7

STANDING COMMITTEE ON DEFENCE (2005-06)

FOURTEENTH LOK SABHA

MINISTRY OF DEFENCE

DEFENCE ORDNANCE FACTORIES

SEVENTH REPORT

LOK SABHA SECRETARIAT
NEW DELHI

December, 2005/*Agrahayana,* 1927 *(Saka)*

SEVENTH REPORT

STANDING COMMITTEE ON DEFENCE
(2005-06)

(FOURTEENTH LOK SABHA)

MINISTRY OF DEFENCE

DEFENCE ORDNANCE FACTORIES

Presented to Lok Sabha on 12.12.2005
Laid in Rajya Sabha on 12.12.2005

LOK SABHA SECRETARIAT
NEW DELHI

December, 2005/*Agrahayana,* 1927 *(Saka)*

C.O.D. No. 69

Price : Rs. 30.00

Published under Rule 382 of the Rules of Procedure and Conduct of Business in Lok Sabha (Eleventh Edition) and Printed by Jainco Art India, New Delhi-110 005.

CONTENTS

COMPOSITION OF THE STANDING COMMITTEE ON DEFENCE (2005-06)

Shri Balasaheb Vikhe Patil—*Chairman*

MEMBERS

Lok Sabha

2. Shri Churchill Alemao
3. Shri Iliyas Azmi
4. Shri A.V. Bellarmin
5. Shri Suresh Chandel
6. Shri Thupstan Chhewang
7. Smt. Sangeeta Kumari Singh Deo
8. Shri Milind Deora
9. Shri Ramesh Jigajinagi
10. Shri Suresh Kalmadi
11. Dr. C. Krishnan
12. Shri S.D. Mandlik
13. Dr. K.S. Manoj
14. Shri Raghuraj Singh Shakya
15. Shri Mahadeorao Shivankar
16. Shri Ganesh Prasad Singh
17. Shri Manvendra Singh
18. Shri Balashowry Vallabhaneni
19. Ms. Ingrid Mcleod
20. Shri Dharmendra Yadav

Rajya Sabha

21. Shri R.K. Anand
22. Dr. Farooq Abdullah
23. Shri T.T.V. Dhinakaran
24. Smt. N.P. Durga

25. Shri Janardan Dwivedi
26. Shri Pramod Mahajan
27. Shri Mukhtar Abbas Naqvi
28. Shri Anand Sharma
29. Shri Lalit Suri

SECRETARIAT

1. Shri John Joseph	—	*Secretary*
2. Shri S.K. Sharma	—	*Additional Secretary*
3. Shri R.C. Ahuja	—	*Joint Secretary*
4. Smt. Anita Jain	—	*Deputy Secretary*
5. Shri D.R. Shekhar	—	*Under Secretary*
6. Shri Nilendu Kumar	—	*Senior Executive Assistant*

PREFACE

I, the Chairman, Standing Committee on Defence (2005-06) having been authorised by the Committee to submit the Report on their behalf, present this Seventh Report on the subject 'Defence Ordnance Factories'.

2. The subject was selected for examination by the Standing Committee on Defence (2004-05). As the examination of the subject remained inconclusive, it was re-selected by the Standing Committee on Defence for examination during the year 2005-06.

3. The Committee, during their examination of the subject, took evidence of the representatives of the Ministry of Defence on 24 May and 2 June, 2005. The Committee also undertook an on-the-spot study visit to some Ordnance Factories in Chennai and Pune during September-October 2005 for an in-depth analysis of the subject matter.

4. Based on the background note, written replies to the list of points furnished by the Ministry of Defence on the subject, briefing/ oral evidence tendered by the representatives of the Ministry, including the Chairman, Ordnance Factory Board, and the observations made by the members of the Committee during the Study visit, the Committee finalised the draft Report at their sitting held on 8 November, 2005 and adopted it at the sitting held on 23 November, 2005.

5. The Committee have strongly recommended that the Ordnance Factories should change their character and gradually should be converted into PSUs according to their groups. The Committee also recommend that the idle capacity should be fully utilized for export market/Defence sector. The revenue thus earned from exports should be utilized for modernization and upgradation of the Ordnance Factories.

The Committee feel that no new Ordnance Factories should come up and in case of requirement, the existing capacity and facilities should be enhanced. In-house R&D activities by the Ordnance Factories should be undertaken on large scale for product upgradation.

6. The Committee wish to express their thanks to the representatives of the Ministry of Defence for appearing before the Committee for evidence and for furnishing the material and information in a very short span of time which the Committee desired in connection with the examination of this subject.

7. For facility of reference and convenience, the observations/ recommendations of the Committee have been printed in thick type in the body of the Report.

NEW DELHI;
5 *December,* 2005
14 *Agrahayana,* 1927 *(Saka)*

BALASAHEB VIKHE PATIL,
Chairman,
Standing Committee on Defence.

CHAPTER I

INTRODUCTION

1.1 Ordnance Factories are an integrated base for indigenous production of defence equipment and ammunition and form the backbone of the country's defence production. Defence production is a highly specialised sector full of complexities and challenges, where products have to be safe, reliable, consistent and capable of operating under varying terrains as well as climates and in extreme conditions. Accordingly, the technologies applied, which cover a wide spectrum of engineering, metallurgy, chemical, textile, leather, optical technologies etc. have to ensure high quality and productivity, apart from meeting the primary objective of self-reliance. Ordnance Factories also fulfil certain requirements of Paramilitary and Police Forces for arms, ammunition, clothing and equipment. Ordnance Factories endeavour to enhance their capacity utilization not only by securing orders from the defence forces but also through sustained efforts in diversification to non-defence customers and exports. However, priority of the Ordnance Factories is indigenous production of defence products only.

1.2 They produce a wide range of arms and ammunitions for the Infantry, Artillery, Air Defence Artillery and Armoured Corps of the Army. Ordnance Factories produce ammunition for Navy and Air Force and have taken up indigenous development of naval armaments. The factories produce military transport vehicles, infantry combat vehicles, armoured vehicles, optical and opto-electronic instruments, summer and winter uniforms, parachutes, miscellaneous leather goods and general stores.

1.3 Indian Ordnance Factories Organisation has completed 200 years of its existence. The Ordnance Factories Organisation is a fine blend of old and state-of-the-art factories, with the first Ordnance Factory established in 1801 at Cossipore, near Kolkata, and the 40th factory being set up at Nalanda, Bihar for production of Bimodular Charges. The 40 Ordnance Factories are geographically distributed all over the country at 25 different locations. The emphasis has shifted from production of basic, intermediate inputs to production of finished stores by outsourcing intermediate sub-assemblies from the private sector.

1.4 39 Ordnance Factories are divided into 5 operating divisions, based on the main products/technologies employed:

(a) Ammunition & Explosive (A&E)—10 Factories

(b) Weapons, Vehicles and Equipment (WV&E)—10 Factories

(c) Materials and Components (M&C)—09 Factories

(d) Armoured Vehicles (AV)—05 Factories

(e) Ordnance Equipment Group of Factories (OEF)—05 Factories

A statement containing details of the establishment of various Ordnance Factories alongwith their major products is appended in Annexure-A.)

1.5 The Committee, in order to have a better understanding of the working of Ordnance Factories, visited the following Ordnance Factories during their study tour on 27 September and 4 October 2005:—

(i) Heavy Vehicle Factory, Avadi

(ii) Clothing Factory, Chennai

(iii) High Explosive Factory, Khadki (Pune)

(iv) Ammunition Factory, Khadki (Pune)

1.6 During their visit, the Committee had wide range discussions with Chairman Ordnance Factory Board, General Managers and other officers on various aspects of working of Ordnance Factories. The Committee also had briefing/evidence of officers of Ministry of Defence on the subject.

1.7 The Committee note that 39 Ordnance Factories are divided into 5 operating divisions based on the main products/technologies employed. 40th Ordnance Factory has been established at Nalanda for production of Bimodular Charges. The Committee feel that it is essential that Ordnance Factories, which are producing same kind of products, should be merged/integrated into one in order to synergise their resources and R&D and ensure optimal use of available manpower and infrastructure. For the purpose the Committee strongly desire that a Task Force of experts be constituted by the Government to go into the details of restructuring/merging of existing Defence Ordnance Factories. The Committee also desire that no new Ordnance Factory should come up and during the process of restructuring/ merging of Ordnance Factories labours' interest must be protected by the Government.

CHAPTER II

ORGANISATIONAL STRUCTURE OF ORDNANCE FACTORY BOARD

2.1 Ordnance Factory Board was set up in 1979 to provide for a cohesive, effective and coordinated working of Ordnance Factories based on the recommendations of an expert & high powered Committee (Rajadhyaksha Committee). The Ordnance Factory Board is headed by Director General who is also referred to as Chairman of the Board. The Board has 9 members in the rank of Addl. DGOF. Five Members of the Board head each of the operating divisions of factories. The four remaining Members are responsible for staff functions *viz*. Personnel, Finance, Planning and Management, Projects & Engineering and Technical Services. The Ordnance Factory Board operate from Kolkata.

2.2 In addition to the above, there is also an extended Board/ Special Board which consists of the following Part-time Members apart from Chairman/OFB and nine full-time Members of Ordnance Factory Board:—

(a)	MGO	(Representative of Army)
(b)	Chief Controller R&D	(Representative of DRDO)
(c)	DGQA	(Representative of Quality Assurance Organization)
(d)	Joint Secy. (OF)	(Representative of M of D)
(e)	Addl. Financial Adviser	(Representative of M of D/Finance)

2.3 The Ministry informed that Ordnance Factory Board meets once a month. The Special Board meets twice a year.

2.4 On Committee's query if there is any proposal/need to change the composition of Ordnance Factory Board to make it more professional by associating experts from private sector in the Board, the Ministry stated:—

> "There is no proposal to change the composition of the Board. Experts from private sector cannot be associated in the Ordnance Factory Board, as it is purely a government body.
>
> To make it more professional, two senior officers *viz*. Master General of Ordnance (MGO) and Directorate General of Quality

Assurance (DGQA) are in the Board to represent the users and their interest on quality aspects. There is also the representation from MOD as well as DRDO including Additional Financial Advisor to provide appropriate inputs and perspective for planning resources, upgrading technology demanded by products and processes and on various other related issues, necessary for functioning of the OFB."

2.5 The Committee note that Ordnance Factory Board (OFB) was constituted in 1979 in order to ensure cohesiveness and coordinated approach in the working of Ordnance Factories. It comprises, besides Director-General, nine members, five heading each of the five operating divisions of Ordnance Factories and four responsible for staff functions *viz*. Personnel, Finance, Planning and Management, Project and Engineering and Technical Services. The Committee feel that in view of the rapid technological advancement taking place the world over in defence sector and the export potential of the defence equipment, there is a need to redefine the role of OFB to enable it to keep pace with the changing requirements and also to tap the vast export market. There is also a need to restructure OFB by including therein experts with proven records in marketing and international trade who may give an export orientation to the indigenously manufactured defence products and make effective strategy for their export in the niche market. The Committee, therefore, recommend that a high level Committee should be constituted to go into the functions and organisational structure of OFB and give its recommendations on restructuring of OFB to make it a more professional and dynamic body responsive to the present day needs.

2.6 The Committee note that in the extended Board there are four more members who represent the Army, Defence Research & Development Organisation, DGQA and Ministry of Defence. The Committee desire that there should be a three-tier system with clear delegation of powers for better performance at Apex, Middle and Floor levels with interface between the Ordnance Factories, users and DRDO.

2.7 The Committee also note that the Special Board Members meet only twice a year. The Committee recommend that the number of sittings be increased in order to ensure better interface between DRDO, OFB and users. The Committee also recommend that the performance of the Ordnance Factories should be periodically/ annually reviewed by the OFB.

CHAPTER III

AUTONOMY/FREEDOM TO ORDNANCE FACTORIES

3.1 The Committee enquired if the Ministry is satisfied with the autonomy given to Ordnance Factories, the Ministry in a written note stated:—

> "Ordnance Factories function like a Government Department under the administrative control of the Department of Defence Production in the Ministry of Defence. Ordnance Factory Board was set up in 1979 to provide more flexibility and autonomy in management of Ordnance Factories. There is a need to give greater autonomy to the Management of Ordnance Factory Board for vendor development, product improvement and development and making commercial decisions. The Ministry is currently examining the issues for arriving at a decision with regard to the form of the management structure required to allow greater autonomy."

3.2 When the Committee asked about the prospects of granting greater autonomy and freedom to Ordnance Factories, the Ministry, in their written note, have stated as below:—

> "Ordnance Factories have been given autonomy and flexibility with the creation of an Ordnance Factory Board. Board has been functioning according to the administrative and financial rules of the Government of India, which have been laid down by Ministry of Finance and Department of Personnel. Within this framework sufficient autonomy has been given.
>
> OFB has been demanding freedom for quality assurance and inspection activities, integration of finance function and freedom to enter into MoU for co-development and co-production. Ministry has given the task of vendor development and inspection of input material to Ordnance Factories to ensure better quality and accountability."

3.3 On being asked by the Committee regarding merits and demerits of the grant of status of Defence PSUs to Ordnance Factories, the Ministry have stated as under:—

> "Ordnance Factories function as a Government Department and are accordingly governed by the applicable rules and regulations.

As an established National Policy Ordnance Factories are also required to maintain idle capacities to take care of surge demand in emergent war situation. In a purely commercial term, maintaining idle capacity would be detrimental to the business interest of the company (PSU) and would appear to be a reason for low performance in terms of turnover and profits. In turn, it would also place such DPSUs in disadvantageous position in a competitive environment.

A Public Sector Undertaking has got more autonomy and flexibility in decision-making. Most of the decisions related to operations, finance, human resources etc. can be taken by the Management of PSU. It has the freedom to enter into alliances with other industries for diversifying its product profile and markets. A PSU Board will have more flexibility as well as compulsions to face the competition and take adequate steps for growth."

3.4 Regarding the necessity of autonomy in Ordnance Factories, Chairman, OFB, stated during an oral evidence as detailed below:

"The major constraint for us is that there is autonomy problem. There is no autonomy like the Railways. The Railways is also a Government Department, but it has full autonomy. We do not have that. The accountability for quality of inputs is defused.

If it is made PSU, there is both plus and minus sides to it. Now, we have been given an order stating that we can have the input material inspection. This is being finalized. In case of financial advice, the role of finance is more of less limited to audit functions. The autonomy for making investments as per the market requirement is not with us today. The action of procurement for inputs can be initiated only on receipt of the targets backed by firm indents. Investment is restricted only to meet defence requirement. If I have to create capacity only with reference to the Armed Forces' requirements, then with that capacity if we are asked to export items or expand customer base, we find it a little difficult. The production capacity is created for meeting wartime requirements, but the wartime requirements do not remain all times. Many a time the peacetime requirement is very less, and there is uncertainty of load."

3.5 He further stated:

"We have no control over product-mix. We did not have the mandate for doing the research ourselves. We do not have,

therefore, adequate research & development and marketing infrastructure. So, in all these proposals, OFB should have full administrative & functional control over finance & accounts and autonomy for making strategic investment and procurement decisions. The Army Headquarters should give us a 4-year roll-on supply plan so that we can plan the input material in advance. OFB may be authorized to make financial commitment for targeted items without awaiting indents. Now we have been given permission to procure inputs for 25 per cent of target quantity in absence of indents."

3.6 The Committee note that with the creation of Ordnance Factory Board (OFB), Ordnance Factories have been given some autonomy and flexibility in their functioning and management. Still, the Committee feel that greater autonomy is required to be given to the Management of OFB. Keeping in view the wide range of changes taking place the world over and requirement of specialisation in the complex defence field, the Committee desire that the Government must change its policy and give greater autonomy to the Ordnance Factories in the field of vendor development, in-house R&D activities, product improvement and making financial and commercial decisions on the lines of Public Sector Undertakings. This will enable them to enter into MoU with Indian and foreign companies for co-development and co-production of items, giving enormous scope for diversification of their product profile and attracting huge markets.

3.7 The Committee feel that more functional and financial autonomy to Ordnance Factories will help in ensuring desired results, fixing greater accountability and maintaining better financial management. The Committee, therefore, hold the view that gradually, the Ordnance Factories may be converted into PSUs so that they may have access to finances from the market, etc. At the same time, care should be taken by the Government to ensure that this arrangement of financial access does not lead to any reduction in the budgetary allocation to the Ordnance Factories and OFB.

CHAPTER IV

SHARE OF ORDNANCE FACTORIES IN TOTAL DEFENCE PRODUCTION

4.1 On being asked by the Committee on Share of Ordnance Factories in Defence Production turnover for the last five years, the Ministry submitted the details as under:

Turnover	2000-01	2001-02	2002-03	2003-04	2004-05
OFs	5535.83	6031.00	6508.05	6523.87	6150.30
DPSUs+OFs	13202.41	13949.38	15296.51	16416.60	17270.68
%Share of OFs in Defence Production turnover	41.93%	43.23%	42.55%	39.74%	35.60%

4.2 When enquired about the reasons for decrease is percentage share of Ordnance Factories in defence production, the Ministry have stated as under:

> "Supply from Ordnance Factories to Defence Sector depends on the annual target given by the Defence Force, based on operational requirement, fund availability and relative priority of the items required."

The Committee was informed that in the year 2004-05 there were orders but in order to meet fiscal discipline, the value of issues came down. However, the annual turnover in 2005-06 will jump to higher figure.

4.3 When the Committee desired to know the financial growth of the Ordnance Factories over the last 5 years, the Ministry have furnished the following details:

Value of issues to Armed Force and sale to non-Defence sector of Ordnance Factories, for the last 5 years is given, as under:

(Value in Rs. Crore)

Indentor Year	Defence Sector Amount	Non-Defence Sector Amount	Total Amount
2000-01	4927	609	5536
2001-02	5312	719	6031
2002-03	5635	873	6508
2003-04	5547	977	6524
2004-05	5197	953	6150

4.4 The Committee desire that Ordnance Factories should speed up efforts to produce new items to match the changing requirements of the Defence Forces so that imports are reduced and Ordnance Factories' share in supplies to Defence Forces increases. The Committee further recommend that besides fulfilling the requirements of Defence Forces, Ordnance Factories should strive to give market orientation to their products so that various other organisations in non-defence sector also approach them to buy their products as per prevailing market price.

CHAPTER V

CAPACITY UTILIZATION OF ORDNANCE FACTORIES

5.1 When asked if sufficient orders are being placed by Armed Forces and Para-Military Forces with Ordnance Factories, the Ministry, in written reply, stated:

"The details of capacity utilization of all the 39 Ordnance Factories for the last 5 years is annexed. The capacity of the organization as a whole is fully utilized though sometimes the capacity in a particular area may remain under-utilized for a brief period. The capacity utilization of the organization as a whole during last 5 years is a under:

(Numbers in Lakh)

	2000-01	2001-02	2002-03	2003-04	2004-05
Input man-hours	1463.89	1428.74	1399.41	1362	1341
Output man-hours	1891.66	1880.11	1905.39	1911	1998
%Capacity Utilization	129.2	131.56	136.2	140.3	149.2

Continuous endeavour is made by Ordnance Factories to diversify their product range and establish new products/upgrades to maximize capacity utilization in each area. Ordnance Factories are also being modernized for better products, productions and economy.

Supply to Defence sector is based on annual target given by Defence Forces. Defence Forces make efforts to place orders/indent for targeted items at the beginning of the financial year. At macro level sufficient order exists with Ordnance Factories both from Defence Forces and Para Military forces and Ordnance Factories are likely to achieve turnover of Rs. 7240 crore during 2005-06 compared to turnover of Rs. 6157.31 cores achieved in 2004-05. Further, a constant dialogue is made with the Defence Forces to secure order in the area where capacity utilization is likely to be low.

A perspective plan has been made in consultation with the Defence Forces and DRDO to plan resources including capacity creation to cater for both existing and new products being planned for introduction in services. However creation of production capacity is exclusively driven by the requirement projected by the

Defence Forces. The annual off-take from the Defence Forces varies depending on operational requirement. Capacity, remaining surplus, after meeting the requirement of the Defence Forces, is utilized by supplying to the non-Defence sector."

5.2 In a clarification as to how capacity utilisation in Ordnance Factories was low while productivity is shown as high, the Ministry of Defence in a written note have stated as under:

"Capacity utilization in Ordnance Factories is measured in terms of (i) labour productivity and (ii) exploitation of available plant and machinery. Labour productivity is computed as a ratio of output time, a product of number of pieces/jobs produced and time allowed per piece based on industrial norm, to actual time. Human Resource Development Plan in Ordnance Factories continuously attempts to improve skill and motivate employees to produce more. This alongwith incentive scheme has enabled Ordnance Factories to improve labour productivity over the years even after reducing allowed time whenever technology upgradation takes place or business process is reengineered.

Plant and machinery capacity is created for production as per requirement projected by the Defence Forces. A group of plant and machinery installed to take care of projected quantity of a product cannot be uniformly utilized as the cycle time of the component manufactured in each machine is different. Output of this group of machine centres depends on exploitation of the most critical machine of the group and the other machines may have slack time. Change in product mix or variation of actual demand with quantity projected during capacity creation also create imbalance in capacity utilization of each machine. Further, product specific machine may remain idle when the product is not being indented. As such machine capacity utilization calculated on the basis of time available for total population of machines and their utilization is less than labour utilisation.

5.3 When asked about the capacity utilization of Ordnance Factories *vis-a-vis* production capacity of the infrastructure, the Ministry have furnished the following figures:

(In lakh hours)

	2000-01	2001-02	2002-03	2003-04	2004-05
Available	2190.47	1917.05	1823.82	1733.88	1753.54
Utilised	1748.41	1432.45	1356.12	1310.65	1302.62
% Utilisation	79.82	74.72	74.36	75.59	74.28

5.4 On being asked by the Committee about the necessity of idle capacity to be maintained to meet the emergent requirements, the Ministry have stated as follows:

> "Certain amount of idle capacity is required to be maintained to take care of surge in demand in emergent war situation. The difference between the surge capacity and capacity required to execute annual target given by Defence Forces is utilized by effecting supply to non-Defence sector. At present about 15% of total turnover of Ordnance Factories are utilized for producing the items for Ministry of Home Affairs and civil trade. Ordnance Factories have supplied products worth Rs. 953 crore to non-Defence sector during 2004-05, compared to supply worth Rs. 5197 crore to Defence sector."

5.5 During the oral evidence, a representative of the Ministry of Defence further informed:

> "The requirement of the existing products from the Indian Armed Forces is stagnant. There is an authorization level for every item for the Armed Forces and once the authorization level is met then we get very small orders. That is what we mean by stagnant requirement. There has been changes in geo-political scenario. The threat perception has changed and because of that it poses a new challenge. The war technology has also changed. Now more of electronic warfare is coming into play. The opening of Defence sector to private sector is a challenge as well as an opportunity which we have taken up and we are sure we will be able to compete."

5.6 During the study visit of the Committee to the Heavy Vehicles Factory at Avadi to see the production of Arjun Tanks that were developed indigenously by Defence Ordnance Factory as per design and technology developed by DRDO, when enquired about the orders received from Armed Forces for supply of Arjun Tanks, the Ministry stated that Ordnance Factories have received an indent for supply of a significant number of Arjun Tanks. Some tanks have been produced and some more have been slated for production during current year. The remaining tanks will be supplied in 2006-07 and 2007-08.

5.7 The Committee note that creation/utilisation of production capacity is exclusively driven by the requirements projected by the Defence Forces and the remaining surplus capacity is utilised for meeting the requirements of the non-defence sector. The Committee

also note that some idle capacity is maintained by the Ordnance Factories to take care of the surge in demands of the Defence Forces in an emergent war situation.

The Committee are of the view that the idle capacity should be utilized fully for catering to the International export market; and in case any emergent situation arises, the entire capacity can be fully utilized to meet the requirements of the Defence Forces. This will help in ensuring increased productivity, optimum resource and capacity utilization and better quality of the products, thereby making them more competitive. In this connection, the Committee also stress that the Ordnance Factories should concentrate on specialized and high-end defence products.

5.8 The Committee are concerned about the delay in production of Arjun Tanks and hope that the obstacles coming in the way of final production of Arjun Tank would be taken care of by the Defence Ordnance Factory in coordination with the DRDO and the shortcomings would be corrected expeditiously so that the supply of required number of tanks could be provided to the user as envisaged.

CHAPTER VI

MODERNIZATION PROGRAMME OF ORDNANCE FACTORIES

6.1 Modernization of infrastructure is a continuous process in Ordnance Factories with a view to update the plants and machineries matching both qualitative and quantitative requirement of the products projected in the perspective plan.

6.2 The Committee enquired about the amount of investment projected on modernization *vis-à-vis* investment made by Ordnance Factories, the Ministry in a written note stated:

The details of amount of investment projected on modernization *vis-à-vis* investment made by Ordnance Factories are as under:

(Value in Rs. Crore)

	2000-01	2001-02	2002-03	2003-04	2004-05
Projection	219	321	328	261	265
Actual Investment made	223	329	327	255	290

The total requirement projected by the Ordnance Factories for modernization purpose, approved by the Ministry and fund utilization by OFB during the last three years is given as under:

(Rs. in crore)

Year	Projection by OFB	Allocation by MoD	Utilization by OFB
2002-03	322	322	328
2003-04	280	280	255
2004-05	257	257	264

6.3 When asked by the Committee about the reasons for reduction in investment in 2003-04, the Ministry in their written reply have stated as follows:

"Modernization is a continuous process in Ordnance Factories to update the plant and machineries. The plan has been made based

on continuous interaction with the Armed Forces and DRDO to cater to the needs of both existing and new products identified for induction into the Services and is reviewed in a time bound manner to apply mid-term correction, driven by change in product-mix/ requirement plan of the Defence Forces. Reduction in investment made in 2003-04 is the result of such corrections."

6.4 In regard to the financial constraints for modernization if any, the Ministry have clearly stated that the Ordnance Factories are not facing any such problem.

6.5 On being asked by the Committee regarding effect of modernization programme for Defence Ordnance Factories, the Ministry, in their reply, stated that the modernization programme of the ordnance factories, has resulted in to the following improvements;

(a) Improved productivity;

(b) Reduction in cost of the product;

(c) Technology up-gradation; and

(d) Improved capability to develop new product and upgrades.

6.6 In a presentation before the Committee, the Chairman, Ordnance Factory Board, submitted the following investment plan for Ordnance Factories:

Investment Plan

Investment	Investment during 9th Plan (Actual)	Investment during 10th Plan
Renewal & Replacement	834	1456
New Capital	228	348
Nalanda Project	—	531
Addl. Capacity for Propellant/ replacement of existing plant at OFB/OFs	—	962
Total	1062	3297

6.7 On being asked by the Committee regarding improvements in production capacity, resultant of modernisation process during the last 5 years the Ministry submitted as per given table:

Increase in output computed in terms of Man-hours (a product of number of jobs produced and time allocated per job) *vis-à-vis* employees strength during last 5 years is as under:

	2000-01	2001-02	2002-03	2003-04	2004-05
Output Man-hours (in crores)	18.92	18.80	19.05	19.11	19.98
Present Employees strength (As on)	1,40,747 (1.1.2001)	1,34,353 (1.1.2002)	1,28,865 (1.1.2003)	1,23,442 (1.1.2004)	1,19,751 (1.1.2005)

(A Statement containing information on expenditure on modernization of various ordnance factories is given in Annexure 'B').

6.8 During the visit of the Committee to High Explosive Factory, Pune, the Committee noted that plant seemed to be old. There was leakage of water, old pipes were being used. They have chalked out plan to modernise it during the 10th and 11th plan of Defence Ordnance Factories. But in fact, nothing has been done. On being asked by the Committee regarding modernisation plan of the High Explosive Factory of Pune, the Chairman, OFB submitted as under:

Civil Works

Improvement in water supply (Scheme to reduce consumption & Wastages) total cost 9.31 Crore.

Phase I—Separate Fire fighting pipelines network with an independent overhead reservoir-RIC 5.31 Crore.

Phase II—Replacement of old lines/pumps etc. for process and drinking water to eliminate leakages and resultant wastages from existing old lines-Expected rough cost Rs. 4 crore.

Renovation of Storm Water Drainage System: Work commenced for execution through MES. Cost: Rs. 58.97 Lakhs.

Provision of Concertina Barbed Wire Fencing Along Perimeter Wall: OFB's administrative approval issued for execution through MES. Estimated cost: Rs. 44.42 Lakhs.

Renewal/Replacement/Upgradation of Plants & Equipments

Steam Supply: 5 Nos. of Old fired boilers (3 tons/Hr) installed & commissioned. Cost Rs. 1.27 Crore

New Electronic Telephone Exchange:-Commissioned. Cost Rs. 32.54 lakhs

Electric Power Supply

Modernisation of main high tension receiving stations (From present arrangements of 11 KV-3.3 KV-440 Volts to 11 KV-440 Volts, with dry type transformers and Vacuum Circuit Breakers). Cost Rs. 1.64 Crore.

Chilled Water Plants

Replacement of 5 Nos. of Chilled water plants (1 each of 40TR & 50TR and 3 Nos. of 120 TR). Supply Order Placed. Cost Rs. 107.00 lakhs.

6.9 A representative further informed the Committee about the ongoing modernization programme during the oral evidence:

> "Any organization can survive only if every year it upgrades, stores and develop new items. So, for upgrading or producing new items we have to get technology. This technology can be obtained from three method. Either we do our in-house R&D or we take the help of the DRDO for the research or we buy the technology. We have now evolved a 4th new system of work in which we have decided that we will have co-partners. We will have partners for development and co-production where we can leverage the optimum strength of each of the partners and supply the goods to the Indian market at the most optimum prices. So, we are trying to upgrade our product range like this. But then to have the upgraded product range, we must modernize our capabilities. So, we have taken up a big modernization programme and to run those facilities we must have proper HRD. We have taken HRD as a focus point."

6.10 As regards the budgetary support and increase in productivity of the organization, Chairman, Ordnance Factory Board further informed the Committee during a presentation as quoted below:

> "From 1999-2000 we are not taking any budgetary support from the Government. This is the amount of negative net Budget support which we are earning. For the last four years we have decreased

the prices in 2001-02 by 3 per cent. Like that we have been decreasing the prices for four years.

Basically, Sir, the economy of production scale of operation and modernization, which we have carried out is responsible for the decrease. In 2005-06, Sir, we are asking for 5.96 per cent increase in issue price. This increase is because of very sharp rise in steel prices by 40 per cent. Most of the increase is in the prices of vehicles.

The value of issues per employees is also growing. There has been a definite increase in the productivity of organization.

In summary, we can say, we have grown continuously in turn over by more than 10 per cent per year, at an average, during the last seven years. We have increased our productivity. We have reduced our average weighted price and we have expanded our customer profile. This was in brief what is status but then with the time the challenges that we are going to face in the future have been taken into account."

6.11 Regarding quality management system he informed the Committee as quoted below:

"As regards quality management system, our all the 39 factories are ISO-9000 certified. Out of this, 33 factories have well established laboratories. These are 58 in number. These laboratories in 29 factories have also been accredited by NABL."

6.12 The Committee note that there is a constant need for upgradation and modernisation of Ordnance Factories in order to enable them to meet the Defence Forces' demands for high quality ammunition and reliable products keeping pace with the latest technology. In this connection, a capital investment of Rs. 3297 crore was planned during the 10th Plan against Rs. 1062 crore invested during the 9th Plan. The planned amount includes Rs. 1804 crore for modernisation and Rs. 1493 crore for new facilities. The Committee are, however, surprised to note that during the first three years of the 10th Plan i.e. from 2002 to 2005 the actual investment made is only Rs. 847 crore as per the annual requirement projected by OFB. The Committee would like that the full amount for modernisation is utilised during the remaining period of the 10th Plan.

6.13 Many Ordnance Factories which were set up before Independence are still using old technology and are in dire need of massive infusion of funds for modernisation. The Committee would like to be apprised of the detailed modernisation plan alongwith

projected fund requirements of OFB in respect of each Ordnance Factory and the level of technology being presently used by it.

6.14 The Committee, during their recent study visit to the High Explosive Factory and Ammunition Factory at Khadki, Pune observed that several machineries and plant are quite old in High Explosive Factory, Khadki and need immediate replacement for security of the plant and to improve efficiency and meet the production targets. The Committee, therefore, recommend that the Ministry should strive to replace the ageing machineries and equipment in a time-bound manner with state-of-the-art technology.

The Committee would like the procedures for purchase of plants & machinery by the Ordnance Factories to be simplified. The Ordnance Factory Board should be given full powers to procure plant & machinery subject to budget provision and availability of funds.

6.15 The Committee stress that restructuring of the production system of Ordnance Factories is the need of the hour. The Armed Forces should prepare a Long Term Integrated Perspective Plan (LTIPP) as already recommended by this Committee, projecting clearly their present and future requirements so that the Ordnance Factories may also draw up their modernisation plan accordingly. The modernisation plan of the Ordnance Factories should address not only the issue of increase in productivity but also matters relating to the range and quality of products to meet the new requirements. The Committee recommend that to minimise imports, users should be fully involved in the preparation of vision document. In this connection, Government should immediately appoint an expert group on the perspective plan which should submit its report within six months from the date of presentation of this report.

6.16 The Committee note that entry of private sector in defence production, especially in non-combat items has posed new challenges before Ordnance Factories. The Ordnance Factories which had complete monopoly over production of defence equipment and items will now have to be more competitive and cost effective in order to maintain their dominant position. They will have to undertake modernisation programme in a broader way. If necessary for the purpose, the Government may also allow them to raise financial resources from the market. In this context, the Committee also desire the Government to examine the feasibility of shutting down ageing and non-revivable Ordnance Factories/Plants. The labour working in these factories may be absorbed in other Ordnance Factories or Voluntary Retirement Scheme (VRS) offer may be given to them.

CHAPTER VII

QUALITY CONTROL MECHANISM IN ORDNANCE FACTORIES

7.1 All 39 Ordnance Factories are ISO-9000 certified. Further due to change in Quality System Standards by BIS and the International bodies to ISO 9001:2000, all the factories have switched over to new standard giving emphasis to continual improvement and customer satisfaction. 52 laboratories have also been accredited with National Accreditation Bureau Limited with the current ISO-IEC 17025 version of quality system. In addition, Information Technology Division at Ordnance Factory Board National Academy of Defence Production (NADP), Ambajhari, Nagpur and two of the hospitals at Kanpur and Ambajhari have also obtained ISO-9000 certification. The above accreditions signify that facilities and quality systems in Ordnance Factories are comparable to the best in the Indian Industry.

7.2 Quality assurance as a line function is the responsibility vested in the Directorate General of Quality Assurance (DGQA), DGAQA/ DGNAI for products meant for Army, Air Force and Navy respectively. These agencies assess the capacity and register the vendors for supply of inputs, inspect input materials, function as Authority Holding Sealed Particulars, and ensure conformance of products with laid down specification before supply is effected.

7.3 Maintenance of quality of the defence items is an important aspect to meet the challenges of competitive prices in the world market. In this regard, on being asked by the Committee, the Ministry have furnished a detailed note as under:

> "Ordnance Factories manufacture products as per specification for supply to Defence Forces duly quality audited by designated quality assurance agency. MoD has recently decided to entrust the responsibility of input material inspection and vendor registration to Ordnance Factories and the modalities for taking over this responsibility is being worked out. MoD has been emphasizing that manufacturers should gradually move towards self-certification of their products."

7.4 On the initiatives taken for improvement of OFB, a representative of the Ministry of Defence further stated:

> "We have taken certain initiatives in OFB for continual improvement. We have started visiting the troops in the forward

areas. We have started having more interaction with the user units directly. We are organizing the meetings with the Army, Navy and Air Force at Delhi and at the base level. We have introduced a concept of Total Productivity Management. It is a technique for quality production. We have on line measurement of products. We are supplying certain items on self certification. Seven clothing items are being supplied from 2002 under our own certification and not by a certification by DGQA. Sixteen more items have been approved by MoD for self certification where final inspection only is by DGQA and rest of the inspection is with us. We have proposed some more items for self certification and these items include B-vehicles, 5.56 mm ball ammunition, 5.56 mm assault rifle and overhauling of T-72 tanks."

7.5 Regarding Self-Certification in Ordnance Factories, the Ministry have informed that the Ordnance Factories have started the process of self-certification since April 1, 2002, thereby, standing guarantee to its products supplied to the Defence Forces. Presently, self-certification extends to seven fast moving clothing and general store items accounting for about 20% of the overall turnover of the Ordnance Equipment Group of factories. Further, twelve clothing items and four types of ammunition boxes are also being supplied under Revision Inspection Procedure where input material and inter-stage inspection is being carried out by Ordnance Factories. Many more items are being planned to be covered under self-certification in due course of time.

7.6 When enquired whether indentors are satisfied with the products being provided to them by the Ordnance Factories, the Ministry in their written reply stated:

"In general indentors are satisfied with the products being supplied by Ordnance Factories. However, there are some stray cases where the products fail to meet the customer's perception of quality attribute, though it had been produced conforming to specification and supplied duly proved and accepted by designated quality assurance agency. On receipt of quality complaint from the customer, ordnance Factories in consultation with Inspection and Design Agency addresses the problem by undertaking modification/ repair."

7.7 Maintenance of quality of the defence items is an important aspect to meet the challenge of competitive prices in the world market.

In this regard, on being asked by the Committee, the Ministry have furnished a detailed note as under:

> "Ordnance Factories manufacture products as per specification for supply to Defence Forces duly quality audited by designated quality assurance agency. MoD has recently decided to entrust the responsibility of input material inspection and vendor registration to Ordnance Factories and the modalities for taking over this responsibility is being worked out. MoD has been emphasizing that manufacturers should gradually move towards self-certification of their products.

7.8 The Committee note that quality upgradation and cost-effectiveness of the defence products are imperative to keep the Ordnance Factories vigilant, agile and responsive to the needs and concerns of Defence Forces. The Committee endorse the view of the Ministry that cost reduction of products may be a successful proposition only when modernisation efforts aim at more productivity. However, the Committee find that while the Ministry have taken quite a few initiatives for quality upgradation and cost reduction, export of the products, which is directly linked to the two factors, is negligible.

7.9 The Committee feel that to achieve the goals of modernisation, concerted efforts need to be made with a clear mandate. Production of items should be undertaken side by side with quality upgradation and cost-effectiveness so as to attract global vendors.

7.10 The Committee are concerned that only 20 per cent items produced by these Factories are self-certified. These items are mainly clothing and general store items. The Committee desire that self-certification by ordnance Factories should be encouraged and these Factories be given powers for self-certification of arms, ammunitions, explosives and other combat products in a phased manner.

CHAPTER VIII

PRICING SYSTEM OF ORDNANCE FACTORIES

8.1 Ordnance Factories supply products to Defence Forces on the basis of actual cost which means no loss no profit basis. For the budgeting purpose, the price of each product is determined before the commencement of the year and made available to the indentors.

8.2 An established system exists in Ordnance Factories to determine and fix the price annually, based on actual cost of production of last 2 years computed by Defence Accounts, latest cost estimated during the year of pricing and cost estimated/projected for the next year in consultation with Associate Finance. The system aims at covering all the cost incurred in manufacture of the product without charging any elements of profit.

8.3 As regards pricing of products of non-defence sector, the following system is follows:

(a) MHA is charged 5% more than the price charged to Armed Forces with an aim to offset the capital financing charges (met from Defence Budget).

(b) Supply to Civil Trade and Export sector is effected at a maximum price that can be absorbed by the market with an aim to recover full cost and profit. The profit so generated is taken into consideration at the time of fixation of price of defence products with a view to pass on the benefit to defence sector as Ordnance Factories do not have mandate to retain profit. A profit of Rs. 164.32 crore has been generated from supply to non-defence sector during 2003-2004.

8.4 A constant endeavour is made to identify the cost drives and exercise effective control apart from securing more order for improving capacity utilization/scale of operation. As a culmination of these efforts, Ordnance Factories could reduce the price of product supplied to Indian Army during last 4 years, notwithstanding market inflation.

8.5 The Chairman, Ordnance Factory Board elaborated during evidence:

"From 1999-2000 we are not taking any budgetary support from the Government. This is the amount of negative net Budget support

which we are earning. We have been decreasing the prices of our items for the last four years. We have decreased the price in 2001-02 by 3 per cent. Like that we have been decreasing the prices for the last four years.

Basically, Sir, the economy of production, scale of operation and modernisation which we have carried out is responsible for decrease. In 2005-06, Sir we are asking for 5.96 per cent increase in issue price. This increase is because of very sharp rise in steel prices by 40 per cent. Most of the increase is in the vehicles.

The value of issues per employee is also growing. The blue bar chart represents the expenditure on the employees. If you see the growth in the expenditure on employees, it has not gone up that much high but the value of the issue per employee has gone very high. There has been a definite increase in the productivity of the organisation.

In summary we can say, we have grown continuously in turn over by more than 10 per cent per year at an average during the last seven years. We have increased our productivity. We have reduced our average weighted price and we have expanded our customer profile. This was in brief what is the status but then with the time the challenges that we are going to face in the future have been taken into account."

8.6 When the Committee asked regarding efforts for making the Defence items cost-effective, representative of the Ministry stated during oral evidence as follows:

"For the cost reduction, we have taken a lot of initiative viz. modernisation of plant and machinery to improve productivity, reduction in material, usage, reduction in rejection or wastages, improvement in worker productivity, reduction in overheads, etc. In the product development, as I said, it is the most focal point for us. As I said, we are doing in house R&D, use of technology developed by DRDO, or acquire technology by import or through co-development and co-production. These are four methods which we are attempting for product development or upgrade.

The limitation of technology acquired through import are many. The cost of technology is high. Always a technology import is clubbed with the imports of SKDs and CKDs. Then we have restriction for export and right to produce upgrades. The transfer of technology is sometimes incomplete and inadequate. If we want

to upgrade the products ourselves, then we have to go to OEM for permission. The time for absorption of technology is long. By the time the technology is absorbed, the requirement more or less gets over. Therefore, taking this into consideration, we have evolved a technique of co-development. This is restricted to import substitution only. This is a win-win strategy for all partners. This instrument of partnership is Memorandum of Understanding. No payment for technology transfer is required. Product price is as per the cost. The profit margin is to be as mutually agreed but it cannot be more than five per cent. Marketing in respective countries by respective partners. If I get the order, I will supply under my brand name and if my partner gets the order, he will supply under his brand name."

8.7 In a presentation to the Committee, the Chairman, OFB gave the following price comparison of certain OFB products with international prices:

Product	OFB Price	International Price
5.56 mm Assault Rifle	USD 450	USD 800-1000
130 mm Cargo	USD 1250	USD 1600
155 mm Cargo	USD 2000	USD 2300

8.8 The Committee note that the Ordnance Factory Board has taken certain initiatives to exercise effective control over increase in the prices of Defence products. The Committee feel that the productivity and scale of production are the crucial issues which need to be stressed upon to contain the sharp increase in prices. The Committee, therefore, recommend that the Ministry should strive to achieve economy of scale in Defence Production in the wake of envisaged competition from the Private Sector. Towards this end, modernisation of the existing plants & machineries and replacement of the old equipment in the factories are required to be taken up on priority. These steps will enable Ordnance Factories to participate in global tenders in a competitive manner.

The Committee understand that Ordnance Factories are providing defence products to armed forces on cost-to-cost basis. The Committee also understand that Ordnance Factories do not have sufficient funds for modernisation of the plants and machineries. The Committee, therefore, desire that on sale of products to armed forces Ordnance Factories should be allowed to have a fixed percentage of profit which may be used for modernisation/ugradation of these factories.

8.9 The Committee note that international prices of arms and ammunition required by the Armed Forces are on much higher side as compared to the prices of Ordnance Factories. The Ministry should carry out import substitution of arms and ammunition by placing orders on Ordnance Factories. This will help in indigenisation of the items and utilisation of full capacity of the Ordnance Factories.

CHAPTER IX

R&D ACTIVITIES IN ORDNANCE FACTORIES

9.1 The Committee enquired about the investments made by Ordnance Factories in R&D, the Ministry stated:

> "Ordnance Factories are making investments in modernising the manufacturing capabilities by procuring high-technology machines for production, quality control and testing purposes. This process has enabled ordnance Factories to undertake the production of latest generation arms and ammunitions, meeting stringent quality requirements at competitive prices.
>
> Ordnance Factories are also giving greater thrust to in-house R&D efforts in order to develop new products. Emphasis is being given to co-development and co-production of new products with advance technology providers so that the product profile of the Ordnance Factories is regularly updated. This process will also help Ordnance Factories to complement their strengths."

9.2 Investment made by Ordnance Factories on R&D during last 5 years is as under:

(Value in Rs. Crores)

2000-01	2001-02	2002-03	2003-04	2004-05 (Prov.)
6.39	5.24	7.26	7.77	8.66

9.3 Giving details of the items developed by the Ordnance Factories, the Ministry furnished the following information:

1. Mine Proof Vehicles
2. Bullet Proof Vehicles
3. Coat ECC
4. Cap Glacier
5. Boot Ankle with toe and back
6. Ak-47 Ammunition
7. Socks Woollen Lycra

8. Ground Sheet PPO OG
9. Rain Coat Multi Purpose
10. Bag Kit Disruptive WP
11. Recoil System for 155 mm Field Howitzer
12. Integration of global positioning system in CMT
13. Driver's Sight for BMP-II and T-72 Tank
14. Gun Barrel for 76/62 Naval Gun System
15. KAVACH
16. Signal Flare
17. 0.22" Sporting Rifle
18. 0.22" Revolver
19. Day and Night Vision Goggles
20. Refurbishing of Warhead Torpedo Impulse Catridge
21. Carbine 5.56 alongwith ammunition.

9.4 Chairman, OFB, has further informed the Committee about the technological upgradation of equipment through in-house R&D during the oral evidence as follows:

> "We have submitted a proposal to the Indian Army to make an in-house upgradation of 155 upgrade of Bofors guns ourselves. The rest of the hardware of any gun which Indian Army is importing or proposing to import can be made by us very easily. There is no problem. The problem is of the various electronics. World over, these things are being bought or are being outsourced. So, we want to make these electronics in India. It is because electronic industry is so developed. But for integration of these electronic in the guns we need a partner. So, we have to take up a project. We have taken up a project ourselves in which we have made 45 calibre barrel instead of 39 calibre barrel. Now, we are making a 52 calibre barrel. We have made a new muzzle brake for the 45 Calibre and for the 52 Calibre. We have no problem in making the hardware. Some of the systems, our sister Public Sector Unit like BEL is making. Some of the inertial navigation systems and GPS have been developed by the DRDO for the missile programmes and the space. So, now we have submitted a project that we under the leadership of the Army, want to take up. We

should be allowed to integrate all this together with the DRDO's help and with the help of third partner."

9.5 A representative of the Ministry of Defence further strongly felt the need of technological upgradation in the wake of changing war situation, during the oral evidence:

"We require to upgrade our technology immediately because the system of warfare is changing. Now the conventional weapon systems are no longer required in that number and those which are there have to be integrated with C4I scenario which means, command, control, communication, computer and intelligence models. So, they have to be integrated. This will lead to engaging the right weapon with right ammunition in the least possible time with the correct understanding of the target. This will also lead to force multiplication. So, this is a battle field scenario. We have taken into account all this and we have taken up certain developments."

9.6 On the possibility to involve private sector and user services on R&D projects being taken up by DRDO, the representatives of the Ministry, in their written reply, submitted as under:

"The DRDO undertakes projects based on the QR requirements of three Services. The QRs themselves are evolved through discussions by the Services with DRDO, DGQA, Defence PSUs and, in some cases, potential private sector as well. DRDO takes up very few projects under 'Technology Competence Build Up' and even here if it is a high valued project, the broad acceptability and concurrence of the concerned service is obtained. DRDO also gives projects to Universities through the Research Boards to encourage work in basic and applied science. These Boards have adequate Services representations.

The efforts of DRDO have always been to take such developmental projects or research pursuits that stay relevant till the accepted period of delivery."

9.7 The Committee note that the Ordnance Factories are giving thrust to in-house R&D efforts in order to develop new products. The Committee are, however, constrained to note that the investment made on R&D during the last five years has been negligible, with the result that no major project or upgradation activities could be undertaken out of the allocated funds. Most of the projects being undertaken by Ordnance Factories are through acquisition of

technology from DRDO or by import and there has been very little achievement in developing new products through in-house R&D. The Committee desire that Ordnance Factories should change their role from technology recipients to technology producers through more emphasis on-in-house R&D.

9.8 The Committee are constrained to note that in the era of Nuclear, Biological and Chemical warfare, our Defence Forces are still bound to depend on conventional weapons which need constant upgradation. The Committee view it very seriously and recommend that the Ministry should intensify efforts to provide sufficient funds and logistic support to the Ordnance Factories to undertake mini and major projects in collaboration with DRDO, Defence PSUs and foreign partners and also continue with the technological upgradation of the conventional weapons so as to meet the ever-growing challenges of the modern warfare. The Committee also desire the Ministry to explore the possibility to involve private sector in some of the select R&D projects being taken up by DRDO/user services.

CHAPTER X

EXPORT MARKET OF THE DEFENCE PRODUCTS

10.1 On being enquired about the export performance of the Ordnance Factories, the Ministry furnished the following information:

"Organized export commenced at OFB since 1989. The initial years saw only trifle export orders from neighbouring countries like Nepal, Myanmar and Maldives. Over the subsequent years OFB made in-roads in many countries across the continents. Export started picking up from 2000-01 and the value of export during the last 5 years is under:

Year	Value (Rs. Cr.)
2000-01	12
2001-02	33
2002-03	60
2003-04	93
2004-05	41

During 2004-05, orders worth Rs. 135 Crores have been bagged. All the orders could not be executed, as the goods could not be delivered due to political crisis in Nepal, resulting in decline in export figure."

10.2 Giving details of potential items for exports the Ministry have stated as under:

"OFB's export market largely caters to the replenishment market in which the items are of conventional warfare. It is very competitive market having large number of players. Apart from political and geographic considerations, the market is also not deterministic. Under this backdrop, the potential items of export of Ordnance Factories along with their export potential can be classified as:

(a) Weapons

Small Calibre—Largely consisting of Rifles, Carbines, Machine Guns and Pistols-OFB has succeeded in export of 5.56mm Rifles and 7.62mm Medium Machine Guns. Other 7.62mm Rifles and Machine Guns and 9 mm Pistols have also been sold.

Medium Calibre—OFB has limited inventory under this category, *viz*., the 30mm BMP Gun, which has licence restrictions for export. A broader variant of this gun, *viz*., 30mm Medak Naval Gun has been exported in recent time. A part from this, 40mm L-70 Anti-aircraft gun is presently under negotiations for sale.

Large Calibre—Enough potential lies for the 84mmk RCL Gun and 105MM Light Field gun but OFB has not been successful so far.

(b) Ammunition

Small Calibre—OFB is not competitive in this sector. Calibres like 5.56mm, 7.62mm and 9mm are available at much cheaper prices internationally.

Medium Calibre—OFB has cost advantage for medium calibre ammunition. Stores like 30mm Aden ammunition and 40mm L-70 ammunition are cheaper than prevalent international prices. L-70 ammunition has been sold in bulk in South East Asia.

Large Calibre-OFB is also cost effective in large calibre ammunition. Prices of 81mm and 120mm Mortar ammunition are comparable, while prices of 84mm, 105mm and 106mm are less.

(c) Chemicals, Propellants and Explosives

Chemicals like Isopropyl Nitrate have been sold in bulk to quite a few countries world-wide. Ammonium Nitrate has ample demand globally, but OFB's capacity is very small. Propellant components like Nitrocellulose and Nitroguanidine have great potential and orders are being bagged. As regards explosives, both TNT and Tetryl have been sold by OFB.

(d) Vehicles

Armoured vehicles like Tanks and Armoured Personnel Carriers (APC) are made under licence and cannot be exported under normal circumstances. However, the recently developed Mine Protected Vehicle has good potential for export.

(e) Troop Comfort Items and Parachutes

Troop Comfort Items include clothings, tentages, leather items. Though they possess enough potential, OFB has not been successful so far. As regards Parachutes, OFB has been successful in bagging

many orders for Brake parachutes for MIG and Jaguar aircraft. It is felt that OFB's prices for man-dropping parachutes are lower than international standards, but OFB is still to make a dent in this sphere."

10.3 When asked by the Committee about the constraints being faced by the Ordnance Factory Board and its factories in promotion of their export market, the Ministry have identified the following reasons:

(a) Ordnance Factories have started exports recently and they have yet to establish a brand image as an exporters. The marketing infrastructure is also developing. The export efforts were also effected because of long list of countries where defence export was not permitted.

(b) *Non-compatibility of OFB items with those in use with many countries world-over*. Many items of the OFB product range are either of indigenous design or of ex-Soviet origin, whereas most of the countries worldwide use NATO compatible products. This results in a narrow band or products available for export.

(c) *Lack of port infrastructure for handling hazardous cargo and vessels carrying such cargo resulting in high freight charges*. All hazardous cargo are loaded mid-stream resulting in high loading charges. No India Flag vessel carries hazardous export cargo resulting in high freight charges. All these have adverse effect on our pricing.

10.4 When asked by the Committee regarding steps taken by the Ministry to increase OFB's export, the Ministry submitted as under:

"In order to plan quantum increase in the OFB's exports, the following measures have been taken:

a. Increased generation of enquiries:

— Reduction in response time by introduction of online response through dedicated e-mail.

— Electronic transmission of technical data and brochures

— Provision of e-mailable and printable product CD

— Continuous product promotion in Military Technology & Janes International Defence Review magazines.

b. Process of registration with Defence Foreign Procurement Offices of other nations initiated through Defence Attaches. This leads to procurement bulletins being directly sent to OFB.

c. OFB has hosted itself on an international generic website *www.army-technology.com* where all major defence product manufacturers are listed and from where a hyperlink is provided to OFB's own website *www.ofbindia.com*. This has led to greater dissemination of information about OFB and generation of more enquiries.

d. Product demonstration in international defence exhibitions.

e. Enter into joint projects for higher end products and services required by the international market and establish them within short lead-time through synergy of competence of the partner(s) involved.

f. Build up brand equity by association with leading partners.

g. Direct periodic interactions with the largest customers.

h. Resorting to strategic pricing based on marginal costing for improving cost competitivenss.

i. Pruning of negative list of countries and relaxation of licence restrictions of the original ex-Soviet suppliers.

j. Procedural simplifications to improve responsiveness.

k. Improving responsiveness to customer's needs-follow up on feedbacks, stock manufacturing for export."

10.5 When enquired about the increase in number of export enquiries received by OFB as a result of increased publicity given to their products and numbers, that have been translated into actual export order, the Ministry stated:

> "In spite of OFB's endeavour to give enough publicity to boost up exports, the physical increase in the number of export enquiries has not been substantial. Enquiries are mostly generated through Agents and only a handful of tenders are received directly from the procurement authorities of a particular country. Enquiries shoot up immediately after the participation in an International Defence Exhibition, largely because to obtain representation in a particular country by a particular agent. But fructification of such enquiries is minimal. In reality only 1-2% of the total enquiries received are converted into orders. Certain enquiries are only probe enquiries to ascertain our prices and one has to be cautious in such cases."

10.6 As the Ministry have stated that most of the products are not compatible to the specifications of NATO, thereby affecting the export market, the Ministry in reply to a related supplementary question have stated that:

> "Certain NATO specific items like Cartg. 5.56mm, SS-109 and M-193 of Shell 155mm Cargo are being planned to cater to foreign markets in addition to Indian requirement."

10.7 On a specific question whether any institution/board has been created to promote/explore the export prospects of various products, the Ministry stated that no standard institution or board has been created to promote exports.

10.8 A representative of the Ministry of Defence further stated during oral evidence that:

> "There is a very little scope for growth in export segment we operate. We operate in export segment, which is basically a replenishment segment of conventional arms segment, where the players are many and with the changes in geo-political situation, competition is very stiff. The technology is available in most of the countries. I would say that we have a little absence of level playing field. We cannot diversify our product range much and expand customer base. We have constraint because our customer profile is not that type where we can increase supply by publicity/ propaganda the consumer items. Customer profile is limited to Defence forces, paramilitary forces, State police forces or whatever civil sector arms and ammunition they take."

10.9 The Committee note that since the commencement of organised export in 1989, value of export has been minimal over the last five years. Export orders have generally been from the neighbouring countries. The Committee note that as of now OFB's export market is largely of conventional items where a large number of players are making it tough and competitive for Indian products to make their presence felt. The Committee also note that the export market of OFB products also suffers due to their non-compatibility with NATO specifications. Despite continuous efforts of OFB to give wide publicity to boost up exports, physical increase in quantum of export is insignificant. At present, no board or institution has been created within the OFB supervision to promote exports of defence products.

10.10 The Committee, therefore, recommend that the Indian Ordnance Factories should strive to diversify their product range to grab the customer base in non-conventional arms segment of export market. Keeping in view the requirements of NATO compatible items in international market, the specifications of more and more indigenous items should be planned to cater to the export market, in addition to the Indian requirements. The OFB should also take earnest initiatives to create an Export Promotion Board under their supervision and entrust it with the task to explore optimal possibility of export and to suggest ways and means to boost the export of Ordnance Factories' products, create infrastructure necessary for export market and help in achieving the aim of Indian Ordnance Factories to establish themselves as a brand leader in the world market. As recommended in earlier paragraphs, the Committee desire that Ordnance Factory Board should have experts from international trade and marketing fields also who can play an effective role in preparing strategy to tap the vast export market for armaments/ammunitions and other defence products.

10.11 In view of the competitive prices of the ammunition of the Ordnance Factories as mentioned in the earlier paras, the Committee feel that these factories should look out for export market.

CHAPTER XI

OUTSOURCING TO PRIVATE SECTOR

11.1 Till recently, Defence production in India was reserved for the Public Sector. Yet, a large number of private companies under the small scale, medium scale and even some major corporate in the private sector had also grown alongside public sector making their own contribution to the Defence production and supplies. In order to harness the vast potential of the private sector, Government in May, 2001 decided to open full Defence production for participation by the Indian private sector including Foreign Direct Investment (FDI) up to 26% both subject to licensing. The private sector would now have the opportunity to manufacture full Defence equipment and system under licence. With a view to take a holistic view of changes required in the acquisition/procurement procedure for Defence equipment in vogue etc., a Committee under the chairmanship of Dr. Vijay Kelkar has been constituted in the Department of Defence Production. Besides, Government has taken steps for continuous interaction between Defence Organisations and private industries to create better understanding on the requirements of the Armed Forces.

11.2 During the course of evidence the Committee was informed by the CII that in spite of reforms policy of 2001 and opening up of Defence production to private sector and allowing 26% FDI, imports have not come down and India is the largest importer of the arms.

11.3 In this regard, the Ministry in their written reply submitted that:

> "In May 2001, the Defence Industry sector was opened up to 100% for Indian private sector participation with FDI up to 26%, both subject to licencing. So far, the Department of Industrial Policy & Promotion, in consultation with the Ministry of Defence, have issued 23 letters of Intent/Industrial Licences to entrepreneurs in the private sector for manufacture of a wide range of defence items. The private sector can also now take the advantage by importing the technology from the foreign vendors and forming a joint venture with foreign collaboration to respond to the Request For Proposals (RFPs) being issued for Defence Procurements. However, Private Sector has to compete with others to get the orders in accordance with the provisions of Defence Procurement Procedure 2005.

Imports are resorted to in order to meet the operational requirements of the Armed Forces for sophisticated technology/ state-of-the art weapon systems, which are not available indigenously."

11.4 The Committee asked the Government regarding preference given to foreign suppliers and to provide a level playing field to Indian Industry *vis-a-vis* foreign suppliers in the area of Defence Procurement, the Ministry, in their reply have stated that this proposal is under consideration of the Government.

11.5 When the Committee desired to know the comments of the Ministry, on the issue of "No cost No commitment" basis under which private sector is asked to develop some product for the defence sector, where they are never sure that after spending some amount they would get some order from the Defence, the Ministry replied as under:

"The issue regarding "shared development cost" in "make" category among Armed Forces, R&D organisation and Industry, both public and private sector and placement of minimum order quantity to sustain the financial viability of the development process have been addressed in the report of the Kelkar Committee, which is under active consideration of the Government.

Ordnance factories have been sourcing their requirement of raw material, castings forgings, semi-finished components and assemblies from the private sector in a big way. The amount of outsourcing is in the range of Rs. 2500 crore per annum. Ordnance Factories are mostly concentrating on production of high technology critical components and systems. Production of components where sufficient capability exists in private sector is usually not taken up in the Ordnance Factories. Ordnance Factories also participate in the buyer seller meets to develop new vendors from the private sector. Ordnance Factory Board is a member of Confederation of Indian Industry (CII), which provides it a forum for interaction with the prominent industrial groups in the country."

11.6 Asked if some private companies are producing ammunition, the Ministry, in a written note, have stated that to the best of information available, Indian private companies are not manufacturing complete ammunition of the specification to which ordnance Factories are manufacturing.

11.7 The Committee note that Defence Production Industry has come a long way from being reserved entirely for the public sector

and is moving towards greater participation from the private sector. The Committee are happy to note that keeping in view the capabilities of private sector, the work of the value of Rs. 2500 crore per annum is being outsourced to them. The Committee, desire that ordnance Factories should strive to outsource more work in those areas where there is sufficient capability of private sector and retain production of only high-end items. The Committee at the same time stress that Ordnance Factories during the process of outsourcing must ensure strict adherence to the stringent quality standard of the outsourced products.

CHAPTER XII

DELAY IN EXECUTION OF ORDERS

12.1 The Committee desired to know the number of cases where delay occurred in execution of orders within the financial year for last three years. The Ministry submitted details as under:

Year	No. of items for which demands existed	No. of items for which target fixed	No of items manufactured as per target	No of items for which target fixed but production was behind schedule
1999-2000	364	307	238	69
2000-2001	375	284	196	88
2001-2002	423	344	265	79
2002-2003	431	354	278	76
2003-2004	462	368	270	98

12.2 On being asked about the reasons by the Committee, the Ministry in their written reply have identified the following individual and/or collective reasons for delay in execution of orders:

(a) Late finalization of annual target

(b) Delay in placement of covering indents.

(c) Delay in issuing clearance of designs and other particulars from respective Authority Holding Sealed Particulars in case of new items.

(d) Modification of designs for existing items.

(e) Sudden increase in target by the indentors in the middle of the financial year.

(f) Urgency shown by some indentors for some particular items with enhanced target, affecting the target of same items for other indentors.

(g) Unforeseen problem and delay in development for some items.

(h) Delay in inspection proof and acceptance.

(i) Long lead time required in procurement of some input materials particularly in case of imported ones, after receipt of indent.

12.3 When asked to furnish the details of cases where delay in execution occurred during the previous year 2004-05, the Ministry have stated as under:

> "The target for supply of defence items are given annually by the Defence Forces. The shortfall in supply during previous year is taken into consideration at the time of giving annual target for the subsequent year. The supply is effected in a year at a predetermined price for the year and ordnance Factories are reducing average weighted price since 2001-02. There has been shortfall in supply of 77 items out of 331 items planned for supply during 2004-05."

12.4 The corrective measures taken to obviate delay in supply of annual target quantity are:

(a) Finalisation of annual target in advance to provide lead-time for procurement of inputs and time for production.

(b) Dispensation given to OFB to procure inputs required for 25% of annual target quantity, wherever annual target is not backed by indent.

12.5 The Chairman, OFB, informed that with the intervention of Defence (Finance) and the Ministry, they have got this year all the indents in time and the position is very good. But normally there is delay in placement of orders and indents.

12.6 The Committee note that out of the demands for 2055 items, target was fixed for 1988 items and actual manufacturing took place for 1247 items during the period 1999-2000 to 2003-2004 which resulted in the production of a number of items behind schedule. Further, the Committee note with concern that there has been a shortfall in supply of 77 items out of 331 items planned for supply during 2004-2005. The data shows that Ordnance Factories have failed to adhere to the targets fixed for all the demands placed by the indentors.

The Committee desire that detailed analysis be made for every delay in execution of orders and responsibility/accountability be fixed accordingly. Necessary steps should also be taken to ensure timely production of items as per the targets fixed.

12.7 The Committee further note that one of the reasons for delay in execution of orders is the late finalisation of annual targets by the Ministry. It only shows lack of planning and coordination among the various concerned departments. The Committee recommend that advance planning should be done by all concerned in this regard so that annual targets are finalized well in time.

CHAPTER XIII

FIRE INCIDENTS IN ORDNANCE FACTORIES

13.1 On being asked by the Committee regarding fire incidents in Ordnance Factories occurred for last five years, the Ministry stated that in 2004-05, 4 fire incidents were reported in Ordnance Factories as against nil in 2003-04, and 2000-01, 2 in 2002-03 and 1 in 2001-02.

13.2 When asked the reasons for such incidents the Ministry have stated as follows:

> "Board of inquiry is invariably appointed to immediately investigate incidence of fire with a view to find the reasons the causes of fire of taking corrective measures to avoid such recurrence. All the four fire incidents occurred in 2004-05, have been investigated. No specific reason could be found for above four incidents of fire."

13.3 When enquired by the Committee why the cause of fire could not be ascertained by the Board and in the absence of the same how the remedial measures could be taken, the Ministry have replied as given below:

> "In case of fire, equipment, accessories and surroundings at the site of fire get damaged and the cause of evidence is lost. In such cases, Board of Enquiry had to list out probable cause of fire and then proceed based on oral evidence and remaining circumstantial evidence and apply the process of elimination to arrive at most probable cause of fire. The remedial measures suggested by the board of enquiry are for the elimination of the identified most probable cause of fire. The corrective measures recommended by the Board of Enquiry are taken to prevent recurrence of fire incidence due to identified probable reasons."

13.4 When asked by the Committee regarding storage accommodation for ammunition in Ordnance Factories and the funds for the construction of such facilities, the Ministry have provided the following note:

> "The storage magazine for ammunition is made and managed scientifically in Ordnance Factories, as per the rules of the Storage and Transport of Explosive Committee (STEC) of the Ministry of

Defence. The magazines are made as per STEC stipulation, after obtaining clearance from concerned authorities of Fire, Environment and Explosive Safety. The regular Safety audits are carried out for ensuring conformance of storage facility, within STEC provisions. There has been no fire in the storage magazine area of Ordnance Factories. The construction of storage facility is need based. No separate account on expenditure for construction of storage facility is maintained by Ordnance Factories."

13.5 The Committee during the study visit to Avadi, High Explosive Factory and Ammunition Factory, Pune, asked the number of fire accidents cases occurred in those factories, the Chairman, OFB stated that such cases were almost 'Nil' for the last few years and one minor case of accident occurred which was duly compensated as per provision of welfare scheme for employees.

13.6 The Committee are concerned to note that fire incident is a frequent phenomenon taking place almost every year. During the last year itself, four such incidents occurred, but surprisingly, no reason or cause could be ascertained by the Board of Enquiry constituted for the purpose. The Committee are unable to understand how the remedial measures can be taken without first knowing the definite cause of fire. Therefore, the logic of remedial measures, as enunciated by the Board, to be taken to strike the most possible cause of fire is outrightly refuted by the Committee. The Committee feel that in the era of advanced Science and Technology, Ordnance Factories should not function on indefinite conclusions.

13.7 Therefore, the Committee strongly recommend that the Ministry should explore all scientific ways and means to obviate such incidents in future. The Ordnance Factory Board should create a watchful team for every Ordnance Factory particularly Ammunition and High Explosive Factories to keep tight vigil on every possible cause of fire and take suitable preventive steps.

NEW DELHI;
23 *November,* 2005
21 *Agrahayana,* 1927 *(Saka)*

BALASAHEB VIKHE PATIL,
Chairman,
Standing Committee on Defence.

ANNEXURE A

AMMUNITION & EXPLOSIVE DIVISION—TOTAL STRENGTH 34,661

Sl. No.	Factories (No. of Employees as on 01-04-2004)	Location (Year of Estd.)	Major Products
1	2	3	4
1.	Ammunition Factory Kirkee (6095)	Pune, Maharashtra (1869)	5.56 mm Ammunition, Bombs, Grenades, Cartridges for others Small Arms, Medium Calibre Ammunitions.
2.	High Explosive Factory (1319)	Pune, Maharashtra (1940)	TNT, HNS, Tetryl (CE), IPN, RFNA, 'G' Fuel, 'O' Fuel, Initiatory Explosives, Acids and Chemicals etc.
3.	Ordnance Factory Chandrapur (5028)	Chandrapur, Maharashtra (1964)	Tank Gun Ammunition, Mortar Ammn., Anti-Tank and Anti-Personnel Mines, Rockets, Missiles War-Heads etc.
4.	Ordnance Factory Varangaon (2852)	Varangaon, Maharashtra (1962)	Cartridges, viz, 7.62 mm Nato Ball M-80 Tracer M-62, 5.56 mm Ammunition.
5.	Ordnance Factory Bhandara (2985)	Bhandara, Maharashtra (1962)	Single Base propellant, Nitro-guanadine, Guanadine Nitrate, Hexamine, Acids, RDX compounds, PETN, Rocket Propellants, Nitro-Glycerine, Nitro-cellulose, Commercial Explosive etc.

1	2	3	4
6.	Ordnance Factory Dehu Road (1399)	Dehu Road, Maharashtra (1983)	Various Pyrotechnic compositions, Bombs, Shells Cartridge-Illuminating and Smoke, Cartg. Signal, Flare Trip wire etc.
7.	Ordnance Factory Khamaria (7655)	Jabalpur, M.P. (1943)	Small Arms Ammunition, Anti Aircraft Ammn., Heavy Calibre Anti-Tank Ammn., Bombs, Mines, Ammn. for Airforce and Navy.
8.	Ordnance Factory Itarsi (2422)	Itarsi, M.P. (1970)	Double and Triple Base propellants, Small Arms propellant, Acids Nitric and Suphuric, Nitro Cellulose, Nitroglycerine, Picrite etc.
9.	Cordite Factory Aruvankadu (2589)	Aruvankadu, Tamil Nadu (1904)	Various Double Base/Triple Base Propellants, Celluloid Products, Nitro Cellulose, Nitro Glycerine, Acids, Acetone, Paints etc.
10.	Ordnance Factory Badmal (2317)	Bolangir, Orissa (1989)	Tank Gun Ammunition, Bar Mine, 30 mm Ammunition, 155 mm Ammunition.

WEAPON, VEHICLE & EQUIPMENT DIVISION—TOTAL STRENGTH 37,046

Sl. No.	Factories (No. of Employees as on 01-04-2004)	Location (Year of Estd.)	Major Products
1	2	3	4
1.	Gun Carriage Factory (5905)	Jabalpur, M.P. (1904)	T-72 Tank Gun Recoil System, Carriages for Artillary Guns, Anti-Aircraft Gun, Tank Gun Mounting, 81 mm Mortar, 51 mm Mortar, 12 Bore Pump Action Gun, Cluster Bomb Gas System Assy., 73 mm Smooth Bore Barrel Assy., Ski Runners & various Ammn. Packages
2.	Vehicle Factory Jabalpur (7462)	Jabalpur, M.P. (1969)	Army Transport Vehicles and variants, Civil Joga, Spares Engines and others spares
3.	Grey Iron Foundry (1682)	Jabalpur, M.P. (1969)	Automobile Casting of Grey & Malleable Iron for Vehicles & other applications
4.	Ordnance Factory Kanpur (5111)	Kanpur, U.P. (1942)	Medium & High Calibre Guns, Mortars Bomb Bodies, Shell Empties, High Velocity Kinetic Energy Shots.

1	2	3	4
5.	Small Arms Factory (2537)	Kanpur, U.P. (1942)	5.56 mm LMG, LMG 7.62 mm, MAG 7.62 mm, .50'Rifle Sporting, 51 mm Mortar, .32" Revolver, 20 L steel Jerricans, 9 mm Carbine
6.	Field Gun Factory (1925)	Kanpur, U.P. (1977)	High Calibre Ordnance & Spare Barrels, .32" Revolver
7.	Rifle Factory Ishapore (4692)	Ishapore, West Bengal (1904)	5.56 mm INSAS Rifle, Pistol 9mm Auto, .315' Sporting Rifle, .22" Sporting Rifle.
8.	Gun & Shell Factory (3834)	Cossipore, West Bengal (1801)	Medium Calibre Guns, Shells & Fuzes, 12 Bore DBBL Shot Gun, .32" Pistol, 84mm Rocket Launcher.
9.	Ordnance Factory Dum Dum (1318)	Dum Dum, West Bengal (1846)	Various Precision Machined & Fabricated items for Army, Navy & Airforce including Retarder Tail Units for Bombs
10.	Ordnance Factory Trichy (2580)	Tiruchirappally, Tamil Nadu (1966)	7.62 mm Rifle, 12.7 AD Gun & Spares, 30 mm Cannon for BMP II, 14.5 mm Sub-Calibre Device for T-72 Tank, 23 mm Ghasha Twin Barrel Gun for MIG.

MATERIALS & COMPONENTS DIVISION—TOTAL STRENGTH 23,416

Sl. No.	Factories (Nos. of Employees as on 01-04-2004)	Location (Year of Estd.)	Major Products
1	2	3	4
1.	Metal & Steel Factory (4232)	Ishapore, West Bengal (1872)	Various Ferrous and Non-ferrous castings & extrusion, component & other stores including Cartg. Cases and shell forgings, Light/Medium/Heavy Steel Forgings including Gun Barrel Forgings
2.	Ordnance Factory Ambajhari (6930)	Nagpur, Maharashtra (1965)	Ammunition Hardware (Shells, Fuzes and cartg. Cases) for various Ammunitions including 130 mm and 155 mm. Also light metal Floating Bridge, Extruded Al. Rods/ Sections, Pressure and Die-Cast Components etc.
3.	Ordnance Factory Ambarnath (13162)	Ambarnath, Maharashtra (1944)	Brass and Guilding Metal cups of various Calibres for Small Arms and Ammn. Thin Gauge non-ferrous Strips, Medium and Heavy Calibre Cartridge Cases. Low and High Tensile Al. Alloy, Extruded sections

1	2	3	4
4.	Machine Tool Prototype Fy. Ambarnath (1525)	Ambarnath, Maharashtra (1944)	Design, Development and Manufacture of special purpose machine tools and equipment, components and sub-assemblies for Armoured and Transport vehicle and weapons spares.
5.	Ordnance Factory Bhusawal (1397)	Bhusawal, Maharashtra (1949)	Drums, Barrels, Ammn. Boxes, Boxes for shells, Ammn. cylinders & Tin Containers, Fuel tanks.
6.	Ordnance Factory Muradnagar (2763)	Muradnagar, U.P. (1943)	Plain carbon and alloy steel castings for Tanks, Empty Bodies of various ammn., Hot Die tool, Steel forgings.
7.	Ordnance Factory Katni (1952)	Katni, M.P. (1942)	Non-Ferrous Rolled & Extruded sections, Cups for Small Arms Ammunitions, Die-cast components, Heavy Calibre Cartg. Cases.
8.	Ordnance Cable Factory Chandigarh (624)	Chandigarh (1963)	Field Telephone cable, Carrier Quad cable, 20 Conductor cable, 3KV Air Field Lighting cable, Beta light devices, various steel wire.
9.	Heavy Alloy Penetrator Proj. (831)	Triruchirapally Tamil Nadu (1990)	Empty Shots for Kinetic Energy Ammn. of various calibres (105 mm, 120 mm, 125 mm).

ARMOURED VEHICLE DIVISION—TOTAL STRENGTH 12,212

Sl. No.	Factories (Nos. of Employees as on 01-04-2004	Location (Year of Estd.)	Major Products
1.	Heavy Vehicle Factory (4870)	Avadi, Tamil Nadu (1961)	Battle Tanks *viz*. Ajeya T-72, Combat Improved Ajeya, Variants, Tanks Spares & Overhaul of T-72
2.	Engine Factory Avadi (1046)	Avadi, Tamil Nadu (1995)	Engines for Battle Tanks and ICV, Overhaul of Engines
3.	Ordnance Factory Medak (2989)	Medak, A.P. (1987)	Infantry Cambat Vehicle Sarath, Variants, Bullet Proofing of Cars & Spares for ICV
4.	Ordnance Factory Dehradun (1617)	Dehradun, Uttaranchal, (1943)	Sighting & fire control instruments for Tanks, Fire control instruments for Guns & Mortars, Range finder, Binoculars, Compasses, Air field Lighting Equipment, Night Vision Instruments.
5.	Opto Electronics Factory (1690)	Dehradun, Uttaranchal, (1988)	Precision Opto Mechanical/Electronic instruments for sighting and fire control of T-72 & Infantry combat vehicles, Laser Range Finder

ORDNANCE EQUIPMENT DIVISION—TOTAL STRENGTH 13,225

Sl. No.	Factories (Nos. of Employees as on 01-04-2004	Location (Year of Estd.)	Major Products
1.	Ordnance Equipment Factory (4250)	Kanpur, U.P. (1859)	Leather Items, Textile Items, Engineering Equipments including Mountaineering Items
2.	Ordnance Parachute Factory (1744)	Kanpur, U.P. (1941)	All types of Parachutes *viz.* Brake Parachute, Supply Dropping & Man Dropping Parachutes Tent, Clothing & Rubberised Items like Floats for Bridges & Inflatable Boats
3.	Ordnance Equipment Factory (645)	Hazratpur, U.P. (1983)	Tents, Mosquito Nets & other Clothing Items
4.	Ordnance Clothing Factory (4286)	Shahjhanpur, U.P. (1941)	All Combat Clothing, Mountaineering Extreme Cold Clothing, Textile & Tentage Items
5.	Ordnance Clothing Factory (2300)	Avadi, Tamil Nadu (1961)	All Combat Clothing & Parade Garments, Parachutes Tents, DLD covers, Vest etc.

ANNEXURE B

ORDNANCE FACTORIES—EXPENDITURE ON MODERNISATION FOR LAST 5 YEARS

Sl.No.	Factory	Investment Made (Rs. in Crores)				
		2000-01	2001-02	2002-03	2003-04	2004-05
1	2	3	4	5	6	7
1.	Gun & Shell Factory, Gossipore, West Bengal	19.94	21.58	22.44	9.88	8.32
2.	Ordnance Equipment Factory, Kanpur, U.P.	3.94	9.2	1.88	3.26	4.99
3.	Ordnance Factory, Dum Dum, West Bengal	3.91	6.34	7.24	2.98	2.41
4.	Ammunition Factory, Kirkee, Maharashtra	13.42	15.21	24.6	7.93	2.28
5.	Cordite Factory Aruvankadu, Tamil Nadu	2.22	2.96	1.79	2.38	1.21
6.	Gun Carriage Factory, Jabalpur, M.P.	3.06	8.93	9.63	12.27	12.57
7.	Rifle Factory Ishapore, West Bengal	6.79	21.34	15.67	23.62	3.04

1	2	3	4	5	6	7
8.	Metal & Steel Factory, Ishapore, West Bengal	6.23	32.23	40.63	22.23	95.11
9.	Ordnance Clothing Factory Shahjahanpur, U.P.	5.85	3.21	1.86	5.21	2.69
10.	High Explosive Factory, Kirkee, Maharashtra	0.93	0.67	1.33	1.29	1.54
11.	Ordnance Parachute Factory, Kanpur,U.P.	0.33	5.52	2.13	1.44	0.02
12.	Ordnance Factory Khamaria, Jabalpur, M.P.	11.17	14.24	12.15	12.32	9.77
13.	Ordnance Factory, Katni, M.P.	2.68	3.03	2.85	2.3	1.5
14.	Small Arms Factory, Kanpur, U.P.	6.92	7.23	8.18	4.93	2.52
15.	Ordnance Factory Dehradun, Uttaranchal	1.51	4.59	2.63	0.39	2.13
16.	Ordnance Factory Ambarnath, Maharashtra	4.89	5.87	6.62	2.06	3.58
17.	Ordnance Factory Muradnagar, U.P.	1.48	9.89	12.36	5.99	3.02
18.	Ordnance Factory, Kanpur, U.P.	15.6	25.31	27.73	16.57	13.59

1	2	3	4	5	6	7
19.	Ordnance Factory, Bhusawal, Maharashtra	3.09	2.62	2.42	1.44	0.64
20.	Machine Tool Prototype Factory, Ambarnath, Maharashtra	2.7	1.88	5.35	4.73	3.17
21.	Heavy Vehicle Factory, Avadi, Tamil Nadu	4.67	8.61	8.64	11.46	16.48
22.	Ordnance Clothing Factory Avadi, Tamil Nadu	0.92	1.74	1.22	0.64	0.54
23.	Ordnance Cable Factory Chandigarh	1.5	2.06	9.87	6.35	0.86
24.	Ordnance Factory Varangaon, Maharashtra	10.82	7.21	12.06	4.68	2.63
25.	Ordnance Factory Bhandara, Maharashtra	9.71	20.41	5.71	7.55	4.84
26.	Ordnance Factory Chandrapur, Maharashtra	2.49	3.81	5.21	12.88	7.87
27.	Ordnance Factory Ambajhari, Nagpur, Maharashtra	34.32	40.93	31.74	33.74	20.54
28.	Ordnance Factory, Tiruchirapally, Tamil Nadu	8.93	13.24	11.91	12.03	4.66

1	2	3	4	5	6	7
29.	Vehicle Factory, Jabalpur, M.P.	14.17	12.02	9.29	9.75	6.9
30.	Ordnance Factory, Itarsi, M.P.	3.87	2.5	5.25	2.48	2.57
31.	Grey Iron Foundry, Jabalpur, M.P.	0.77	0.87	2.31	2.52	2.3
32.	Ordnance Factory, Dehu Road, Maharashtra	1.04	1.06	1.3	0.42	1.52
33.	Field Gun Factory, Kanpur, U.P.	2.99	2.39	3.9	1.86	2.88
34.	Ordnance Equipment Factory, Hazratpur, U.P.	1.02	1.32	0.32	0.14	0.14
35.	Ordnance Factory, Badmal Orissa	3.13	0.93	1.25	1.21	0.46
36.	Ordnance Factory Medak, Andhra Pradesh.	1.99	2.4	3.19	1.44	30.93
37.	Opto Electronics Factory, Dehradun, Uttaranchal	0.31	0.41	0.64	0.8	0.31
38.	Heavy Alloy Penetrator Project, Tiruchirapally, Tamil Nadu	2.24	0.87	0.96	0.57	0.09
39.	Engine Factory Avadi, Tamil Nadu	0.51	3.09	2.93	1.43	2.65

MINUTES OF THE THIRTIETH SITTING OF THE STANDING COMMITTEE ON DEFENCE (2004-05)

The Committee sat on Tuesday, the 24th May, 2005 at 1100 hrs. to 1235 in Committee Room 'B', Parliament House Annexe, New Delhi.

PRESENT

Shri, Balasaheb Vikhe Patil—*Chairman*

MEMBERS

Lok Sabha

2. Shri A.V. Bellarmin
3. Shri Suresh Chandel
4. Shri Thupstan Chhewang
5. Shri Ramesh Jigajinagi
6. Dr. C. Krishnan
7. Shri S.D. Mandlik
8. Shri Ganesh Prasad Singh

Rajya Sabha

9. Dr. Farooq Abdullah
10. Shri Janardan Dwivedi
11. Shri Pramod Mahajan
12. Shri Anand Sharma
13. Shri Lalit Suri

SECRETARIAT

1. Shri P.D.T. Achary — *Secretary*
2. Shri P.K. Bhandari — *Director*
3. Smt. Anita Jain — *Deputy Secretary*
4. Shri D.R. Shekhar — *Under Secretary*

Representatives of Ministry of Defence

1. Shri Ajai Vikram Singh, Defence Secretary
2. Shri M. Natarajan, Secretary (R&D)
3. Ms. Somi Tandon, Secretary (Def. Min.)
4. Shri S. Banerjee, Addl. Secretary (DP)
5. Shri H.C. Gupta, Special Secretary (Acq.)

6. Shri V.R.S. Natarajan, CMD, BEML
7. Maj. Gen. R.S. Balyan, DQA (Armament)
8. Shri Sudhir Nath, JS (HAL)
9. Smt. Rita Menon, JS (SY)
10. Shri Alok Perti, JS (S/OF)
11. Shri Tapan Ray, JS (X)
12. Shri R.K.M. Bhattacharya, JS (C)
13. Shri P.K. Mishra, Chairman, OFB & DGOF
14. R. Adm. R.M. Bhatia, CMD, MDL
15. Shri Devasis Chowdhury, CMD, Midhani

2. At the outset, the Hon'ble Chairman welcomed the representatives of Ministry of Defence to the sitting of the Committee and invited them to brief the Committee on the subject 'Defence Ordnance Factories' and 'Defence Public Sector Undertakings'.

3. The Defence Secretary then informed that a presentation on Defence Ordnance Factories and Defence Public Sector Undertakings which would be made before the Committee by the concerned official.

4. The Chairman, Ordnance Factory Board then apprised the Committee about the brief history of Indian Ordnance Factories Organisation, location of ordnance factories, share of Ordnance Factories in defence production and share of Ordnance Factories in Army Budget. He also apprised the Committee about the ammunitions and explosives being supplied to Defence Forces by the Ordnance Factories. He also stressed for autonomy for Ordnance Factories.

5. Representative of the Ministry also informed the Committee about the MBT Arjun and its production capacity which would be fifty tanks per year from 2007-08 onwards. He further stated that there would be continuous growth in turnover, productivity and expansion of customer profile. The Ordnance Factories were facing challenges in the field of stagnant requirement of Indian Armed Forces, changes in Geo-political scenario, rapid advancement in war technology, opening up of Defence sector to Private Sector, no scope for growth in export in the operated market segment. The Ministry further informed that the Ordnance Factories was also upgrading 155 mm Bofors guns.

6. The Chairman and Members raised certain queries on the functioning of Ordnance Factories and the same were resolved by the Ministry.

7. The briefing remained inconclusive.

8. The verbatim record of the proceedings was kept.

The Witnesses then withdrew.

The Committee then adjourned.

MINUTES OF THE THIRTY FIRST SITTING OF THE STANDING COMMITTEE ON DEFENCE (2004-05)

The Committee sat on Thursday, 2nd June, 2005 at 1100 hrs. to 1615 in Committee Room No. 139, Parliament House Annexe, New Delhi.

PRESENT

Shri, Balasaheb Vikhe Patil — *Chairman*

MEMBERS

Lok Sabha

2. Shri Ramesh Jigajinagi
3. Dr. C. Krishnan
4. Shri Raghuraj Singh Shakya
5. Shri Balashowry Vallabhaneni

Rajya Sabha

6. Shri Janardan Dwivedi
7. Shri Lalit Suri

SECRETARIAT

1. Shri M. Rajagopalan Nair — *Additional Secretary*
2. Shri P.K. Bhandari — *Director*
3. Smt. Anita Jain — *Deputy Secretary*
4. Shri D.R. Shekhar — *Under Secretary*

Representatives of Ministry of Defence

1. Shri Ajai Vikram Singh, Defence Secretary
2. Shri Shekhar Dutt, Secretary (DP)
3. Dr. M. Natarajan, Secretary (R&D)
4. Ms. Somi Tandon, Secretary (Defence Finance)
5. Shri H.C. Gupta, Special Secretary (Acquisition)
6. Shri S. Banerjee, AS (DP)

7. Shri Ranjit Issar, Additional Secretary (I)
8. Shri Sudhir Nath, JS (HAL)
9. Smt. Rita Menon, JS (SY)
10. Shri Alok Perti, JS (S/OF)
11. Shri Tapan Ray, JS (X)
12. Shri R.K.M. Bhattacharya, JS (COORD)
13. Shri S.C. Narang, CCR &D (R&M)
14. Shri K.U. Limaye, CCR&D (ECS)
15. Dr. D. Banerjee (CCR&D) (AMS)
16. Maj. Gen. R.S. Balyan, DQA (Armament)
17. Shri P.K. Misra, Chairman OFB & DGOF
18. Shri Ashok K. Baweja, Chairman, HAL
19. Shri V.R.S. Natrajan, CMD, BEML
20. Maj. Gen. R. Gossain, CMD, BDL
21. Shri Y. Gopala Rao, CMD BEL
22. R. Adm. R.M. Bhatia, CMD, MDL
23. Shri Devasis Chowdhury, CMD, Midhani
24. Rear Adm. Sampath Pillai, CMD GSL
25. Cmde. G.N. Sreekumar, CMD, GRSE
26. Shri B. Saha, Secretary, OFB
27. Cdr. Hardev Inder, Regional Chief Manager, GRSE
28. Shri K.G. Gupta, DDG/O.F. Cell

2. At the outset, the Hon'ble Chairman welcomed the representatives of the Ministry of Defence to the sitting of the Committee and invited them to make presentation on the subject 'Defence Ordnance Factories'. The representatives of the Ministry apprised the Hon'ble Chairman and some members of the Committee of the various aspects of the ordnance factories *viz*. capacity utilization, technological upgradation, manpower planning, etc. The Committee felt that a roadmap should be prepared for the Defence Public Sector Undertakings (DPSUs), Ordnance Factories and R&D Organisations with the aim of attaining self-reliance in Defence technologies. The Defence Secretary and other representatives of the Ministry further elaborated the issues raised by Members.

*** *** ***

3. The representatives of the Ministry then responded to the queries raised by the Chairman and other members of the Committee.

4. A verbatim record of the proceedings was kept.

The Committee then adjourned.

MINUTES OF THE NINTH SITTING OF THE STANDING COMMITTEE ON DEFENCE (2005-06)

The Committee sat on Tuesday, the 08 November, 2005 from 1500 hrs. to 1530 hrs. in Committee Room '53', Parliament House, New Delhi.

PRESENT

Shri, Balasaheb Vikhe Patil — *Chairman*

MEMBERS

Lok Sabha

2. Shri Suresh Chandel
3. Smt. Sangeeta Kumari Singh Deo
4. Shri Ramesh Jigajinagi
5. Shri Suresh Kalmadi
6. Dr. C. Krishnan
7. Shri S.D. Mandlik
8. Dr. K.S. Manoj
9. Shri Mahadeorao Shiwankar
10. Shri Manvendra Singh
11. Ms. Ingrid Mcleod

Rajya Sabha

12. Smt. N.P. Durga
13. Shri Janardan Dwivedi
14. Shri Lalit Suri

SECRETARIAT

1. Shri S.K. Sharma — *Additional Secretary*
2. Shri R.C. Ahuja — *Joint Secretary*
3. Smt. Anita Jain — *Deputy Secretary*
4. Shri D.R. Shekhar — *Under Secretary*

2. At the outset Hon'ble Chairman welcomed the Members to the Sitting of the Committee of the Committee for finalizing the draft report on 'Defence Ordnance Factories'. Hon'ble Chairman requested the Members to give their suggestions/modifications for incorporation in the draft report. Members of the Committee then suggested some minor changes/modifications. The Chairman further requested the Members to give their suggestions in writing, if any, later on for incorporation in the draft report. The Committee then decided to consider and adopt the amended draft report at the Sitting to be held on 17 November 2005.

The Committee then adjourned.

MINUTES OF THE ELEVENTH SITTING OF THE STANDING COMMITTEE ON DEFENCE (2005-06)

The Committee sat on Wednesday, the 23 November, 2005 from 1230 hrs. to 1320 hrs. in Committee Room 'C', Parliament House Annexe, New Delhi.

PRESENT

Shri Suresh Kalmadi — *In the Chair*

MEMBERS

Lok Sabha

2. Shri Iliyas Azmi
3. Shri A.V. Bellarmin
4. Shri Suresh Chandel
5. Smt. Sangeeta Kumari Singh Deo
6. Dr. C. Krishnan
7. Shri S.D. Mandlik
8. Dr. K.S. Manoj
9. Mr. Ingrid Mcleod
10. Shri Dharmendra Yadav

Rajya Sabha

11. Shri R.K. Anand
12. Dr. Farooq Abdullah
13. Smt. N.P. Durga
14. Shri Janardan Dwivedi
15. Shri Anand Sharma
16. Shri Lalit Suri

SECRETARIAT

1. Shri S.K. Sharma	—	*Additional Secretary*
2. Shri R.C. Ahuja	—	*Joint Secretary*
3. Smt. Anita Jain	—	*Deputy Secretary*
4. Shri D.R. Shekhar	—	*Under Secretary*

2. In the absence of Hon'ble Chairman, Standing Committee on Defence, the Committee unanimously chose Shri Suresh Kalmadi, M.P. to act as Chairman for the sitting under rule 258 (3) of the Rules of Procedure and conduct of Business in Lok Sabha.

3. The Committee, thereafter, considered the draft report on 'Defence Ordnance Factories' and adopted the same with some minor additions/modifications as suggested by the Members.

4. The Committee then authorised the Chairman to finalise the report with further minor modifications, if any necessary, and to present the same to the Parliament.

The Committee then adjourned.