PREFACE

This Report of the Comptroller and Auditor General of India contains the results of the performance audit of procurement system of Bharat Electronics Limited for the period from April 2007 to March 2010 and is based on test audit of records of the corporate office and its nine manufacturing units.

Executive Summary

Bharat Electronics Limited (Company), a Navartna Public Sector Undertaking under the administrative control of the Ministry of Defence (MoD), Government of India, is engaged in designing, developing and manufacturing wide range of electronic equipment/components for defence services and other government departments.

The Company has nine production units located at Bangalore, Chennai, Ghaziabad, Hyderabad, Kotdwara, Machilipatnam, Navi Mumbai, Panchkula and Pune. In addition, two overseas offices have been established at New York and Singapore as technological windows of the Company for importing material / components.

Performance Audit covering a sample of 1272 purchase orders placed between April 2007 to March 2010 aggregating ₹ 4954.83 crore constituting about 52 per cent of the total value of purchases of ₹ 9490.95 crore was conducted to assess the efficiency, economy and effectiveness of the procurement system of the Company. Audit examination revealed certain inadequacies in the systems and procedures of purchase, vender development and tendering process. Some of the significant audit findings are discussed below:

Thin vendor base

The Company was operating on a thin vendor base, as for almost one third of the standard items, it had only one vendor while for *another one third of these items, it had only two vendors. In fact, the Company could add only 168 vendors to its directory during the last three years which accounted for only one per cent of the total vendors of the Company. Thus, in the absence of an adequate vender base for procuring a large number of items, the Company's ability to obtain competitive rates was impaired. Despite the fact that the Company has a very thin vendor base, the purchase procedure of the Company was liberalised in 2009 to permit procurement of items through single tender even where more than one vendor for such item was available. Consequently, during the last three years, almost 90 per cent of the total procurement of the Company was made through single tenders and balance 10 per cent through limited tenders. The procurement through open tenders was negligible.*

Non-sharing of vendor base

Vendor base of the Company was unit specific and was not being shared among units while inviting quotations. This deprived the Company from reaping the benefits of competitive prices particularly when the vendor base of the Company was thin.

As the vendor base impacts the competitiveness of the procurement prices and provides leverage in selecting the suppliers, the Company needs to urgently address this issue of widening the vendor base to achieve economy and quality in procurement.

Non-monitoring of price trend

The Company and its units were not monitoring the price trends of material and components despite specific provision in its Purchase Procedure.

Delays in placement of purchase orders and inspection of material

In 38 percent of cases examined, the units of the Company failed to adhere to the specified time limit for placement of purchase orders. Ghaziabad and Chennai units, in particular, could convert only 43 and 26 percent of the purchase requisitions respectively within the prescribed time. Moreover, in 66 percent of the cases where purchase orders had been finalised, there were delays in dispatching the Purchase orders to the vendors. The Company had not fixed any time lines for various stages of procurement process, i.e., tender evaluation and placement of purchase orders after its finalization.

Also, no timeline was fixed for quality test or physical inspections of material unlike in another Defence PSU viz HAL. In the absence of any such norms, there were considerable delays in inspections and consequent return of rejected materials.

Under utilization of overseas offices

Though the Company had opened two overseas offices at New York and Singapore for importing materials/components directly and had worked out a saving of around 14 per cent on purchases made through these offices, audit noticed that meager quantities (3.34 to 5.91 per cent of value of imports) were imported through these overseas offices. Thus, the Company could not leverage its overseas offices to reap savings in the import of material.

Cost reduction measures

Indigenization, which was supposed to be one of the major drivers of cost reduction, was not very successful as is evident from the fact that the value of purchase orders placed on foreign vendors increased from 48 per cent in 2007-08 to 68 per cent in 2009-10.

Executive Summary

Unrealistic budgeting

Company failed to exercise a realistic assessment of its requirement of its expenditure on procurement as in all the three years under review, the actual expenditure of procurement deviated by more than 20 per cent from the planned expenditure.

Recommendations

This performance audit contains following recommendations to help the Company improve its performance.

- *Company should make concerted efforts to expand its vendor base and share the vendors directory among its units to facilitate competitive rates.*
- *Company should fix time line for various activities of the procurement process and ensure its compliance for adherence to production schedule.*
- *Revisit its procedures for procurement to ensure that quotes are invited from more than one available sources to reap the benefits of competitive rates*
- *Optimally utilize the services of foreign offices for economical imports of material/components*
- *Fix timeline for various activities of the procurement process and ensure its compliance for adherence to production schedule.*
- *Strengthen the existing ERP system to ensure comprehensive database for exercising effective control over procurement of material only from authorized sources and advances to suppliers*

Ministry accepted all the recommendations and stated (March 2011) that as a follow up of the extensive study by Audit, the Company has been advised to find out solutions for the problems highlighted in the Report.

Chapter-1

INTRODUCTION

1.1 Industry Profile

The Indian defence industrial base and production capacity is one of the largest in the world. It constitutes 31 Ordnance Factories and 10 Defence Public Sector Undertakings under the Ministry of Defence producing a wide range of armaments, vehicles, fighter aircrafts, and sophisticated electronics equipment, *etc.* The era of liberalization which commenced in 1991, coincided with the commencement of the role of the private sector in defence sector too. Presently, Indian defence industry is in transition with increased private participation and consequent competition.

1.2 Company Profile

Bharat Electronics Limited (Company), established in April 1954, is a Government of India undertaking under the administrative control of the Ministry of Defence (MoD). The Company is engaged in designing, developing and manufacturing wide range of electronic equipment/components such as radars, communication systems, naval systems and broadcasting & telecommunication equipments etc for the use of defence services, para military organizations and other government users such as All India Radio, Doordarshan, Bharat Sanchar Nigam Limited, Police wireless, Meteorological department and Indian Space Research Organisation etc. Since 2007 the Company is enjoying Navaratna status.

The Company has nine production units located at Bangalore, Chennai, Ghaziabad, Hyderabad, Kotdwara, Machilipatnam, Navi Mumbai, Panchkula and Pune and six[1] Regional offices spread across the country. In addition, two overseas offices have been established at New York and Singapore as technological windows of the Company for importing material / components. The Company has also set up two Central Research Laboratories at Bangalore and Ghaziabad to carry out their Research & Development activities.

1.3 Organisational Set Up

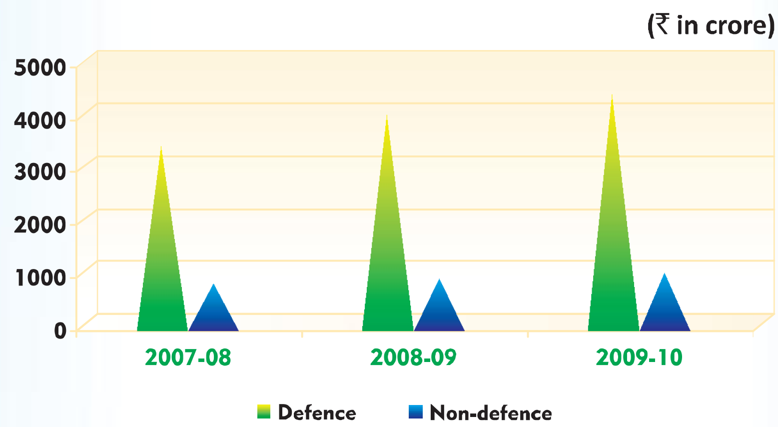
The Company is managed by a Board of Directors headed by the Chairman and Managing Director (CMD) who is assisted by six functional Directors and four Part-time independent Directors.

The purchase policies and procedures are framed at Corporate Office level. Two Directors at Corporate office viz. Director Bangalore Complex and Director Other Units monitor the purchase functions of the units which is de-centralised at Unit level. The production units are headed by General Managers who are assisted by Additional General Managers /Senior Deputy General Managers and Deputy General Managers heading Material Management in discharging the procurement related functions.

[1] Chennai, Delhi, Hyderabad, Kolkata, Mumbai, Vizag

1.4 Dependence on orders from defence services

Major procurement by the Company is to meet the orders from defence customers as more than 80 percent of the total sales were to the defence sector as witnessed from the graph explained below.



1.5 Operational Performance

As is evident from the table below, despite rise in the turnover of the Company, the profitability declined during this period.

Table 1

(₹ in crore)

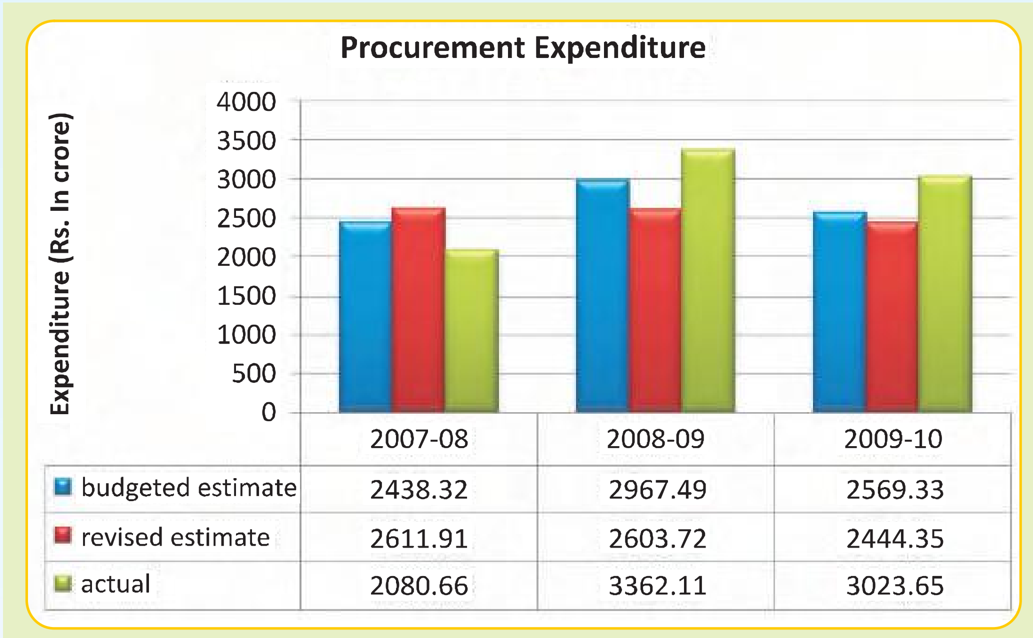
	2007-08	2008-09	2009-10
Sales & service	4102.54	4623.69	5219.77
Profit before tax	1171.30	1096.84	1045.02
Earning per share (₹)	103.34	93.22	90.11

One of the major reasons for declining profitability was increase in the cost of material vis-à-vis value of production.

1.6 Procurement Budget and Expenditure

The Company prepares the Annual Budget including the procurement budget in the beginning of the calendar year, based on the order book position, orders to be executed during the year, anticipated orders, scheduled delivery date etc.

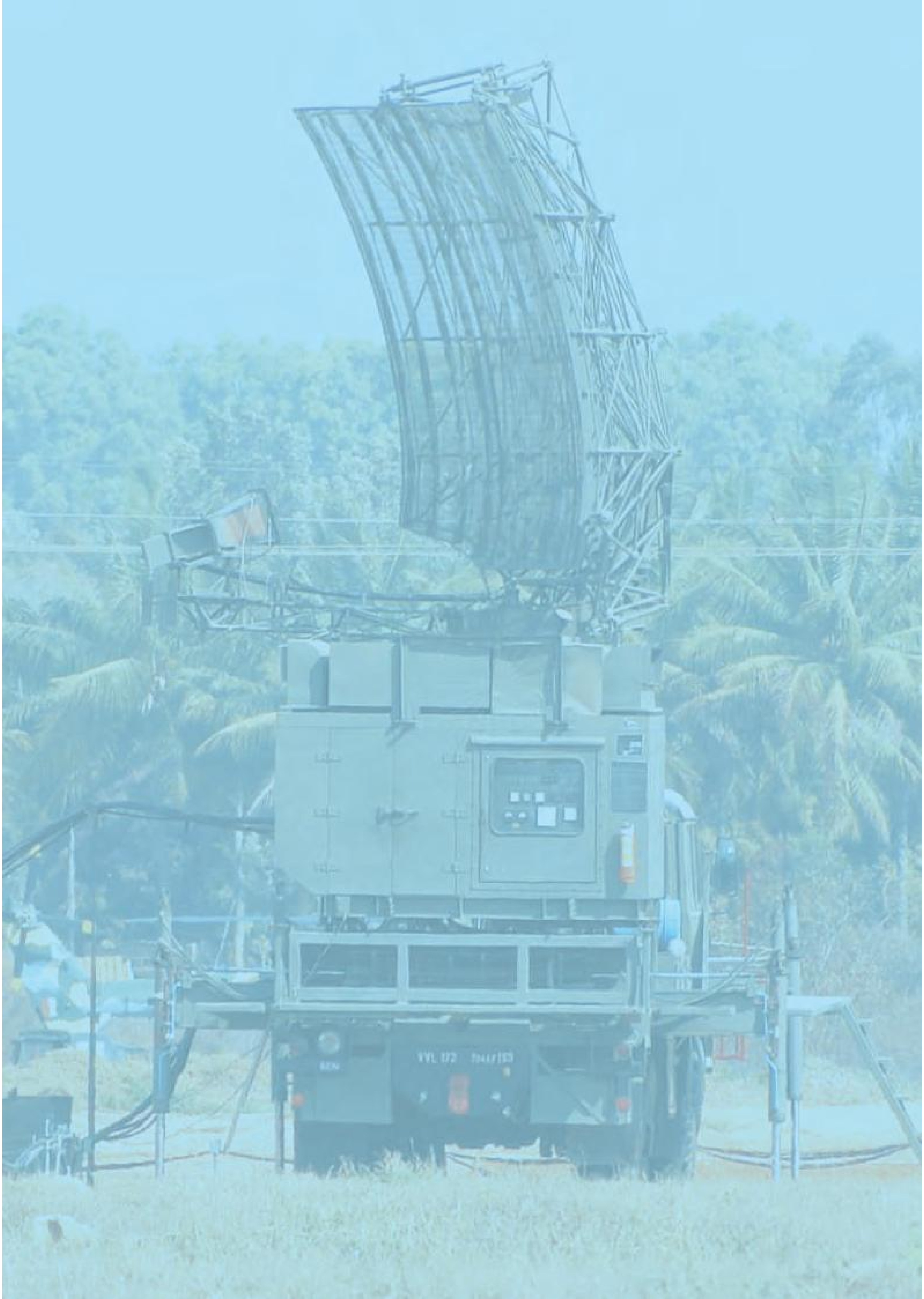
The graph below indicates budgeted and actual procurement expenditure of the Company during the period 2007-08 to 2009-10:



It may be seen from above that in all the three years under review, the actual expenditure deviated by more than 20 percent from the planned expenditure which indicated that the Company failed to make realistic assessment of its upcoming business and corresponding expenditure.

The Management replied (December 2010) that the variation in expenditure was due to variation in the anticipated orders from the customers and such variation materially did not affect the operational plans of the Company. The Ministry stated (March 2011) that Company has been directed to conduct a detailed analysis and furnish actual reasons for such huge variations

The fact remains that variations of more than 20 percent each year from the plans, highlight the weaknesses in the planning process of the company which needs to be reviewed for taking corrective measures.



Chapter-2

AUDIT APPROACH

2.1 Scope of Audit and Audit Methodology

Audit studied the procurement policies, guidelines and directives formulated by the Company and implementation by the units. The audit examination was restricted to a sample of 1,272 purchase orders placed between April 2007 to March 2010 valuing ₹ 4954.83 crore (out of total of 1,24,751 purchase orders valuing ₹ 9490.95 crore) which constituted about 52 per cent of the value of total purchases during the period. The sample was drawn by using Monetary Unit Sampling Method. The details of sample are indicated in Annexure-1. Besides, an analysis of Purchase Orders relating to overseas offices located at New York and Singapore generated through the SAP ERP was also conducted.

Audit commenced with an entry conference held with the Management in April 2010 wherein the scope, objectives and methodology of audit were discussed and the Audit criteria were agreed upon. This was followed by collection of data, issuance of preliminary observations and discussions with the unit Management. Audit was concluded with an Exit conference with the Corporate Management, held in September 2010, wherein the results of audit and recommendations were discussed. The replies of the Management (December 2010) and Ministry of Defence, GOI (March 2011) have been suitably incorporated in this report.

2.2 Audit objectives

The objectives of the Performance audit were to assess whether:

- Company had a well defined purchase policy/ procedure in place and the same was complied with by the units.
- The procurement process was fair, equitable and transparent and ensures efficiency, economy and effectiveness.
- There existed an effective mechanism for reviewing the outcome of contracts to implement the lessons learnt in future contracts.

2.3 Audit Criteria

The performance of the Company was assessed against the following criteria:

- Purchase Policy and procedures amended from time to time.
- Minutes of the meetings of Board of Directors.
- Procurement budgets and production plans of the Company
- Guidelines issued by Central Vigilance Commission and other Regulatory Authorities.
- Internal control procedures
- Industry best practices.

2.4 Audit Findings

Audit findings, conclusions and recommendations are discussed in the following chapters:

- **Chapter - 3** **Procurement System and procedures**
- **Chapter - 4** **Vendor Development**
- **Chapter - 5** **Tendering System**

2.5 Acknowledgement

Audit acknowledges and appreciates the co-operation and assistance extended by the Management at various stages in conducting the performance audit.

Chapter-3

PROCUREMENT SYSTEM AND PROCEDURES

3.1 Procurement Policy

The Company formulated detailed Purchase procedures in 1964, which was modified from time to time. During the period under review, Purchase Procedures 1996 was being followed which was modified again in December 2009. This modified Purchase Procedure was being followed by the Company, though the Board of Directors of the Company was yet to approve it (December 2010). The Purchase Procedure is applicable to all the units except orders placed on sub-contractors, purchases made by Regional offices abroad and works contracts which are governed by separate procedures.

3.1.1 Inadequacies in the system of Procurement

A review of the Purchase Procedures followed in the Company during the period of review revealed the following inadequacies:

(a) Though as per the Purchase Procedure 2009, the Company and its units were required to monitor the price trends of material and components regularly, Audit observed that the same was not being done.

The Management stated (December 2010) that mapping the data of price trends of the electronic components was not practical and useful as prices vary on a day to day basis.

Reply is to be viewed in the light of the fact that though daily fluctuation of prices is an acceptable reality in today's economy, price monitoring is still very essential as it serves as a benchmark for price negotiation, especially in the backdrop of the fact that major procurement is being done on one or two quotes .

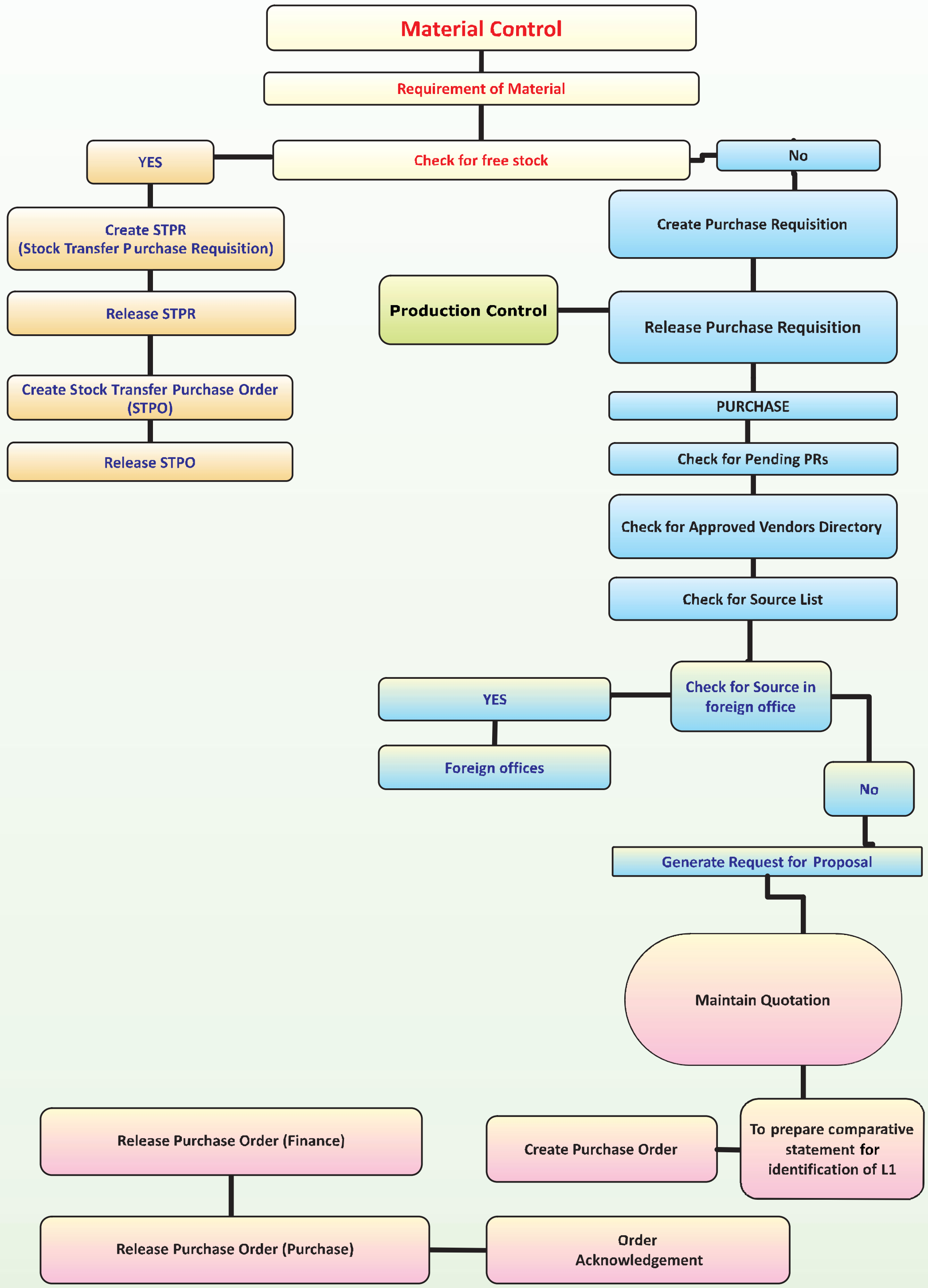
The Ministry agreed (March 2011) with Audit and stressed that the Company must comply with the institutionalized procedure of monitoring the price trends.

(b) In terms of Purchase Procedure 1996, the Purchase Department was required to have at least two preferred suppliers of proven quality, price terms and delivery adherence and also a standby source with same qualities. However, while revising the Purchase Procedure in 2009, audit noticed that the said provision was removed which permitted the department to go for the single source without making efforts to develop alternate sources for obtaining competitive rates.

Further, even in cases where the Company had more than one approved vendor, the revised Purchase Procedure of 2009, permitted procurement through single tender with the approval of next higher authority.

The Management stated (December 2010) that the clause in the Purchase Procedure 1996 was not practical from vigilance angle as it stipulated splitting of order on preferred and standby supplier at the discretion of divisional / unit heads. On the issue of preferred suppliers, the Management replied that this was necessitated due to specified customer specifications in the agreements.

Flow chart indicating the Purchase Process



Rationale of this amendment is not justified as in the absence of this clause, the Company cannot fetch competitive rates by procuring material/ equipment from a single source which besides vitiating the sanctity of the procurement process, would also impact the profitability of the Company . Also, the guidelines of Central Vigilance Commission do not debar a Company to procure from more than one source provided the decision on the quantum of material was disclosed well in advance i.e. at the tender enquiry stage itself.

The Ministry stated (March 2011) that the company was being advised to relook the issues, deliberate in the Board meeting and also to obtain the Board approval for the modified Purchase Procedure 2009.

(C) In case of purchase orders (POs) on foreign vendors, Purchase Procedure 1996 included a clause on Liquidated Damages (LD) with a ceiling of 10 per cent for belated supplies. However, as per Purchase Procedure 2009, this clause is applicable only when it is mutually agreed upon.

While admitting the fact, the Management stated (December 2010) that it was not possible to insist on the Company's terms and conditions on all the suppliers particularly in cases where the purchases are made on cash basis. The Management further added that by deleting the clause it had not foregone the right to claim LD.

The fact remains that in the absence of a specific clause on LD, the Company would not be able to legally enforce the recovery of LD even in cases where there had been a delay resulting in delayed supplies to the customers and imposition of LD against the Company.

The Ministry while agreeing (March 2011) with the audit, advised the Company to incorporate the relevant clause in all the POs placed on foreign vendors.

3.2 Under utilization of Overseas offices

The Company established two overseas regional offices (New York-1979, Singapore- 1998) for importing materials/components directly and thereby achieving a saving of 10 per cent on prices. Audit, however, observed that during the period 2007-08 to 2009-10, quantities imported through the overseas offices were very insignificant.

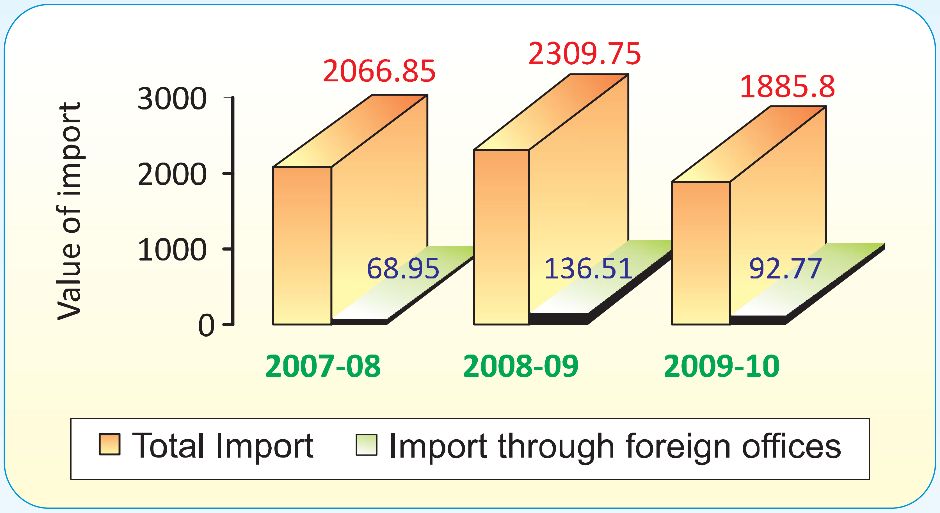
The table and graph below indicate the quantities and value of imports through these offices

Table 2

Value ₹ in crore

	2007-08		2008-09		2009-10	
	No of POs	Value	No of POs	Value	No of POs	**Value**
Total imports	14126	2066.85	22083	2309.75	21790	**1885.80**
Import through foreign offices	5856	68.95	6584	136.51	5241	**92.77**
Share of Import through foreign offices (%)	**41.46**	**3.34**	**29.81**	**5.91**	**24.05**	**4.92**

Share of import through overseas offices (value)



Thus it is evident that during the period under review, the services of the overseas offices were under utilized as meager quantities (4.76 *per cent)* of material worth ₹ 298.23 crore only, out of a total imports of ₹ 6262.40 crore were imported through these offices.

The Management stated (December 2010) that in many cases direct procurement is made from foreign sources after negotiating with the vendors or their authorized representatives in India.

However, Audit observed that a Committee constituted by the Company itself to study the economics of purchases reported (December 2002) that procurement through overseas offices was cheaper by 14 per cent in majority of cases. Further, the Committee had also recommended that such a study should be carried out after every three years to reassess the situation., .However, it appears that the Management did not give any cognizance to the recommendations of the committee.

The Ministry informed (March 2011) that the Company has been advised to reassess the requirement of its overseas offices.

3.3 Unit Procurement of components-Lack of synergy

Purchase Procedure 1996 and Purchase Procedure 2009 required Material control departments to ascertain the availability of components being manufactured in-house by other sister unit(s) before procuring the same from outside source. However, Audit observed that the Company procured components/manufactured parts valuing ₹ 355.27 crore (46 POs) from outside sources though the components were, being manufactured in the sister units, without ascertaining the availability from these units.

A further audit analysis through SAP of total procurement made during 2007-08 to 2009-10, revealed that the Company was under utilizing the manufacturing facilities available in its units.

Out of a total of 28,052 parts which were being manufactured by the sister units, only 2334 parts (8.32 per cent) were procured through these units and the remaining 25,718 parts (91.68 per cent) were procured by the company from outside vendors.

The Management while responding (December 2010), was however, silent on the justification for procuring components worth ₹ 355.27 crore from outside source and stated that the facilities for manufacture of the items under the sample list do not exist. Further, the Management added that the procurement of material / components is done only when the same cannot be manufactured in-house.

However, the fact remains that the Company did procure items from outside sources despite these being manufactured by its own units without documented justification.

The Ministry informed (March2011) that the Company has been advised to explore the possibilities of producing the items in-house, before purchasing the same from outside as also to circulate the information about components which are proposed to be procured, to the other units who will intimate whether they can manufacture these items or not.

3.4 Inadequacies in Procurement module of ERP system (SAP)

In order to facilitate the Management to take right decisions at right time, the business enterprises need to have real-time, correct and meaningful database. The Company, in October 2006, introduced ERP in Bangalore Complex and in other units during 2007-08.

An exercise was conducted in audit to assess the effectiveness of the system and the following inadequacies were noticed:

- **Non-sharing of Vendor database -** Each unit maintained a separate database of vendors which was unit specific and was not being shared by other units while inviting quotations. Audit noticed that this deprived the units from reaping the benefits of competitive prices particularly when the vendor base of the company was thin.

  Management while confirming the fact stated (December 2010) that each unit identified and created vendor list as per their requirements.

  The Ministry stated (March2011) that the Company has been advised to ensure that the restriction on sharing of vendor database among the units should be minimal.

- **Accounting of Rejections and Replacements -** Replacement of materials against the rejected items was not verifiable, as the replaced materials were being recorded as fresh receipts. The system was, thus, inadequate to monitor the receipt of the replaced material against the rejected items.

  The Management confirmed (December 2010) that the replacements were being monitored outside the system.

Thus, to exercise better internal control over replacement against the rejected material the Company needs to strengthen the system suitably.

- **Vendor identification -** Though the Company was procuring components/material mainly for defence customers where quality and reliability was the main concern, Audit observed that the database did not support identification of vendors as original manufactures, authorized / franchise distributors and unauthorized distributors despite being repeatedly cautioned by the Corporate Standards wing of the Company.

  The Management stated (December 2010) that system was being modified suitably.

- **Tracking Material Consumption -** The system was not able to track the consumption of materials received against a particular purchase order once it is received in the stores department.

  Management contended (December 2010) that tracking of consumption to sale order was not required.

  The reply is not tenable as tracking of consumption of a material would facilitate the company in ascertaining the profitability / loss of a particular transaction.

- **Advances to Suppliers -** System was not able to distinguish balances of advances lying with the suppliers between interest bearing and interest free, supported by bank guarantee and without supported by the bank guarantees.

  While confirming the fact the Management stated (December 2010) that this would need creation of multiple codes in the system.

  The fact remains that the system did not ensure effective control and monitoring of advances.

  The Ministry intimated (March 2011) that the Company has been advised to modify the system to include tracking of material consumption and advances to suppliers.

In sum, the database of the company was not comprehensive and reliable as it lacked effective checks and controls which may impact its business decisions adversely and therefore, necessitated a revisit.

Chapter-4

VENDOR DEVELOPMENT

The Company was maintaining an Approved Vendor Directory (AVD). The Corporate Standards Department of the Company was responsible for the generation, updation, maintenance and publication of AVD for standard material and components. The vendors were discovered from

- Requests from the parties,
- Listed with the reputed institutions such as Electronic Component Standard organization (LCSO),
- US Military and National and International Buyers Guides etc.,

  information available on internet, Transfer of Technology agreements, design houses, and
- Advertisement in media.

4.1 Thin vendor Base

Audit scrutiny of the Approved Vendor directory of the Company revealed that the company was having a very thin vendor base.

The table below indicates the number of vendors registered with the Company[2] for total 42730 types/categories of standard material/components being procured by the Company for manufacturing products for its suppliers.

Table 3

Electronic Components		Mechanical and Material components		Total components	
Total No . of parts	Vendors in AVD	Total No of parts	Vendors in AVD (Nos)	Total No. of Parts	Vendors in AVD (Nos)
10021	1	3345	1	13366	1
10893	2	2814	2	13707	2
1301	3	3442	3	4743	3
4687	4	2906	4	7593	4
1308	< 4	2013	<4	3321	<4
28210		**14520**		**42730**	

It may be seen from the above that against almost one third (31 percent) of the standard items (13366 items), the Company had only one vendor and against another one third (32 percent) of items (13707 items) the Company had only 2 vendors registered with it.

This indicated the level of inadequacy of the vendor base of the Company.

The inadequate number of vendors available with the Company stressed the level of dependency to the extent of quality and price being dictated by the vendor. Therefore, in order to discourage

[2] Status as on July 2010

the monopolistic scenario, the Company needs to urgently diversify and widen its vendor base. The fact that in respect of 3095 (7 percent) items the same vendors were continuing since 1977 till date only corroborates the Audit concern.

The Management stated (December 2010) that the same vendors would continue in the Directory until evaluation of new vendors is completed and further added that US Military and Bureau of Indian Standard (BIS) approved buyers lists also contained only one approved vendor.

Expressing its concern, the Ministry stated (March 2011) that the company has been advised to take concrete steps to widen the vendor base.

4.2 Validity period of registrations

As per the procedure, the vendors were to be registered initially for a period of three years and after the expiry, a grace period of six months was to be allowed within which the validity shall be renewed for continuation in the AVD.

Audit observed that:

- Four vendors registered for supply of 132 electronics components were continuing in the AVD (December 2010) though the stipulated validity period had expired in December, 2009
- For 1572 parts, the vendors registered during 1977 to 1997 were still continuing till date and no alternate/additional source was developed even after 13 to 33 years.

During discussion, the Management stated (November 2010) that though efforts are being continued to develop multiple vendors for standard items, this exercise takes considerable time and involves various factors i.e., quality approvals, in-house evaluation and feedback from/units etc.

The Ministry stated (March2011) that the validity period of registration as stipulated in the Purchase Policy of 2009, has to be maintained and the system should be able to identify the deviation along with justifications thereof.

4.3 Vendor performance rating system

As per the Procedure, based on quality, delivery and service parameters, the company classified vendors as

- Preferred (rating above 90 *per cent*),
- Acceptable (rating between 75 to 90 *per cent*) and
- Non-preferred (rating less than 75 *per cent*)

Vendors failing to qualify in any of these categories were put under observation. During this period, such vendors were required to improve the rating in order to come in the range of acceptable category failing which the vendor would be removed from the Approved Vendor Directory.

The table below indicates the assessment of performance of the vendors conducted by the Company during the years 2007-08 to 2009-10.

Table 4

Year	Total no. of vendors rated	Preferred vendors		Accepted Vendors		Non-preferred vendors		Additions/deletions during the year	
		No.	%age	No.	%age	No.	%age	Vendors added in AVD	Vendors deleted in AVD
2007-08	4251	2455	57.75	807	18.98	989	23.27	38	14
2008-09	6042	3363	55.66	1326	21.95	1353	22.39	49	14
2009-10	6316	3785	59.93	1059	16.77	1472	23.31	81	44
Total	**16609**	**9603**	**57.78**	**3192**	**19.23**	**3814**	**22.99**	**168**	**72**

It may be seen that 23 per cent of the vendors were rated as 'non preferred vendors' by the company. The occurrence of procurement from 'non-preferred vendors' was seen to be only in two per cent of the total value of procurement made during the period covered in Audit. The Company did not record any reasons for going in for procurement from 'non-preferred vendors'. The Company must ensure that reasons for doing so are recorded in all such cases in future.

Audit further observed that though the rating of 66 non preferred vendors was consistently less than 75 percent for last 3 years, i.e. 2007-10, even then , 1088 orders for ₹ 44.89 crore were placed on them.

The fact that the Company could add only 168 vendors in the Directory during the last three years which accounted for only one per cent of the total vendors and indicated lack of adequate efforts made by the Company to enhance the vendor base.

The Management stated (March 2011) that efforts were being made to enhance the vendor base. The Ministry stated (March 2011) that as the vendors are classified as 'non-preferred' by the units for lack of performance / commitments on delivery and /quality, the company has been advised to exclude such vendor from its Approved Vendors Directory.

In conclusion, the Company has a very thin vender base and for majority of the material/components it has only one or two vendors registered with it. Thus, in the absence of an adequate vendor base, the Company had to place the orders even on those vendors which were either 'non- preferred vendors' or with expired validity. The Company also did not add significantly to the new vendors in its Directory. As the vendor base impacts the competitiveness of the procurement prices and provides leverage in selecting the suppliers and negotiating with them, the Company needs to urgently address this issue of widening the vendor base to achieve economy in procurement.

Chapter-5

TENDERING SYSTEM

5.1 Timeliness of procurement activities.

Timeliness of the procurement activities assumes a great significance as any delay in executing the Customer orders affects

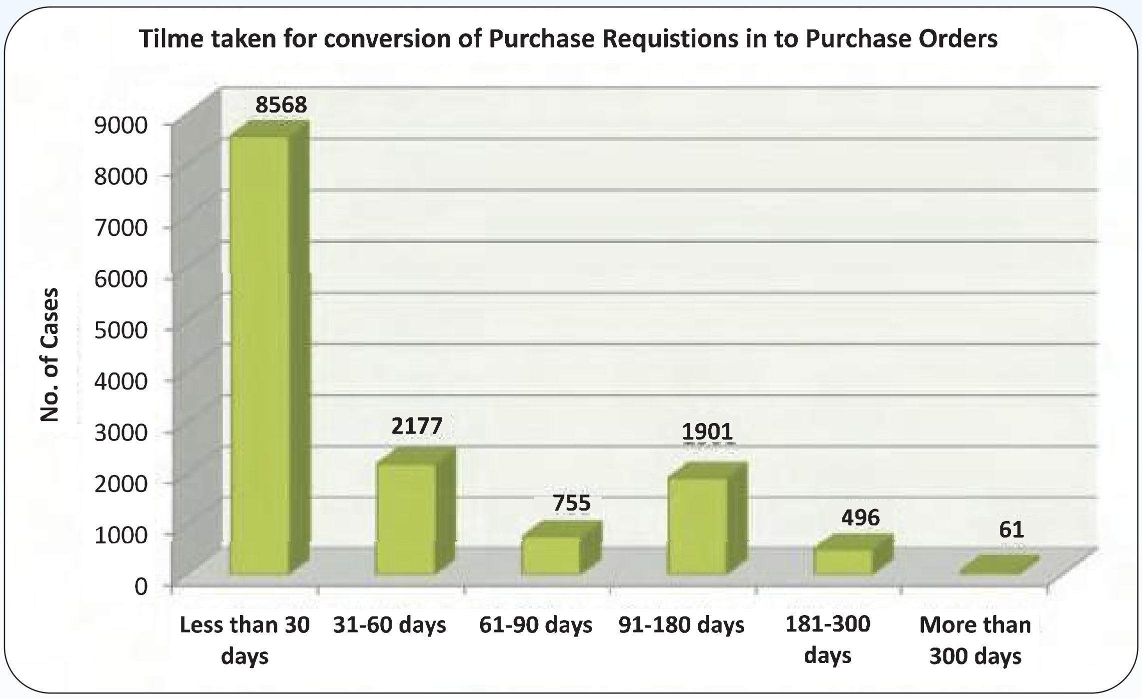
- The defence preparedness of the Nation,
- Goodwill of the customer, and
- Production schedule leading to levy of Liquidated Damages by the customer.

Audit scrutiny revealed inordinate delays in various stages of the procurement process of the Company which are discussed below:

5.1.1. Delay in conversion of Purchase Requisitions into Purchase Orders

As per the Procedure, all the purchase requisition (PR) are to be converted into Purchase Orders within a period of 30 days (subsequently reduced to 21 days in the year 2009).

The graph below indicates the quantum of time taken by the company in sample cases:



Though almost in 62 per cent of cases ,the Company adhered to the specified time schedule, in the remaining 38 per cent cases, the time taken in converting purchase requisitions into purchase orders ranged between 31 days to 300 days.

Further audit analysis indicated that the performance of

- *Navi Mumbai*, *Hyderabad* and *Pune* units was comparatively better as in **more than 75 *per cent*** cases, the PRs were converted within the specified time limit.
- Whereas *Panchkula, Machalipatnam*, *Bangalore* and *Kotdwara* units could convert **more than 60 to 75 percent** of the PRs into POs in 30 days time.
- ***Ghaziabad*** and ***Chennai performance*** was not encouraging as these could convert only **43 and 26 percent of PRs respectively** into purchase orders within the specified time limit (***Annexure-2).***

The Management without analyzing the reasons for delays in each of the cases, attributed (December 2010) delays to: (i) low quantity PRs kept on hold for clubbing with subsequent PRs (ii) seeking the clarifications regarding drawing, technical specifications (iii) change in indenter's requirement (iv) SAP related problems and (v) re-tendering due to poor response, etc.

The reply being general in nature is not acceptable as:

(i) Clubbing of low quantity PRs with subsequent PRs and change in indenter's requirements lacks logic as these PRs were against the specific orders to be executed within the stipulated time.

(ii) Requirements of the customer are to be frozen before issuing the PR.

(iii) SAP ERP was implemented in October 2006 which should have been stabilized by this time.

Thus, the fact remains that the Company delayed the placement of purchase orders without any valid reasons which had a cascading impact on the timeliness of the overall completion of the projects which could be of strategic significance.

Viewing the overshooting of time lines in defence projects a matter of grave concern, the Ministry stated (March2011) that the company has been advised to adhere to the timeliness.

5.1.2. Absence of time line for various stages of procurement

As discussed in the preceding paragraph, the PRs were to be converted to POs within 30 days (now reduced to 21 days). However, in order to ensure that the time schedule is adhered to, the Company had not stipulated any time limit for various stages involved in the process such as

- Indenting by the user department
- Verification of stock availability
- Finalization of drawings

- Request for Quotation and
- Tender evaluation etc.

The Management stated (December 2010) that time frame for each stage was practically not possible due to wide product range.

However, the fact remains that adherence to the prescribed timeline for converting PRs into POs could be ensured only if the time line for each stage of the procurement process is fixed and monitored. Therefore, due to non-fixation of stage wise timeline, the Company could not achieve the target of converting the requisitions into purchase orders in the prescribed time.

The Ministry stated (March 2001) that the Company has been advised to institunalise a practical and reasonable time line for evaluating the critical activities involved in the procurement process.

5.1.3 Delay in releasing the Purchase Orders

In order to avoid any delay in executing the customer's order, the POs are to be issued as soon as the terms and conditions of the POs are finalized. Audit, however, observed that there were considerable delays in issuing the POs to the successful vendors.

The following table indicates the unit wise delays in issuance of POs.

Table 5 - Delay in issuance of purchase orders

Unit/Range	POs Examined	1 to 10 days	11 to 20 days	21 to 30 days	31 to 60 days	61 to 90 days	91 and above	Total Pos delayed	Delay % age
Bangalore	511	128	39	24	24	11	6	232	**45**
Chennai	66	22	8	8	1	2	6	47	**71**
Machalipatnam	35	14	3	2	3	1	4	27	**77**
Navi-Mumbai	39	17	3	4	2	1	4	31	**79**
Pune	35	18	5	0	2	1	2	28	**80**
Ghaziabad	265	57	49	37	38	17	15	213	**80**
Hyderabad	93	42	23	9	6	2	3	85	**91**
Panchakula	133	29	30	14	18	7	4	102	**77**
Kotdwara	95	13	24	13	21	6	4	81	**85**
Total	**1272**	**340**	**184**	**111**	**115**	**48**	**48**	**846**	**66**

It may be seen that out of a total of 1272 POs examined in Audit, in 846 POs (66 percent) there were delays in releasing the POs to the vendors. Audit also observed that except Bangalore unit, in every unit more than 70 *per cent* of the POs were released after delays.

Management replied (December 2010) that in some cases, delays could not be avoided for want of additional clarifications by Finance/Approving Authority, negotiations of payment terms, delivery schedule, and price and SAP problems.

The reply is not tenable as the POs are finalized only after firming up of terms and conditions and with the approval of competent authority. Moreover, delay in 66 *per cent* of the cases, is a matter of grave concern which needs to be urgently addressed.

This systematic lapse is corroborated by the fact that the Company has already incurred Liquidated Damages of ₹ 50.61 crore, ₹ 55.74 crore and ₹ 76.06 crore respectively during last three years 2007-08, 2008-09 and 2009-10

While emphasizing the need of systemic tightening of procedures, the Ministry stated (March 2011) that the company has been advised to prescribe a period of 15 days for issuance of purchase orders after finalization of the order.

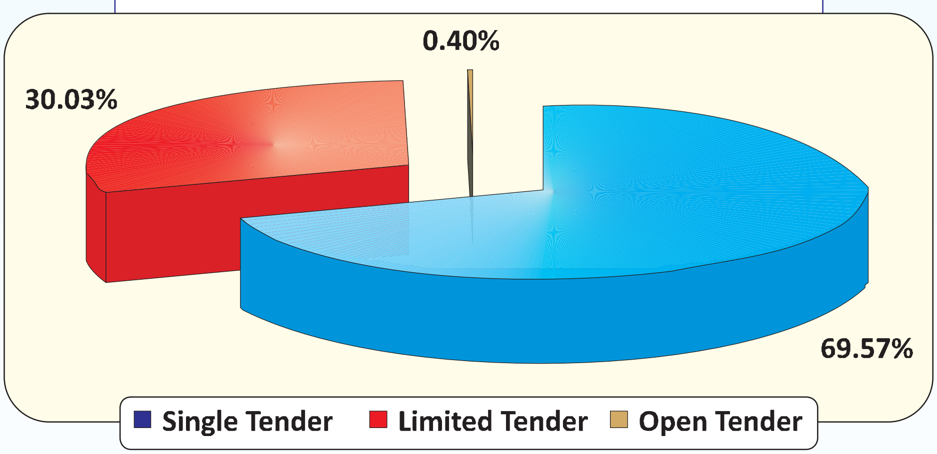
In sum, delays in procurement due to non fixation of prescribed time lines for various stages of procurement process, conversion of purchase requisition into purchase order and placement of purchase order after its finalization; may impact the overall completion schedule of the projects

5.2 Procurement by Single or limited tenders

The Purchase Procedure of the Company stipulates three types of tendering viz. open, limited and single for procurement of material and components.

The graphs and the table below give year wise break-up of the purchase orders placed by the Company during 2007-08 to 2009-10 through different types of tendering process.

Tender Position of Selected Sample (in Number) %age



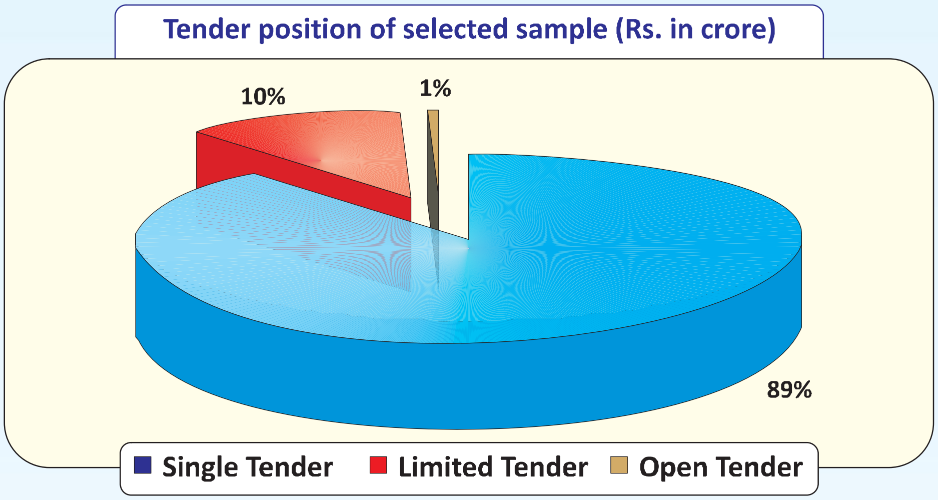


Table 6

(₹ in crore)

Mode of Tender	Years						Total		
	2007-08		2008-09		2009-10				
	No. of POs	Value	No. of POs	Value	No. of POs	Value	No. of POs	Value	Percentage
Single Tender	231	1755.63	311	1404.21	293	1125.95	**835**[3]	**4285.79**	**88.65**
Limited Tender	94	68.63	150	336.97	138	109.46	**382**	**515.06**	**10.65**
Open Tender	1	15.17	1	0.76	3	17.99	**5**	**33.92**	**0.70**
Total	**326**	**1839.43**	**462**	**1741.94**	**434**	**1253.40**	**1222**[4]	**4834.77**	**100**

From the table, it is evident that the Company was mainly resorting to single tenders which constituted almost 90 percent of the total procurements and balance 10 percent through limited tenders. In fact, the percentage of procurement through open tenders was negligible. This was obviously due to the fact that the vendor base of the Company was very thin and for majority of the items (63 percent), it had only one or two vendors registered with it.

5.2.1. Single Tenders

As per the Purchase procedure, single tenders were to be invited:

- in case of propriety items,
- when specified source is indicated in the license / collaborator agreement/ customer requirement,
- for items procured on emergency basis which were to be regularized from authority one level higher by giving justification.

[3] Single tenders include 121 repeat orders for ₹ 142.31 crore.
[4] This excludes 50 cancelled POs

In all such cases, the Company was required to record the reasons for opting for single tenders.

Audit observed that though the Company was generally adhering to its laid down procedures, the following deviations required the attention of the Management:

a) While resorting to single tendering, audit observed that for 17 POs valuing ₹ 350.89 crore, no such justification was found recorded.

b) Despite the availability of multiple vendors, 19 POs valuing ₹ 373.05 crore were placed on single tender basis without exploring the competitive rates. In six such cases, the Company incurred an extra expenditure of ₹ 30.15 crore as the alternate sources on being contacted subsequently for part supplies were found cheaper (Annexure 3).

   The Management accepted (December 2010) the fact that exploring alternate sources resulted in considerable savings.

c) Company resorted to procure even non-standard items viz. heavy vehicle chassis, etc. valuing ₹ 5.94 crore on single tender basis despite multiple vendors existing for the items.

d) The Company procured capital items (11 POs) valuing ₹ 12.46 crore on single tender basis without following the prescribed procedure of issuing market research enquiries to the manufacturers.

The Management stated (December 2010) that in the above cases, the single tendering was necessitated due to proprietary nature of items and specified customers requirements. It, however, assured to comply with the audit requirement in future.

The Ministry in its advisory issued to the Management stated (March 2011) that:

- propensity to procure on a single tender basis must be curbed.
- the option must be exercised only when other vendors are not able to supply as per the quality specifications and reasonable efforts have been made for procurements of items on a multi-vendor basis.
- any decision to go for a single vendor system of procurement, should be backed up by market intelligence, price-index and monitoring of prices on a continuous basis.
- the Company was being advised to carefully analyse all single vendor/ limited tender procurement cases and submit a detailed report to the Ministry .

The Ministry added (March 2011) that the company has to graduate towards a system for purchase on a competitive basis and such efforts must be institutionalized in a procurement system itself.

5.2.2 Limited Tender

The Purchase procedure of the Company defines 'limited tenders' as those addressed to all the parties which figured in the approved list of suppliers.

Audit observed that though there were poor responses from the vendors, there existed no system in the Company to insist on the vendors to either send the acknowledgement/ regret letter against the tender enquiry so as to ensure that all the approved venders actually receive the tender enquiries.

However, audit observed that another Defence PSU i.e. HAL has a system of maintaining and filing the proof of dispatch of enquiries like postal/courier receipt in the respective purchase files.

The Management accepted (December, 2010) that acknowledgment from suppliers was not always received.

As the limited tender system involves only three or four suppliers, in order to have the participation of maximum number of the approved suppliers, it is prudent for the Company to devise a mechanism to ensure that the tender enquiries are received by them and that too in time.

The Ministry stated (March 2011) that Company has been advised to ensure acknowledgement from suppliers in limited tender cases.

5.3 Inspection of Material

As per the procedure, materials procured from preferred suppliers, whose products were quality tested by Electronic Components Standard organization (LCSO-military quality approval agency), are not normally subjected to detailed quality inspection. However, there would be visual inspection to confirm the receipt of correct material and quantity. Further, rejection of material, if any, has to be communicated to Purchase Department for liaison with the supplier for return or replacement.

Audit analysis revealed that:

- The Company did not prescribe any time limit for quality test / visual inspections unlike in HAL where the time limit of two weeks is prescribed. Thus, in the absence of any such norms, there were considerable delays in the inspections which ranged between 16 and 181 days in 7061 cases.

- As per the laid down procedure, the Company has to sort out the rejected cases within 120 days from the date of reporting. However rejection claims worth ₹ 11.43 crore were pending settlement for more than 120 days.

The Company needs to formulate a suitable mechanism to avoid these delays in order to achieve its production schedules.

While agreeing with audit , the Ministry stated (March 2011) that :

- unless the performance of an activity is measured, it can never be improved and for measurement of performance, it is essential to set evaluation norms for any activity.
- Undue delay of inspections amounts to stock out of material creation of artificial emergency leading to purchases which are at higher rates giving rise to all kind of undesirable activities.
- Company was being advised to study HAL system and find the feasibility of prescribing time limit for quality/tests/visual inspection.

5.4 Cost reduction (CR) measures

Considering the increasing competitive environment for electronic products, the Company set up cost reduction task forces in all units with members from cross functional areas. The task forces in each unit identifies areas and sets targets for achieving cost reduction in each year *viz.,* design change, indigenization, identifying alternate source and others.

The Company has estimated a saving of ` 398.23 crore, as a result of the efforts of its task forces. This amounts to a mere 2.72 *per cent* of the total value of production.

An analysis of the contribution towards cost reduction achieved during the period under review revealed the following:

a) Indigenisation, which was supposed to be one of the major drivers of cost reduction, was not very successful as evident from the fact that the value of POs placed on foreign vendors increased from 48 *per cent* in 2007-08 to 68 *per cent* in 2009-10. Further as against ₹ 4186.66 crore procurement from domestic sources, the total imports/foreign procurement was ₹ 6262.41 crore during the period 2007-08 to 2009 -10.

b) Cost reduction includes reduction due to price negotiation (₹ 155.80 crore during 2007-08 to 2009-10) with the vendors which in fact, is the normal phenomenon in any tendering process.

The Management replied (December 2010) that saving was more as in a project running into multiple batches, the cost reduction was considered for the first batch of production only and in subsequent batches, only the incremental savings was being considered.

The Ministry, however, stressed (March 2011) that with the opening of defence sector for private manufacturing and open competition, cost reduction can significantly affect the bottom-line of the company and therefore, it has to actively strive for cost reduction though efficient procurement process, reduction of overheads and increase thrust on Research & Development.

The Ministry further stated that the Government have announced a Defence Production Policy for building up a self-reliant Defence Production Base. As a follow up on the policy, Ordnance Factory Board and Defence PSUs have been advised to designate a nodal officer for each of their units who will be charged with the responsibility of enhancing the vendor base and increasing indigenous capability.

5.5 Use of electronic technology in procurement

Purchase Procedure of the Company provides that e-procurement is to be resorted to in stages for maintaining confidentiality and secrecy of the content of the data and information. The Company was yet to implement (December 2010) e-procurement for availing the benefits of price savings, process cost reduction and keeping up to date with global best practices.

Management informed (December 2010) that the implementation of e-procurement is being reviewed.

The Ministry stated (March 2011) that Company has been asked to introduce e-procurement within next 6 months.

New Delhi
Dated 28 April 2011

(SUNIL VERMA)
Deputy Comptroller and Auditor General
and Chairman, Audit Board

Countersigned

New Delhi
Dated 28 April 2011

(VINOD RAI)
Comptroller and Auditor General of India

Annexure-1

(Refer to Paragraph No. 2.1)

Statement showing year wise details of total number of POs placed and POs selected for review

Name of Unit	No. of Pos placed	Value (₹ in crore)	No. of POs selected	Value (₹ in crore)
Bangalore Complex	50206	5352.91	511	2592.27
Chennai	6459	334.03	66	203.80
Machilipatnam	3480	582.27	35	425.97
Navi Mumbai	3818	229.98	39	78.00
Pune	3517	114.88	35	50.79
Ghaziabad	25197	1702.63	265	1084.19
Kotdwara	9502	190.75	95	71.75
Panchkula	13353	346.22	133	130.58
Hyderabad	9219	637.28	93	317.48
Total	**124751**	**9490.95**	**1272**	**4954.83**

Annexure-2

(Refer to in Paragraph No.5.1.1)

Statement showing details of delay in PR release date to PO date

Range	Bangalore Complex	Navi-Mumbai	Pune	Chennai	Machili patnam	Ghaziabad	Hyderabad	Panchkula	Kotdwara	Total	Percentage
< 0 days	1810	213	21	0	12	350	93	172	88	2759	20
0-30 days	3855	229	48	35	33	649	257	485	218	5809	42
31-60	1442	6	7	27	5	446	59	122	63	2177	15
61-90	345	9	4	18	0	299	13	48	19	755	5
91-180	1280	5	7	29	8	430	2	37	103	1901	14
181-300	326	0	0	23	0	113	0	31	3	496	4
300 and above	41	0	0	0	0	17	0	3	0	61	0
Total	**9099**	**462**	**87**	**132**	**58**	**2304**	**424**	**898**	**494**	**13958**	**100**

Annexure-3

(Refer to Paragraph No. 5.2.1 (b))

Statement showing the loss due to non placement of order on alternate source

Material description/ part No	Previous Supply cost from OEM/ sole vendor		Alternative Vendor Supply Cost			
	PO NO/dt.	Rate/ unit	PO No./dt	Rate/unit	Qty. procured	Remarks
L Synthesizer (112003195834)	4200021269 / 05.05.2008	176043 Euro (Rs.11060718 @ 62.83/Euro)	4200022885 / 10.06.2008	USD 29500 (Rs.1265255 @ Rs. 42.89 /USD)	2	The Company placed (5th May 2008) a PO on M/s Thales for supply of 2 nos. of L synthesizer costing Euro 176043 each with delivery instructions to supply before 31.5.2010. Meanwhile, the Company placed (10th June 2008) for the supply of the same material at USD 29500 on an alternative vendor (viz. Microwave Inc.). The materials were received from Microwave Inc. in April 2009. As the Company was aware (June 2008) of the cost of the said material and the previous quote received was higher, it should have negotiated to match the price. The failure of which resulted in **extra expenditure of ₹1.96 crore** towards the differential rates.
LPOWAMPL-9556 734 10601 (11203195737)	4200021652 / 13.05.2008	47697.54 Euro (Rs.3041195 @ 63.76/Euro)	4200022855 / 10.06.2008	USD 11800 (Rs.506102 @ Rs. 42.89 / USD)	3	The Company placed (13th May 2008) a PO on M/s Thales for supply of 3 nos. this material costing Euro 47697.54 each with delivery instructions to supply before 30.10.2009. Meanwhile, the Company placed (10th June 2008) a PO on an alternative vendor (viz. Microwave Inc.) for the supply of the same material at USD 11800. The materials were received from Microwave Inc. in February/April 2009. As the Company was aware (June 2008) of the cost of the said material and the previous quote received was higher, it should have negotiated to match the price. The failure of which resulted in **extra expenditure of ₹0.76 crore** towards the differential rates.
Chassis Assy. (110001779411) Panel Assy. (110001776889) Heat sink upper (11000779023) Heat sink Lower (110001810354)	4200024554 / 07.07.2008	511.52 USD 600.00 USD 582.91 USD 271.98 USD	4200027473 / 30.08.2008	51.24 USD 18.20 USD 61.02 USD 20.46 USD	1650 1930 1650 1650	The Company placed a PO dated 07.07.2008 on E-FA Metal Products, Israel for the supply of 4 different types of castings/chassis on single quote basis. As the vendor was not able to match the delivery requirement of the Company, it identified an alternative source (i.e., M/s Harlin) whose rates were cheaper by 90 percent in comparison to the rates of E-FA metals. The quantity of order placed on M/s Harlin was subsequently reduced from 500 nos. to 251 nos. on the grounds that there was no further requirement of the said material. However, the order quantities on E-FA were not reduced though the price was higher. The ordered quantities from both the vendors were received by April 2009. As M/s Harlin was an established vendor for castings, the Company should have invited tenders and obtained competitive rates. The failure of which resulted in **extra expenditure of ₹12.91 crore** towards the differential rates as detailed below:

<table>
<tr><th>Material description/ part No</th><th colspan="2">Previous Supply cost from OEM/ sole vendor</th><th colspan="3">Alternative Vendor Supply Cost</th><th></th></tr>
<tr><th></th><th>PO NO/dt.</th><th>Rate/ unit</th><th>PO No./dt</th><th>Rate/unit</th><th>Qty. proc-ured</th><th>Remarks</th></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td><td>
<table>
<tr><th>Material Description</th><th colspan="2">Rates Quoted by E-FA Metal Products (PO 4200024554 dated 07.07.2008)</th><th colspan="2">Rates Quoted by Harlin (PO 4200027473 dated 30.08.2009)</th><th>Qty orde-red on E-FA</th><th>Extra Cost incurred
(3-4) x 6</th></tr>
<tr><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th><th>7</th></tr>
<tr><th></th><th>USD</th><th>Rs</th><th>USD</th><th>Rs</th><th>USD</th><th>Rs</th></tr>
<tr><td>Chassis Assy (110001779411)</td><td>511.52</td><td>22016.51</td><td>51.24</td><td>2208.44</td><td>1650</td><td>32732812.20</td></tr>
<tr><td>Panel Assy (110001776889)</td><td>600.00</td><td>25860.00</td><td>18.20</td><td>784.42</td><td>1650</td><td>41374707.00</td></tr>
<tr><td>Heat Sink Upper (110001779023)</td><td>582.91</td><td>25123.42</td><td>61.02</td><td>2629.96</td><td>1650</td><td>37114207.35</td></tr>
<tr><td>Heat Sink Lower (110001810354)</td><td>271.98</td><td>11722.34</td><td>20.46</td><td>881.83</td><td>1650</td><td>17886844.80</td></tr>
<tr><td>Total</td><td></td><td></td><td></td><td></td><td></td><td>129108571.35</td></tr>
</table>
</td></tr>
<tr><td>Pin Diode (4246148110)</td><td>4200009276 / 30.03.2008
4100004159 / 30.03.2008
4500000164 / 30.11.2008
4200027844 / 060.4.2009
4100011660 / 28.02.2010</td><td>42.96 USD , 43.80 USD and 36.84 USD</td><td>4200016622 / 02.06.2007
4200026405 / 09.08.2008</td><td>2.10 USD to 3.19 USD</td><td>93740 nos</td><td>The Pin Diode Kits is a standard item required by the Company and the same was being procured from M/s Elbit at a price ranging from USD 42.96 to USD 36.84 per unit during the period March 2008 to November 2008. Audit observed that the said material was simultaneously being procured by another SBU from another vendor viz. M/s M/A Com Inc., USA for as low as USD 2.10 to USD 3.29 per unit.
The Company failed to use the opportunity to bargain/negotiate for a reduction in the cost by M/s Elbit and incurred avoidable extra expenditure of ₹14.07 crore as detailed below:
<table>
<tr><th>PO No.</th><th>Date</th><th>Rate/ Unit (USD)</th><th>Qty</th><th>Rate of M/A Com in USD</th><th>Difference in USD</th><th>Rs. / USD</th><th>Difference in Rs.</th></tr>
<tr><td>4200009276</td><td>30.03.08</td><td>42.96</td><td>6800</td><td>2.10</td><td>277848.00</td><td>40.86</td><td>11352869.28</td></tr>
<tr><td>4100004159</td><td>30.03.08</td><td>42.96</td><td>8840</td><td>2.10</td><td>361202.40</td><td>40.75</td><td>14718997.80</td></tr>
<tr><td>4500000164</td><td>30.11.08</td><td>43.80</td><td>5000</td><td>3.29</td><td>202550.00</td><td>41.30</td><td>8365315.00</td></tr>
<tr><td>4200027844</td><td>06.04.09</td><td>43.78</td><td>5100</td><td>3.29</td><td>206499.00</td><td>39.66</td><td>8189750.34</td></tr>
<tr><td>4100011660</td><td>28.02.10</td><td>36.84</td><td>68000</td><td>3.29</td><td>2281400.00</td><td>43.00</td><td>98100200.00</td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td>3329499.40</td><td></td><td>140727132.42</td></tr>
</table>
</td></tr>
</table>

Material description/ part No	Previous Supply cost from OEM/ sole vendor		Alternative Vendor Supply Cost			
	PO NO/dt.	Rate/ unit	PO No./dt	Rate/unit	Qty. proc-ured	Remarks
7cell protection unit	4900041114 / 29.11.2008	Rs.1201.41 per unit	4900038797 / 30.10.2008	Rs.1044.50 per unit	7640 Nos	The Pune Unit of the Company placed the PO on a vendor citing immediate requirement and on the ground that the alternative source in the directory was a new supplier and that the quality of the regular source was satisfactory. In this connection, audit observed that the original vendor failed to meet the delivery schedule and there were rejections due to poor quality, which negated the main reasons for placement of order at higher rates **which had resulted in extra expenditure of ₹ 0.17 crore.**
Alluminium 3003 sheet	4200052206 / 23.02.2010	Euro 6.86 per kg	42000533328 / 27.03.2010	Euro 4.90 per kg	22240 kg	Audit observed that Navi Mumbai Unit placed orders in February 2010 and March 2010 for the supply of Alluminium 3003 sheets against two different vendors at different rates. This indicates that the Company has not negotiated to obtain the price advantage between the vendors and incurred an **extra expenditure of ₹0.28 crore.**

The avoidable extra expenditure involved in the above 6 cases amounts to ₹30.15 crore.