughtsmen at the Artisan Training School, Ambernath, the Committee do not see any need for the continuance of the other training scheme in the nine Ordnance Factories and recommend that the Draughtsmen Training Scheme at Ambernath should be made permanent and expanded further, so as to meet the entire demand of this category of staff of all the Ordnance Factories.

(H) Training of Senior Draughtsmen and Draughtsmen, Senior Planners, Planners, Senior Rate Fixers and Rate Fixers

90. These are permanent training schemes of the Ordnance Factories. The detailed particulars thereof are given on the next page.

Particulars	Method of recruitment	Qualification of candidates	Duration of Training	Average annual intake	Annl. expr. per trainee	Location of the scheme
1. Senior Draughtsman/Draughtsman	Recruitment is made by D.G.O.F. on the result of test and interview.	Senior Draughtsman : Matric with three years practical training or as draughtsman for 2 yrs.	One year.	24 to 28	1,440	Nine Factories, viz. GSF, RFI, OFK, GCF, OFDun, HSF, SAF, and OFM.
2. Senior Planner/Planner.	—do—	Draughtsman : Intermediate in Drawing. Senior Planners : Matric, preferably I.Sc. with three years practical training . . . 1½ yrs. Planners : Matric, preferably I.Sc. with two years practical training . . . 1 year.	13	1,584	Ten Factories, viz. GSF, RFI, OFA, OFK, GCF, OFC, OFDun, SAF, OFM, and MPF.	
3. Senior Rate Fixers/Rate Fixees.	—do—	Senior Rate Fixers : as per Senior Planners Rate Fixers as per Planners . . . 1 years	17	1,440	Twelve Factories viz. GSF, RFI, AFK, OFA, OFK, GCF, OFDun, HSF, SAF, OFM AND MPF.	

91. The Committee enquired into the necessity for recruiting trainees for both senior and junior posts in the same category and of having two separate schemes for this purpose when there was very little difference in their qualifications and period of training. It was explained that, apart from there being a difference in the functions of the two posts, this was being done in order to fill the deficiencies in the higher grade. The Committee again regret to observe that with the training facilities existing in so many factories, the authorities could not fill the shortage for so long. This clearly indicates not only lack of planning and foresight on the part of the authorities concerned but also non-utilisation of the training facilities existing in the Factories. Furthermore, the deficiencies in the higher posts, if any, could have easily been filled by resorting to larger recruitment in the first few years. Equally unconvincing is the argument put forward regarding the difference in the functions of the two posts, as normally incumbents of the junior posts in such cases are considered eligible for holding senior posts after acquiring the necessary experience in the lower posts. The Committee, therefore, consider that there was no justification for making the schemes of recruitment to these senior posts permanent. They recommend that direct recruitment to those senior posts should not normally be made after the existing vacancies are filled and that they should mainly be filled by promotion from the junior posts which would not only result in senior posts being held by more experienced staff but also provide adequate opportunities for advancement for the lower category of staff which is essential for the maintenance of their efficiency and morale.

92. The Committee do not also feel very happy to find same or similar training schemes and facilities for various categories of staff in a number of factories. Their remarks made earlier in the case of the training of Assistant Works Managers and Apprentices apply to all these training schemes also.

(I) Unsatisfactory Training of Rate Fixers

93. Rate Fixers perform the important function of determining piece work rates. It is therefore necessary that rate fixers should be fully trained in the proper and scientific methods of estimating time required for a job closely so that they may assist in making production economic and efficient by controlling costs.

However, the Committee learn that the type of training given to them in the Ordnance Factories at present is not considered by any means satisfactory. Even the instructors and senior rate fixers are said to be not conversant with modern methods and techniques of scientific time and motion study. The Committee very much regret to observe that sufficient attention has not been paid to improve the standard of training to this category of staff for so long although it is well known that any imperfection in their training is bound to have serious repercussions on the cost of production as well as on the

payment of wages to the workers. While they are glad that the authorities are aware of the unsatisfactory position in this matter, they hope that very early action would be taken to make up the deficiency.

(J) Boy Artisan Training Scheme

94. A scheme for the training of boy artisans to work as skilled tradesmen was hitherto in operation in Ordnance Factories but this has recently been integrated with the revised scheme for the training of skilled craftsmen at the Artisan Training School, Ambernath, under which there is preliminary training for 2 years, in nine selected Ordnance Factories and these boy artisans who pass a prescribed trade test will be sent to the Artisan Training School upto the number of vacancies available while others will continue for 1½ years to receive further training as boy artisans. Under the revised training, the Boy Artisan Training Scheme will also be concentrated under the Principal, Artisan Training School.

(K) Workmen Training Scheme

95. The Workmen Training Scheme is an upgradation training of unskilled workmen to semi-skilled and from semi-skilled workmen to skilled workmen. The training arrangements for this exist practically in all Factories. The Committee understand that a proposal to concentrate the existing workmen training scheme under the supervision and control of Principal, Artisan Training School in the nine Ordnance Factories where the revised Artisan Training Scheme is in operation, is under the consideration of the Government.

(L) Training of Designers

96. The Committee understand that a scheme for training designers for the Ordnance Factories has been worked out and is under consideration by the Ministry of Defence. In this connection, they would like to refer to para 11. 31 of the Report of the Railway Equipment Committee in which a mention has been made of the prevailing dearth of machine tool designers in the country and wherein it was suggested that the Machine Tool Factories at Ambernath and Bangalore be suitably equipped with a design organisation so as to provide training facilities in this respect. The Committee hope that this scheme of training designers would be worked out in such a way as would provide training facilities for persons belonging not only to the Ordnance Factories but to other undertakings also.

(M) Question of Sufficiency of Training Schemes

(i) Expenditure

97. The expenditure incurred on the various training schemes in the Ordnance Factories, the total expenditure on pay and allow-

ances of staff and their ratio during the three years (for which figures are available) are as follows:—

Year	Expenditure training	Expenditure on Pay & allowances of staff	Ratio of 2 and 3
I	2	3	4
(In lakhs of rupees)			
1952-53	23·04*	868·18	2·7%
1953-54	24·44*	884·63	2·8%
1954-55	22·92*	929·11	2·5%

*(The details of this amount are given in Appendix IX)

(ii) *Number of trainees.*

98. The approximate intake under the various training schemes in force, the relevant strength of the staff in the category concerned and their ratio are as follows:—

Category	Average intake.	Total strength.	Ratio approxima- tely.
Non-gazetted Establishment (except Stores/Asstt. Store holders) and Supervisors A & B and equivalent grades	154	3,960	3·9%
Skilled and highly skilled	150	12,269	1·2%
TOTAL	304	16,229	1·8%

It will thus be observed that the annual intake of trainees in the Ordnance Factories under the various categories (excluding Assistant Works Managers and Workmen *i.e.*, semi-skilled and unskilled and also clerical etc.) is less than 2 per cent. of the total strength of the staff in the relevant categories. The Committee consider the number of trainees in the Ordnance Factories unusually low considering that the training schemes at present were believed to have been considerably expanded recently in view of the shortages in certain categories. They understand that the normal annual intake of trainees should be not less than 3 per cent. so as to give the number of trainees at

one time approximately more than 10 per cent. and in view of the present shortages and wastages, as also the prospects of further expansion, it should be even more. The Committee, therefore, recommend that the requirements of labour and staff should be worked out on a realistic and long term basis taking all the relevant considerations into account and that the training schemes should be expanded to meet them.

(N) Shortages of highly skilled technicians in Ordnance Factories

99. The Committee understand that the Ordnance Factories are experiencing shortage of specially skilled technicians and Craftsmen, particularly in respect of highly skilled and skilled tool room personnel, Tool and Gauge Designers, adequately trained Rate Fixers, Estimators and Drawing Office personnel, skilled Foundrymen, Forgemen, Pattern Makers etc. The position was stated to have further worsened due to the inordinate defections of skilled technicians, particularly those trained in steel melting and rolling and the skilled artisans trained at Ambernath.

100. It was explained that these shortages were proposed to be met (i) through the various training schemes including the Artisan Training School (ii) by deputation of Indian technicians abroad and (iii) by recruiting foreign experts who could train Indian Technicians in those specialised lines. As has been pointed out earlier the various training schemes in the Ordnance Factories themselves require strengthening due to the present shortage and wastages. The Committee suggest that special steps be taken to meet the shortages of highly skilled craftsmen etc., as these continued shortages are bound to affect the efficiency and economic functioning of the Ordnance Factories. In this case also they commend similar steps as have been recommended in para 4 regarding the Assistant Works Managers.

(O) Training of Instructors

101. The Committee learn that there is a proposal to start a small Instructors Training Scheme to meet the demands of instructors in the Ordnance Factories. They consider such a scheme essential as the instructors who are the backbone of all training schemes, should themselves be fully qualified and equipped for their job. They, therefore, hope that the scheme will be fully worked out and implemented without any further delay.

(P) Refresher Courses

102. The Committee learn that at present there are no arrangements in the Ordnance Factories to conduct refresher courses for the supervisory staff and those who are placed in responsible position. It is obvious that in such undertakings as the Ordnance Factories, it is desirable and necessary to have a system of training which would

enable at least the supervisory staff to keep their knowledge of the problems of supervision and management fresh and up-to-date and that this can be achieved by introducing a system of refresher courses. The Committee would, therefore, recommend the introduction of short refresher courses to members of the supervisory staff drawn from the whole organisation. The curriculum of training may be drawn up to include subjects like managerial functions, industrial relations and problems, factory expenditure, cost control etc. The Committee would like to stress that in this scheme, due emphasis should be laid on the subject of cost control in the Ordnance Factories and efforts should be made to make the supervisory staff and through them the whole organisation more 'cost conscious'. In the Committee's view, the value of this training would be further enhanced, if in addition to the training instructors, senior members of the managerial staff of the Factories and the technical colleges are invited to give lectures to the trainees in this school.

(Q) Training Within Industry

103. The Committee understand that in U.S.A. and in Europe a highly organised scheme of training, known as 'Training Within Industry' has been developed, particularly for the supervisory staff, who have to function as organisers, managers and instructors of their working group, whose coordination they have to ensure. They understand that this system has recently been introduced and two Assistant Works Managers have been trained. The features of this system are that they concentrate on three phases of supervision *viz.*, the need to instruct (Job instruction) and the need to handle staff effectively (Job Relations) and the need to organise (Job Methods). The method of instruction is by discussion and within the relatively short time available, the course deals only with primary essentials. The most important feature of Training Within Industry is that it offers a general programme, irrespective of the individual industry. The Committee understand that in Belgium this scheme has been further enlarged to include industrial hygiene, elementary psychology, work study, Belgian social and economic problems, labour legislation, accident prevention, report writing, elements of leadership and management. They also understand that the International Labour Organisation is developing the Training Within Industry in many parts of the world. The Committee suggest that similar schemes on a wider scale be introduced in all public undertakings in India, including the Ordnance Factories at an early date.

(R) Need for Centralised Training for various Schemes

104. It will be observed from some of the foregoing paragraphs that the Ordnance Factories have a large number of schemes, many of which existing in a number of Factories. In certain cases the Committee have suggested that the feasibility of centralising some of them on regional or zonal basis should be examined. It cannot be denied that centralisation of training has several advantages, particularly in

securing (i) full-time instructors and consequent full-time attention to trainees instead of depending for instruction on other workers who are busy and probably unwilling to impart the training; (ii) better equipment; (iii) better training, (iv) comraderie; (v) resultant efficiency, better output and consequent economy. The Committee consider that the Artisan Training School, Ambernath is excellent example in this direction which deserves to be emulated in the case of other schemes. They feel that this question should be examined comprehensively by a Committee consisting of the Principal, Artisan Training School, Senior Officers and one or two representatives of technical training institutes in the country to see how far the various training schemes could be centralised, so as to meet all the needs of the Ordnance Factories in respect of technical personnel in various trades and categories, consistent with efficiency and economy. They suggest that while considering this question, the desirability of locating elementary as well as intermediate training centres on a regional basis and of having advanced central schools may also be considered. They recommend that such a Committee be set up at an early date and in addition to the above also asked to examine whether the large number of training schemes existing at present are really necessary and whether they could not be rationalised or streamlined facilitating recruitment, training and employment.

(S) Training within precincts of Ordnance Factories

105. At present, Training under the various schemes in force is mostly carried out in the Ordnance Factories themselves except possibly in the case of Artisan Training School, Ambernath where there is a separate school which is also for all practical purposes an adjunct to the Machine Tool Prototype Factory. It was pointed out to the Committee by an industrialist of repute that due to the presence of idle labour in Ordnance Factories and various other considerations, the atmosphere in the Ordnance Factories is not by any means healthy and conducive for the training of boys, who are liable to be led away to wrong paths including ways of indiscipline and wrong methods of work by the older workers in the Factories. It was, therefore, suggested that in the interest of training of efficient workers, the training schemes should not exist within the Ordnance Factories or near them. The Committee are aware that there would be considerable difficulties in implementing this suggestion fully mainly because of considerations of cost in view of the need to give practical training to the trainees and to have alternative buildings, equipment, staff etc. At the same time, they feel that the suggestion made earlier deserves consideration and the feasibility of implementing it gradually to the extent possible, at least for the more important and also new training schemes, or at least of safeguarding the risks pointed out above should be explored.

(T) Training of Outsiders

106. The Committee understand that the training facilities at the Artisan Training School, Ambernath are considered even by impartial

observers to be of high order. However, these facilities at the Artisan Training School as well as in Ordnance Factories are not available for outsiders *i.e.* other than those selected for working in Ordnance Factories though a few trainees from the Artisan Training School have been transferred/have been earmarked as shown below for outside organisations recently, the actual cost of training being recovered in such cases:

Hindustan Machine Tools Ltd., Bangalore	10 Trainees from Artisan Training School already transferred.
Atomic Energy Commission.	10 Craftsmen from Artisan Training School every year after 1-4-57.
Hindustan Aircraft Ltd. 1958.	10 craftsmen from Artisan Training School.
Hindustan Aircraft Ltd. 1959.	10 from Artisan Training School plus 10 from other Factories.
1960 onwards.	20 from Artisan Training School (training of an additional 100 of Hindustan Aircraft Ltd's. selected trainees per year is under negotiation.

107. While the Committee appreciate the fact that the Ordnance Factories spared their trainees to other organisations to a limited extent and thus met the pressing needs of the latter, they also realise that this was done at the cost of the equally pressing needs of the Ordnance Factories themselves, which are also short of skilled craftsmen. Further, the training of craftsmen for other industries on such a small scale would hardly touch even the fringe of the problem of meeting the shortage of skilled workers and technical men in the country, which would increase further during the second Five Year Plan period as industrialisation progresses. The Committee feel that coordinated efforts on the part of all the Ministries of the Government and the industries concerned are urgently called for to solve this vital problem from an all India angle. At present, every big industry either sets up its own school to train the technical personnel required by it or prefers to get trained men on a small scale from a neighbouring training institution. The Committee consider that such compartmental approach to this stupendous problem is a waste of the limited resources of the country in respect of training facilities which involve finance, equipment, buildings, instruments instructors etc. They also feel that such facilities existing in Government Factories in general and in Ordnance Factories, in particular should be available for training skilled workers in the entire country. They therefore, recommend that the All India Council of Technical Education in association with

other interested Ministries and private industries should conduct a thorough survey of the existing facilities for technical training in the country, including those available in the various industrial undertakings and then draw up a coordinated plan to meet the present and future requirements of technical personnel in the various industries in the country both in the public and in the private sectors.

108. The Committee consider that such a coordination, besides utilising the existing facilities to the maximum possible advantage would also make for standardisation of training in the various trades in all the institutions. The Committee also suggest that the question of the award of suitable diplomas/certificates by the various training institutions in the Ordnance Factories which would be recognised all over the country should also be examined.

(U) Training Abroad

109. The Committee understand that to provide necessary experience to the technicians in those branches of manufacture for which the Ordnance Factories are not adequately equipped, capable and qualified Ordnance Factories personnel are deputed overseas for the specific purpose of training in modern methods of manufacture as also of learning specialised techniques in the manufacture of modern arms and ammunition. The number of such personnel sent abroad for training during the last three years is as under:—

1953-54	9.
1954-55	9
1955-56	1

110. It is further learnt that for 1956-57 Government have sanctioned the deputation of 11 Ordnance Factories personnel to U.K. for specialised studies. A further proposal to depute 17 Ordnance Factories personnel to West Germany under the scheme of scholarships for post-graduate studies and practical training in workshops and factories has also been submitted to Government for consideration. The Committee cannot over-emphasise the desirability of making the best use of the limited facilities for training in foreign countries afforded to this country under various agreements and of getting as many men trained as possible in various specialised branches, particularly the manufacture of modern arms and ammunition. They hope, therefore, that more personnel would be had trained abroad in the years to come. At the same time, they feel that the services of those trained abroad should be utilised to the maximum extent possible to train others in the organisation in the knowledge and information received from abroad.

(V) Other Measures

111. The Committee suggest that to make the various training schemes more effective, audio-visual methods like short films on fac-

tory problems e.g. cost control, labour management etc. may be adopted. Further, with a view to increasing the efficiency of the Factories they suggest that selected members of non-industrial and industrial staff may be encouraged to visit other factories engaged in the manufacture of similar products. The Committee also suggest that the non-industrial staff may be encouraged to acquire technical qualifications and the same may be recognised in deserving cases, through the grant of advance increments etc.

BALVANTRAY G. MEHTA,

*Chairman,
Estimate Committee.*

NEW DELHI;

The 22nd March, 1957.

APPENDIX I-A

Factory-wise distribution of Staff in Ordnance Factories

Name of the Factory	Gazetted			Non-Gazetted			Non-Industrial Establishment	M.D.S.C. Personnel.	
	Civilian.	Military.	Total	Charge-man (upwards)	Medical	Total			
	2	3	4	5	6	7	8	9	10
Gun & Shell Factory, Cossipore .	11	2	13	106	4	110	889	4,047	160
Rifle Factory, Ishapore .	10	1	11	88	3	91	767	3,670	132
Metal & Steel Factory, Ishapore .	18	1	19	110	5	115	1,208	4,958	131
Gun, Carriage Factory, Jabalpur .	18	2	20	117	5	122	1,358	4,826	147
Ordnance Factory, Khamaria .	22	2	24	168	5	173	1,136	4,403	193
Ordnance Factory, Katni .	9	2	11	44	2	46	442	1,210	52
Ordnance Factory, Dehradun .	10	2	12	40	2	42	388	744	122
Ordnance Factory, Muradnagar .	8	2	10	60	3	63	545	1,987	53
Clothing Factory, Shahajahanpur .	9	1	10	35	2	37	547	2,360	97
Ordnance Factory, Kanpur .	16	2	18	93	4	97	1,028	2,736	101
Small Arms Factory, Kanpur .	9	—	9	59	1	60	437	1,072	3

APPENDIX I-B

Scales of pay attached to different categories of Staff in the Ordnance Factories

Category of staff	Scales of pay
<i>Gazetted</i>	
Superintendents Grade I	(1350-100-1750 (a) (1300-100-1600 (b)
Superintendents Grade II	1350-50-1550 (a) 1000-50-1400 (b)
Works Managers	850-100-1250 (a) 600-40-1000-1000-1050-1050-1100- 1150 (b)
Asstt. Works Managers	600-50-800 (a) 350-350-380-380-30-590-E.B.-30-770- 40-850 (b)
Labour Officers	275-25-500-EB-30-650.
Security and Asstt. Security Officers	In the ranks of Major/Captain and Lieu- tenant.
<i>Non-Gazetted</i>	
Foreman	475-15-535 (a) 500-20-600 after five years 650 (a) 300-20-500 (b) 360-20-500 (c)
Storeholders	500-20-600 (a) 300-20-460 (b)
Assistant Foreman	400-15-475-EB-25/5-500 (a) 375-15-435 then 6th, 8th & 10th years 450-470-490 (a) 260-15-350 (b) 300-20-400 (c)
Assistant Storeholders	400-15-475 (a) 375-15-435 (b) 260-15-335 (c)
Chargeman Grade I	260-15 -350 Grade I (b)
Chargeman Grade II	200-10-300 Grade II (b) 170-10-250-EB-40/4-290(a)
<i>Non-Industrial Establishment</i>	
Supervisor 'A' & Equivalent	155-5-200 (a) 150-7-185-8-225 (b)

 Category of staff

Scales of pay

Non Industrial Establishment—contd.

Supervisor 'B' & Equivalent	. 100-5-125-6-155-EB-6-185.
Head Clerk and other clerical staff	Various grades ranging from Rs. 55/- to 350/-.
Other Class III staff	. . . Various grades ranging from Rs. 55/- to 130/-.
All Class IV employees	. 30-½ -35-1-50.

Industrial Establishment

Highly skilled	} Various grades ranging from Rs. 30/- to Rs. 185/-.
Skilled	
Semi-skilled	
Un-skilled.	

In addition to the above, there are Hospital and Medical staff, school staff and M.D.S.C. platoons for security purposes.

-
- (a) Pre-prescribed scales.
 - (b) Prescribed scales.
 - (c) Special grade of pay.
-

APPENDIX II

No. of Scheduled Castes/Tribes Staff in Ordnance Factories as on 30-9-1956

Class of Post	Scheduled Caste		Scheduled Tribe	
	Perma- nent	Tempo- rary	Perma- nent	Tempo- rary
Class I	Nil	Nil	Nil	Nil
Class II	Nil	2	Nil	Nil
Class III	216	319	3	12
Class IV	1,957	7,427	185	671
TOTAL	2,173	7,748	188	683

GRAND TOTAL

Scheduled Caste 9,921

Scheduled Tribe 871

NOTE : The above figures do not include Sweepers/Scavangers.

APPENDIX III

Ratio of Supervisory Staff to Industrial Staff in the Ordnance Factories

Sl. No.	Name of the Factory	No. of staff		Ratio of Staff Super- visors 'A' & 'B' to Industrial
		Super- visors 'A' & 'B'	Industrial	
(1)	(2)	(3)	(4)	(5)
1	Metal & Steel Factory, Ishapur	144	4,958	I : 34.4
2	Gun Carriage Factory, Jubbulpur	239	4,826	I : 20.2
3	Ammunition Factory, Kirkee .	307	8,757	I : 82.5
4	Cordite Factory, Arvanakadu .	64	1,434	I : 22.4
5	Rifle Factory, Ishapore . . .	86	3,670	I : 42.7
6	Gun & Shell Factory Cossipur .	113	4,047	I : 35.8
7	Harness & Saddlery Factory, Kanpur	91	3,835	I : 42.1
8	Clothing Factory, Shahjhanpur	71	2,360	I : 33.2
9	High Explosives Factory, Kirkee	127	1,389	I : 10.9
10	Ordnance Factory Khamaria .	276	4,403	I : 16.0
11	Ordnance Factory, Kanpur . .	138	2,736	I : 19.8
12	Ordnance Factory, Katni . . .	60	1,210	I : 20.2
13	Ordnance Factory, Ambarnath .	83	1,628	I : 19.6
14	Ordnance Factory, Murad Nagar	117	1,987	I : 17.0
15	Ordnance Factory, Dehra Dun	54	744	I : 14.0
16	Ordnance Parachute Factory, Kanpur.	28	549	I : 19.6
17	Small Arms Factory, Kanpur .	60	1,072	I : 17.9
18	Ordnance Factory, Bhusawal .	29	487	I : 16.8
19	Machine Tool Prototype Fac- tory, Ambernath	63	400	I : 6.3

APPENDIX IV

Ratio of Clerical Staff to Industrial Staff in the Ordnance Factories

Sl. No.	Name of the Factory	No. of Staff		Ratio of Clerical to Industrial staff
		Clerical	Industrial	
(1)	(2)	(3)	(4)	(5)
1	Metal & Steel Factory, Ishapur	341	4,958	I : 14·5
2	Gun Carriage Factory, Jubbulpur	371	4,826	I : 13
3	Ammunition Factory, Kirkee	250	8,757	I : 35
4	Cordite Factory, Arvankadu	56	1,434	I : 25·6
5	Rifle Factory, Ishapur	200	3,670	I : 18·3
6	Gun & Shell Factory, Cossipur	217	4,047	I : 18·6
7	Harness & Saddlery Factory, Kanpur	309	3,835	I : 12·4
8	Clothing Factory, Shahjhanpur	175	2,360	I : 13·5
9	High Explosives Factory, Kirkee	55	1,389	I : 25·3
10	Ordnance Factory, Khamaria	220	4,403	I : 20·0
11	Ordnance Factory, Kanpur	257	2,736	I : 10·6
12	Ordnance Factory, Katni	104	1,210	I : 11·6
13	Ordnance Factory, Ambarnath	97	1,628	I : 16·8
14	Ordnance Factory, Murad Nagar	99	1,987	I : 20·1
15	Ordnance Factory, Dehra Dun	87	744	I : 8·6
16	Ordnance Parachute Factory, Kanpur	62	549	I : 8·9
17	Small Arms Factory, Kanpur	147	1,072	I : 7·3
18	Ordnance Factory, Bhusawal	41	487	I : 11·9
19	Machine Tool Prototype Factory, Ambernath	106	400	I : 3·8

APPENDIX V

*Percentage of Absenteeism in Ordnance & Clothing Factories
(Manshifts absent to Manshifts scheduled to work)*

S. No.	Factory	1951-52 (Jul '51 to Mar '52)	1952-53 (Apr '52 to Mar '53)	1953-54 (Apr '53 to Mar '54)	1954-55 (Apr '54 to Mar '55)	1955-56 (Apr '55 to Mar '56)
1	GSF . . .	5.7	6.2	6.2	7.7	9.4
2	RFI . . .	6.7	7.3	8.2	9.8	10.5
3	MSF . . .	8.2	10.1	10.9	11.9	12.6
4	GCF . . .	9.1	10.6	11.5	13.0	13.3
5	OFK . . .	8.9	9.3	11.9	14.5	14.0
6	OFKAT . .	8.7	9.8	9.7	10.5	12.4
7	OFDUN . .	10.3	11.7	10.2	12.5	11.8
8	OFM . . .	7.4	8.7	8.9	11.3	13.4
9	CFS . . .	6.5	8.7	9.3	10.4	12.5
10	OFC . . .	9.3	10.4	12.6	15.3	15.7
11	OPF . . .	7.0	9.0	7.9	9.5	10.4
12	SAF . . .	10.0	11.8	13.1	14.9	14.7
13	HSF . . .	7.2	8.3	10.1	11.8	12.4
14	OFA . . .	8.7	10.5	11.1	11.1	14.6
15	MPF . . .	8.2	7.1	13.0	13.9	17.2
16	AFK . . .	10.0	12.8	9.3	10.8	10.1
17	HEF . . .	10.4	14.7	14.5	16.4	15.0
18	OFB . . .	9.5	9.6	10.8	15.4	11.0
19	OFW . . .	10.3	13.4	13.8	15.9	..*
20	CFA . . .	9.2	9.6	8.9	12.1	14.1

*April to August '56 only. Due to closing down of OFW, the returns were discontinued.

APPENDIX VI

Statement showing the number of staff and M. D. S. C. personnel in the Factories and the security officers attached thereto

Sl. No.	Name of the Ordnance Factory	Total No. of Staff	No. of M.D.S.C. Personnel	Rank of security officers
(1)	(2)	(3)	(4)	(5)
1	Ammunition Factory, Kirkee	10,314	251	Major]
2	H. E. Factory, Kirkee.	1,909	50	
3	Ordnance Factory Bhusawal	753		
		<hr/> 12,976	<hr/> 301	
4	Rifle Factory, Ishapur	4,671	132	Major
5	Metal & Steel Factory, Ishapore .	6,431	131	
		<hr/> 11,102	<hr/> 263	
6	Gun Carriage Factory, Jubalpur .	6,473	147	Major
7	Ordnance Factory, Khamaria .	5,929	193	Major
8	Ordnance Factory, Kanpur .	3,980	101	
9	S. A. Factory, Kanpur . . .	1,581	3	Major
		<hr/> 5,561	<hr/> 104	
10	Ordnance Factory, Dehra Dun .	1,308	122	Major
11	Clothing Factory Shahjahanpur .	3,051	97	
		<hr/> 4,359	<hr/> 219	
12	Ordnance Factory, Ambernath .	2,294	..	
13	Machine Tool Prototype Factory, Ambernath	858	47	Major
		<hr/> 3,152	<hr/> 47	
14	Harness & Saddlery Factory, Kanpur	4,951	98	Captain
15	O. P. Factory, Kanpur	786	54	
		<hr/> 5,737	<hr/> 152	

(1)	(2)	(3)	(4)	(5)
16	Gun & Shell Factory, Cossipore (including Dum Dum branch) .	5,219	160	Captain
17	Ordnance Factory, Muradnagar .	2,658	53	Captain
18	Cordite Factory, Aruvankadu .	2,072	163	Captain
19	Ordnance Factory, Katni. . .	1,761	52	Lieutenant.

APPENDIX VII

Percentage of residential accommodation provided for the non-industrial and industrial workers in the Ordnance Factories

Factory	Non-Industrial and Industrial workers
G.S.F.	10%
M.S.F. & R.F.I.	12%
O.F.C. & S.A.F.	55%
H.S.F.	1%
O.P.F.	Nil
C.F.S.	17%
O.F.M.	65%
O.F.D.	64%
O.F.Kat.	56%
O.F.K.	73%
G.C.F.	22%
A.F.K. & H.E.F.	15%
O.F.A.	43%
M.P.F.	95%
O.F.B.	33%
C.F.A.	22%

APPENDIX VIII

Statement showing the amount paid on account of injury pay in respect of each Ordnance Factory during the last 3 years

Factory	1952-53	1953-54	1954-55
	Rs.	Rs.	Rs.
M.S.F.	2,85,918	2,96,729	2,86,308
R.F.I.	1,96,922	2,23,154	2,15,627
G.S.F.	2,20,647	2,28,131	2,31,608
O.F. Dun.	39,191	35,518	37,134
O.F.M.	88,884	91,129	88,619
O.F.S.	1,40,641	1,24,193	1,14,215
H.S.F.	2,02,070	1,97,348	1,83,798
O.F.C.	1,61,376	1,49,574	1,38,162
S.A.F.	52,317	63,322	62,769
O.P.F.	39,227	28,093	29,225
O.F. Kat.	71,380	55,379	59,643
O.F.K.	1,31,819	1,55,142	1,53,222
G.C.F.	2,26,927	2,69,894	2,64,407
C.F.A.	74,694	72,130	78,079
M.P.F.	23,625	20,257	25,809
O.F.A.	96,060	66,149	86,618
A.F.K.	4,73,960	4,19,240	5,31,487
H.E.F.	60,126	65,676	78,188
O.F.B.	25,743	25,506	25,987
O.F.W.	24,105	24,100	26,694
TOTAL	26,35,632	26,10,664	27,14,599

APPENDIX IX

Statement showing expenditure on Training

Subject	1954-55	1953-54	1952-53
	Rs.	Rs.	Rs.
1. Training of A.W.M.	{ 1,35,720	1,85,946	2,31,196
	4,092	3,012	2,940
2. Training of Draughtsmen	95,895	91,939	1,30,625
3. Instruction of Apprentices	4,21,359	4,66,163	4,12,253
	24,829	24,863	21,922
4. Apprentice Hostel	24,584	13,451	12,886
	894	799	811
5. Training of Boy Artisans	6,38,151	6,78,884	7,38,929
	11,006	31,674	38,505
6. Training of unskilled labourers	24,108	65,761	1,825
	834	564	81,549
			353
7. Technical School at R.F.I.	12,460	14,468	14,609
8. Factory School	2,67,038	2,05,491	1,69,740
	19,395	21,712	19,439
9. Training of Workmen in Ordnance Factories for Upgrading of labour	1,22,050	1,16,181	1,94,957
10. Training of Rate fixers	28,337	23,243	66,381
11. Training at A.T.S. Ambernath	3,12,557	3, 82,966	34,619
12. A.T.S. Hostel	1,39,280	1,13,437	1,28,685
13. <i>Ad hoc</i> Training courses in Stores preservation conducted by I. S. S. P. O.	1,453	713	
14. Supplementary Training to Industrial Workers outside working hours	7,484	2,552	..
	302		
15. Training of Staff & Workmen for other Ordnance Clothing, Leather Factories	1,901
	22,91,828	24,43,819	23,04,125

APPENDIX X

Statement showing the summary of conclusions/recommendations of the Estimates Committee relating to the Ministry of Defence—Ordnance Factories

S. No.	Ref. to the Para No. of the Report	Summary of conclusions/recommendations
1	2	3
1	4	The Committee were told that there was a great shortage of senior officers in the Ordnance Factories and that attempts to fill these posts through the U.P.S.C. had not met with encouraging results. They consider this particularly unfortunate and suggest that special steps be taken to fill the shortages among these categories of posts by means of special recruitment in various age-groups so as to attract the experienced persons from private industry also. Reference is also invited in this connection to S. Nos. 9 & 10.
2	6	The Committee were given to understand that papers for the written examination of candidates to Apprentice Training Scheme are set centrally but examined locally. They feel that the existing system might result in lack of uniformity in standards and suggest that the valuation of papers should also be undertaken on a central basis.
3	7	The Committee recommend that psychological tests should also be included in the examination for selection to the Apprentice Training Scheme for the purpose of finding the aptitude of the candidates for these jobs.
4	8	The Committee feel that the absence of precise rules to determine the eligibility of employees of Ordnance Factories for selection to the Apprentice Training Scheme against the quota of 20% to be filled by the Director General, Ordnance Factories is not conducive to the creation of confidence among the employees as well as the public outside. They recommend that specific rules for this purpose should be laid down and publicised among the staff and that the departmental candidates should be selected by a prescribed procedure.

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The Director General, Ordnance Factories is authorised at present to sanction the creation of temporary posts (except Gazetted posts) upto a period of two years while no powers in this regard have at all been vested in the Superintendents of Factories. The Committee feel that in an industrial concern an executive head is in a better position to decide his requirements of industrial personnel in relation to the work loads. They suggest that the feasibility of granting more powers to the Superintendents of Ordnance Factories commensurate with their status, to be exercised in consultation with the Factory Board, should be considered.

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The Director-General, Ordnance Factories is empowered to recruit staff pertaining to non-Gazetted and non-industrial posts in the Ordnance Factories whereas the Superintendents of Factories can recruit class IV and industrial staff only. The Committee feel that there is excessive centralisation in this case also. In their opinion the system of centralised recruitment besides making the members of the Board and the staff go long distance for interviews etc. is bound to result in frequent and distant transfers which in the case of lower staff might cause much hardship. The Committee, therefore, suggest that the feasibility of making the recruitment of certain categories of non-gazetted and non-industrial posts on a regional basis and of delegating authority to regional boards to be set up for the purpose may be examined. Similarly transfers among these categories apart from those on voluntary basis or on disciplinary grounds, may also be made on some regional basis.

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The representation of Scheduled Castes/Scheduled tribes in the Gazetted and Class III posts is far below their reserved quota. The Committee would urge that effective measures should be taken to step up their recruitment by keeping in touch with the various representative organisations of these castes/tribes. In addition such measures as, for example, prescribing lower standards of selection for them and by trying to make good the deficiency by giving them subsequently extra training or by recruiting them in larger number in areas where suitable candidates may be available, may also be considered. In this connection, the Committee also invite a reference to para 28 of their 24th Report.

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8	15	The Committee suggest that conditions of eligibility for departmental promotions to the Supervisory categories may be laid down and publicised among the staff.
9	17	The Committee were concerned to learn of the large number of resignations from Ordnance Factories. They were informed that the pay scales for equally qualified men offered by certain undertakings set up in the public sector were very high as compared to those prevailing in the Ordnance Factories. The Committee view this position with great concern and do not see any reason why there should be so much disparity in the pay scales in the undertakings administered by the same Government. They recommend that immediate steps should be taken to examine the whole pay structure of comparable posts in all Government undertakings and to bring uniformity therein as far as may be possible.
10	18-19	The Committee were informed that service in the Ordnance Factories was not attractive due to the slow rate of promotion as compared to the Government departments and the absence of pension scheme in this organisation. The Committee are not happy with the rapid promotions being given in certain expanding departments but are inclined to think that it would be desirable to ensure that there should be uniformity in prospects in various similar services. The Committee consider that these problems have to be tackled realistically and from the point of view of national good and not from the narrow good of particular Ministry or Industry. They, therefore, suggest that the question should be tackled at a very high level and that the Cabinet itself should give a policy decision in this matter, so that a certain amount of equality of opportunity and prospects exists in all the Ministries and industries in the country. They further suggest that armed with this policy decision the Home Ministry should ensure its implementation by all concerned.
11	22	The Committee regret to observe that it would not be possible to replace the foreigners serving in the Ordnance Factories before 1960, <i>i.e.</i> , eight years beyond the scheduled time provided for in the Machine Tool Prototype Factory agreement. They hope that there would be no further delays in the matter and that suitable Indians would be fully trained and given experience by that time.

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The Committee feel that the existing procedure of calculating direct labour requirements in Ordnance Factories allows ample scope for a loose and liberal computation thereof. Further, even the checks laid down to control indirect labour do not seem to be effective since the ratio of expenditure on indirect labour charges to direct labour charges has been consistently rising during the last six years. The Committee have recommended elsewhere not only the rationalisation and streamlining of the indirect labour strength in the Ordnance Factories but also fixation of the strength of the various categories of staff on the basis of scientifically determined norms and workloads.

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The Committee do not expect that there would be any agreement between the management and the Works Committees in regard to the extent of surplus labour and the procedure to be adopted for retrenching them. They feel, however, that had the works committees been working successfully, which would also have required greater co-operation on the part of the labour representatives as well as their leaders, it should have been possible to effect gradual retrenchment of surplus labour by providing simultaneous employment elsewhere.

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The Committee are surprised to note that the deployment of idle labour on indirect work orders was not detected and stopped by the Director General, Ordnance Factories, in time. Further, the unjustified employment of this labour on such work orders not only resulted in exhibiting an incorrect picture of the volume and extent of idle labour in factories and inflating their production costs, but also would have had an adverse effect on other workers. The Committee feel that had the true picture in this regard been presented from the very start, which could possibly have been done if there was some attempt to correlate labour strength and the workload, the solution of this problem might not have been delayed so long.

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The Committee consider it unfortunate that Government took four years to solve the problem of surplus labour in Ordnance Factories. They feel that had the same energetic steps, which were taken in 1956, been taken earlier to provide alternative employment, Government could have avoided considerable

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expenditure on the idle labour and also averted the strikes which followed the retrenchment in September, 1956. The Committee hope that the lesson of these incidents will not be lost sight of when similar problems arise in future.

- 16 30 The Committee understand that there was every likelihood that hidden surpluses had been kept in the Ordnance Factories, due to liberal computation of labour requirements. They consider that labour and staff requirements should be computed on a firm basis by fixing optimum workloads and norms of work for all categories of staff. While it may be necessary to retain certain surplus staff in order to retain specialised skill for stepping up production in emergencies, the Committee recommend that some measures should be devised to segregate idle staff and labour from others in the Ordnance Factories.
- 17 31 The Committee feel that the persons who were retrenched for want of work would provide a very satisfactory source of labour in the event of an emergency and that it would be worthwhile to have some arrangement including maintenance of a Register showing full particulars of these men by which they could be recruited quickly for work in the Ordnance Factories in an emergency.
- 18 32 The Committee feel that the overtime bonus being paid to the Industrial staff in the Ordnance Factories is on the high side and suggest that the same should be minimised by careful planning in placing extracts on Ordnance Factories and in training of workers in a variety of jobs so that they could be employed in other shops during emergencies.
- 19 33 The Committee observe that the expenditure on pay and allowances of staff has been rising continuously since the year 1951-52 even though the value of production has fallen. This indicates that the productivity of labour in the Ordnance Factories is on the decline. They recommend that every possible step should be taken to improve the output and productivity of staff.
- 20 34 The Committee recommend that the reasons for the sudden rise in the percentage ratio of indirect labour to direct labour in the Ordnance Factories should be
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examined and proper steps taken to streamline and rationalise the indirect labour strength in the Ordnance Factories.

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The Committee consider it unsatisfactory that in the Ordnance Factories the supervision charges are very high as compared to the industrial labour. They suggest that urgent steps should be taken to assess the optimum requirements of supervisory staff and to fix the strength at that level.

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The Committee observe that the clerical strength had been increasing in recent years. They were told that one of the reasons for this was that paper work in these factories had increased in recent years due to hundreds of returns being asked for by various authorities. The Committee consider this unfortunate in a defence industry and suggest that practical steps should be constantly devised and introduced to keep paper work and red tape to the minimum.

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The Committee feel that the staff in the Ordnance Factories is definitely on the high side and recommend that early steps should be taken to determine on a scientific basis the norms and workloads for the various categories of staff in the Ordnance Factories, and to fix their strength on that basis. In this connection, they also suggest that a comparative study should be undertaken of the strength of various categories of staff in the industrial establishments in the civil sector, both public and private.

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The Committee suggest that the prize bonus scheme at present in vogue should be given wide publicity among the employees so as to derive the best results. They also suggest that other steps such as active association of labour with works and production committees, more congenial surroundings and atmosphere of work, educating the labour for fostering discipline, loyalty, etc., should be taken to increase the output of labour, both industrial and non-industrial.

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The Committee feel that the incidence of absenteeism in the Ordnance Factories can be lessened to a great extent by providing some incentives to the workers. They recommend that the authorities should examine the possibility of introducing th

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system of high attendance rewards in the Ordnance Factories. They also suggest that Labour Officers should make it a point to visit the absent workers at their houses, wherever possible, so as to find out the cause of absence and to explore ways and means of helping the workers to desist from remaining absent.

- 26 42 The Committee feel that a hierarchy of supervisory staff is not always conducive to efficiency or productivity of labour. They recommend that the question of rationalising the number of grades of staff working in the Ordnance Factories may be examined expeditiously. They also recommend that the feasibility of introducing a Class II gazetted service in the Ordnance Factories should also be considered.
- 27 44 The Committee learn that only about 45% of the total labour strength and 75% of the direct labour strength in the Ordnance Factories is governed by the piece-work rate system of payment, *i.e.*, payment by results. They recommend that the system should be extended as far as possible to all the direct labour strength in the Factories as it provides the necessary incentive to the industrial staff to improve the production as well as their earnings. They suggest that the feasibility of extending this system of payment to other categories of staff may also be considered.
- 28 45 The Committee understand that in the Chittaranjan Locomotive Works it has been found possible to increase the output of labour under a Labour Incentive Scheme. The Committee suggest that a comparative study of the system prevailing in the Chittaranjan Locomotive Works and that in the Ordnance Factories may be undertaken to see in what way the method can be improved to make it scientific and modern.
- 29 46 The Committee understand that the system followed by ratefixers in fixing the piece-work rates is by no means modern or scientific. As this affects the production costs and the earnings of employees the Committee recommend that immediate steps should be taken to introduce modern scientific methods of time and motion study by securing

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where necessary co-operation from Technical Co-operation Administration and similar other International organisations for the purpose.

- 30 47 At present there is no uniform formula for determining the rank of Security Officers employed in the Ordnance Factories. The Committee recommend that the position may be reviewed so as to bring some sort of uniformity in the appointment of these Officers.
- 31 48 It is by no means flattering that the Works Committees on which labour as well as management are represented have not succeeded in reducing strikes or even absenteeism and the not uncommon go-slow tactics of labour. While every measure should be adopted to improve this position by persuasive as well as educative methods, the Committee consider it necessary that the disciplinary aspect of the labour problems in the Ordnance Factories also needs to be given due attention and that acts of indiscipline should be sternly dealt with. The Committee were informed that the question of simplifying the procedure for disciplinary proceedings in the case of civilians in the Defence installations was under consideration. While hoping that a decision on this question will be expedited the Committee recommend that this question be had comprehensively examined in the light of the remarks made earlier in consultation with Law, Labour and Home Ministries as well as Labour representatives and Members of Parliament well-versed with the problem so as to evolve for the employees in Defence installations a satisfactory disciplinary Code which would take into account the peculiar security considerations attached to them and yet meet in some measure the legitimate aspirations of labour.
- 32 50 The Committee regret to observe that the Works Committees in Ordnance Factories have not been as effective and comprehensive in their working as they were intended to be. They feel that the success of such committees would depend largely on mutual goodwill, co-operation and understanding which could only be secured by a sympathetic approach to the problems of labour. They, therefore, consider that a reorientation of
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- attitude towards the employees is called for, whereby they should be made to realise that they were partners in the national development and production programmes. They hope that Government would take steps to forge the Works Committees into effective instruments of mutual consultations not merely for removal of the grievances of labour but also to inculcate an attitude of co-operation and loyalty among the workers.
- 33 51 The Committee consider that the industrial and non-industrial staff, especially in the low-paid categories, should be provided with residential accommodation on a larger scale than at present particularly because alternative accommodation within a reasonable distance from the Factories is not available.
- 34 54 The Committee suggest that necessary measures should be taken to ensure adequate educational facilities for the children of the employees of Ordnance Factories at all places and this work should not be left entirely to the State Governments. They recommend that to facilitate matters, buildings may, where possible, be provided by Factory authorities for being used as Schools by the State Governments.
- 35 56 The Committee learn that the Medical Re-organisation Committee has submitted its report regarding the medical facilities in the Ordnance Factories. They hope that final decisions on this report and action thereon will be taken at an early date.
- 36 58 The Committee suggest that steps may be taken to establish co-operative societies in the Ordnance Factories to impart training in handicrafts to workers and their families in the spare time.
- 37 62 The Committee suggest that with a view to stimulating interest in the employees in their affairs the management of the Labour Welfare Fund should be entrusted entirely to the representatives of workmen.
- 38 65 The Committee are very much concerned at the consistently high rate of expenditure on account of Injury Pay in the Ordnance Factories. They suggest that reasons for this high expenditure on Injury Pay should be carefully investigated.
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and action taken to reduce it. For this purpose they recommend that co-operation of workers may be sought by setting up Safety Committees consisting almost wholly of labour representatives to suggest ways and means to prevent frequent accidents.

- 39 69—70 The Committee were surprised to learn that there were no special arrangements for the training of Assistant Works Managers. They feel that the feasibility of having a common school for providing basic training to Assistant Works Managers in common subjects *viz.* organisational matters, personnel management, industrial relations, cost control, planning, production control etc. should be examined. The possibility of reducing their period of training (three years at present) may also be considered.
- 40 71 The Committee feel that the present bond taken from Assistant Works Managers under training hardly serves any purpose and suggest that more realistic, practical, and long term means including bonds, should be devised to bind the officers to remain in service willingly. They also suggest that an examination of the bonds now being taken from Apprentices and Artisans and other categories of staff may also be undertaken.
- 41 76 The Committee feel that the present arrangement for the training of apprentices in eleven different factories is not conducive to the efficient and economic working of the Scheme. They suggest that the feasibility of centralising the apprentice training Schemes on regional or Zonal basis and also of rationalising the training courses may be carefully considered. Further until this is done, the question of centralising this Scheme under the Principal, Artisan Training School may also be examined.
- 42 80 The Committee suggest that the valuation of examination papers in connection with the selection of candidates for Artisan Training at present done locally in the Factories should be centralised in order to bring about uniformity in the standards.
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- 43 82 The Committee suggest that the feasibility of reducing the period of training under the Artisan Training Scheme should be examined afresh in the light of the recommendations of the Rolls Royce Engineers and with reference to the position as it exists in other industries in India and elsewhere. As a practical suggestion they suggest that the preliminary training be reduced by one year and the journeymanship increased by six months so as to provide increased practical experience and at the same time to reduce the overall training by six months.
- 44 83 The Committee suggest that the feasibility of introduction of double shift system in the Artisan Training School to meet the requirements of technicians not only in the ordnance factories but also in other industries in the public and private sectors may be examined. They feel that the only difficulty in this connection *viz.* the absence of sufficient hostel accommodation for the trainees could easily be surmounted.
- 45 86 The Committee understand that promising and meritorious artisan trainees, are selected as Supervisors in the Ordnance Factories. They consider that the provision of such incentives is essential for maintaining a high standard of efficiency among the trainees.
- 46 89 The Committee are surprised to learn about the shortage of draughtsmen in Ordnance Factories in spite of the Draughtsmen Training Scheme in nine factories. They feel that either the requirements of draughtsmen are not properly assessed or the training facilities are not fully utilised by the authorities. The Committee consider the state of affairs as very unfortunate.
- 47 89 In view of the better training facilities for draughtsmen at the Artisan Training School, Ambarnath, the Committee feel that the continuance of the training scheme at the nine factories is unnecessary. They recommend that the Training Scheme at the Artisan Training School should be made permanent and expanded further to meet the requirements of draughtsmen in all the Factories.
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- 48 91 The Committee enquired into the necessity for recruiting trainees for both senior and junior posts in the same category and of having two separate schemes for this purpose when there was very little difference in their qualifications and period of training. They do not find any justification for making the schemes for recruitment to senior posts permanent. They recommend that direct recruitment to these senior posts should not normally be made after the existing vacancies are filled and that recruitment to such posts should be made by promotion from the junior posts. This would provide opportunities to the employees in the junior grade and also raise their efficiency and morale.
- 49 92 The Committee do not appreciate the existence of same training schemes in different factories. They suggest that the feasibility of centralising these training schemes may be examined.
- 50 93 The Committee are pained to observe that sufficient attention has not been paid to improve the standard of the training of Rate Fixers. They hope that early steps will be taken to make up the deficiency.
- 51 96 In view of the prevailing shortage of machine tool Designers in the country the Committee hope that the Scheme of training designers will be worked out in such a way so as to provide training facilities to persons belonging to other undertakings besides the Ordnance Factories.
- 52 98 The Committee observe that the annual intake of trainees in the Ordnance Factories is very low *viz.* 2% of the total strength of the staff in relevant categories. They recommend that the requirements of labour and staff should be worked out on a realistic and long term basis and that the training schemes should be expanded to meet them.
- 53 100 The Committee suggest that special steps be taken to meet the shortages of highly skilled craftsmen as these continued shortages are bound to affect the efficiency and economic functioning of Ordnance Factories. In this connection the Committee commend similar steps as have been recommended in the case of Asstt. Works Managers (Recommendation No. 1 above).
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54	101	The Committee feel that the proposed scheme for the training of Instructors is very essential and hope that the same will be implemented without any delay.
55	102	In such undertakings as the Ordnance Factories it desirable and essential to have a system of refresher courses. The Committee recommend the introduction of short refresher courses for members of the supervisory staff drawn from the whole organisation. The curriculum of training may include subjects like managerial functions, industrial relations and problems, factory expenditure, cost control etc. The Committee would like to stress that due emphasis should be laid on the subject of cost control and thereby efforts may be made to make the staff of Ordnance Factories more cost conscious. In the Committee's view the value of this training would be further enhanced if in addition to the training instructors senior members of managerial staff of the Factories and the technical colleges are also invited to give lectures to the trainees of the school.
56	103	The Committee suggest that schemes like the "Training within Industry" at present prevalent in the U.S.A. and some of the European Countries should be introduced on a wider scale in all public undertakings in India, including the Ordnance Factories.
57	104	In connection with certain training Schemes prevalent in the Ordnance Factories the Committee have suggested that the feasibility of their centralisation may be examined. The Committee consider that the Artisan Training School, Ambernath is an excellent example in this direction which deserves to be emulated in the case of other schemes. They feel that this question should be examined comprehensively by a Committee consisting of the the Principal, Artisan Training School, Senior Officers and one or two representatives of technical training Institutions in the country. They suggest that while considering this question, the desirability of locating elementary as well as intermediate training centres on a regional basis and having advance central schools may also be considered. The Committee recommend that such a Committee may be set up at an early date and may be asked

to examine all the training schemes existing at present with a view to their being rationalised and streamlined to facilitate recruitment, training and employment.

- 58 105 It was pointed out to the Committee that due to the existence of idle labour in the Ordnance Factories and various other considerations the atmosphere in the Ordnance Factories was not healthy and conducive for the training of boys. It was suggested that the training schemes should not exist within the Factories or near them. The Committee feel that the above suggestion deserves consideration. They further suggest that the feasibility of implementing it gradually to the extent possible at least for the more important and new training schemes or at least of safeguarding the risks pointed out should be explored.
- 59 107 The Committee observe that a few trainees from the Artisan Training School have been transferred or earmarked for certain Government undertakings other than the Ordnance Factories. While the Committee appreciate this action they feel that the persons were given to other industries at the cost of equally pressing needs of the Ordnance Factories which are equally short of trained personnel. Further the training of craftsmen for other industries on such a small scale is hardly sufficient. The Committee feel that co-ordinated efforts on the part of all the Ministries of the Government and the industries concerned are urgently called for to solve this vital problem from an all-India angle. At present every big industry either sets up its own school to train the technical personnel required by it or prefers to get trained men on a small scale from a neighbouring training institution. The Committee consider that such compartmental approach is very unsatisfactory. They feel that facilities existing in Government factories, in general and Ordnance Factories in particular should be available for training skilled workers in the entire country. The Committee, therefore, recommend that the All India Council of Technical Education in association with other interested Ministries and private industries should conduct a thorough survey of the existing facilities for technical training in the country and draw up a coordinated plan to meet the present and future requirements of technical personnel.
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60	108	The Committee suggest that the question of award of suitable diplomas/certificates by the various training institutions in the Ordnance Factories which would be recognised all over the country should be examined.
61	110	The Committee cannot over-emphasise the desirability of making the best use of the limited facilities for training in foreign countries afforded to this country under various agreements and of getting as many men trained as possible in various specialised branches, particularly the manufacture of modern arms and ammunition. They hope, therefore, that more personnel would be had trained abroad in the years to come. At the same time, they feel that the services of those trained abroad should be utilised to the maximum extent possible in training others in the organisation.
62	111	The Committee suggest that to make the various training schemes more effective, audio-visual methods like short films on factory problems <i>e.g.</i> cost control, labour management etc. may be adopted.
63	111	The Committee suggest that with a view to increasing the efficiency of the Factories selected members of non-industrial and industrial staff may be encouraged to visit other factories engaged in the manufacture of similar products.
64	111	The Committee suggest that the non-industrial staff may be encouraged to acquire technical qualifications and the same be recognised in deserving cases through the grant of advance increments etc.