REPORT OF THE

COMPTROLLER AND AUDITOR GENERAL OF INDIA

FOR

THE YEAR 1982-83

UNION GOVERNMENT (DEFENCE SERVICES)

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PREFATORY REMARKS

This Report has been prepared for submission to the President under Article 151 of the Constitution. It relates mainly to matters arising from the Appropriation Accounts of the Defence Services for 1982-83 together with other points arising from audit of the financial transactions of the Defence Services.

The cases mentioned in the Report are among those which came to notice in the course of test audit during the year 1982-83 as well as those which had come to notice in earlier years but could not be dealt with in previous Reports ; matters relating to the period subsequent to 1982-83 have also been included, wherever considered necessary.

The points brought out in this Report are not intended to convey or to be understood as conveying any general reflection on the financial administration by the departments/authorities concerned.

CHAPTER 1

BUDGETARY CONTROL

1. Budget and actuals

The table below compares the expenditure incurred by the Defence Services in the year ended March 1983 with the amount of original and supplementary appropriations and grants for the year :

(i) Charged Appropriations

	(Rs. in crores)
Original	3.57
Supplementary	0.61
Total	4.18
Actual Expenditure	2.02
Saving	(—)2.16
	(*per cent*)
Saving as percentage of the total provision	51.67

(ii) Voted Grants

	(Rs. in crores)
Original	5334.79
Supplementary	293.35
Total	5628.14
Actual Expenditure	5674.86
Excess	(+)46.72
	(*per cent*)
Excess as percentage of the total provision	0.83

2. Supplementary grants/appropriations

(a) *Supplementary grants.*—Supplementary grants (voted) aggregating Rs. 293.35 crores were obtained under 4 Grants in March 1983 as indicated below :

(Rs. in crores)

Grant No.	Amount of Grant			Actual Expendi-ture	Excess(+) Saving(—)
	Original	Supple-mentary	Total		
20-Army . .	2919.60	124.32	3043.92	3159.80	(+)115.88
22-Air Force .	1143.38	112.29	1255.67	1257.15	(+)1.48
23-Pensions . .	372.41	14.65	387.06	386.90	(—)0.16
24-Capital Outlay on Defence Services . . .	498.50	42.09	540.59	525.02	(—)15.57
TOTAL : .	4933.89	293.35	5227.24	5328.87	(+)101.63

In spite of the supplementary grant of Rs. 124.32 crores obtained under 'Army', expenditure of Rs. 115.88 crores remained uncovered.

The supplementary grant of Rs. 42.09 crores obtained under 'Capital Outlay on Defence Services' could not be utilised to the extent of Rs. 15.57 crores (37 per cent).

(b) *Supplementary appropriations (Charged).*—Supplementary appropriations (Charged) aggregating Rs. 61.50 lakhs ('Air Force' : Rs. 1.50 lakhs ; 'Capital Outlay on Defence Services' : Rs. 60.00 lakhs) were obtained in March 1983 to meet decretal payments.

In the case of 'Capital Outlay on Defence Services' the original approprpiation of Rs. 300 lakhs was increased to Rs. 360 lakhs by obtaining a supplementary appropriation of Rs. 60 lakhs. Against this, the total expenditure came to Rs. 167.32 lakhs leaving an unexpended provision of Rs. 192.68 lakhs ; surrender of Rs. 51 lakhs was notified on 31st March 1983. Thus the entire supplementary appropriation of Rs. 60 lakhs proved unnecessary.

3. Excess over Voted Grants

Excess aggregating Rs. 117,36,41,642 over Voted portion of 2 Grants, as indicated below, requires regularisation under Article 115 of the Constitution :

Grant No.	Total Grant Rs.	Actual Expenditure Rs.	Excess Rs.
20—Army	3043,92,00,000	3159,80,13,416	(+)115,88,13,416
The excess occurred mainly under 'Stores' and 'Works'.			
22—Air Force	1255,67,10,000	1257,15,38,226	(+)1,48,28,226
The excess occurred mainly under 'Works'.			

4. Control over expenditure

The following are some instances of defective budgeting relating to Voted Grants :

(a) Instances in which supplementary grants remained wholly or partially unutilised :

(Rs. in crores)

Grant No. Sub-head	Original Grant	Supplementary Grant	Total Grant	Actual Expenditure	Saving (—)	Amount re-appropriated
20—*Army*						
A.6—Ordnance Factories	693.94	84.08	778.02	749.00	(—)29.02	(—)1.00
23—*Pensions*						
A.2—Navy (1) Pensions and other Retirement Benefits	9.25	1.35	10.60	7.94	(—)2.66	(—)1.71
A.3—Air Force						
(1) Pensions and other Retirement Benefits	18.50	0.59	19.09	16.10	(—)2.99	(—)1.95
24—*Capital Outlay on Defence Services*						
A.1—Army						
A.1 (1) Land	10.50	15.00	25.50	12.26	(—)13.24	(—)1.50

(b) Instances in which re-appropriations made were wholly or partially unnecessary :

(Rs. in crores)

Grant No. / Sub-Head	Sanctioned Grant	Amount re-appropriated	Final Grant	Actual Expenditure	Excess(+) Saving(—)
20—Army					
A.9—Stores	784.10	(—)112.80	671.30	765.79	(+)94.49
21—Navy					
A.6—Works	27.08	(+)2.31	29.39	26.33	(—)3.06
A.7—Other Expenditure	24.36	(+)0.82	25.18	20.70	(—)4.48
22—Air Force					
A.5—Stores	954.62	(+)4.00	958.62	948.24	(—)10.38
24—Capital Outlay on Defence Services					
A.5—Research and Development Organisation	12.00	(+)0.20	12.20	11.74	(—)0.46

(c) Instances in which there was an appreciable shortfall in (voted) expenditure compared to the sanctioned/final grant :

(Rs. in crores)

Grant No. / Sub-Head	Sanctioned Grant	Amount re-appropriated	Final Grant	Actual expenditure	Shortfall compared to	
					Sanctioned Grant	Final Grant
21—*Navy*						
A.5—Stores	256.03	(—)58.64	197.39	188.87	(—)67.16	(—)8.52
A.7—Other Expenditure	24.37	(+)0.81	25.18	20.70	(—)3.67	(—)4.48
24—*Capital Outlay on Defence Services*						
A.3—Air Force						
A.3 (1)—Land	2.60	..	2.60	0.71	(—)1.89	(—)1.89
A.4—Ordnance Factories						
A.4 (2)—Machinery and Equipment . .	51.00	(—)9.92	41.08	32.59	(—)18.41	(—)8.49

CHAPTER 2

MINISTRY OF DEFENCE

5. Review on the working of the Department of Defence Supplies

Introduction

1.1 The Department of Defence Supplies (DDS) was set up under the Ministry of Defence in November 1965 to achieve self-reliance in the procurement of Defence equipment and stores required by the Armed Forces. The DDS deals with indigenisation, development and production of imported items, new items developed by Defence Research and Development Organisation and components, sub-assemblies and assemblies required to supplement the production in the Defence Production Units. Ten Technical Committees for various disciplines of stores consisting of representatives of users, inspectors, Authorities Holding Sealed Particulars (AHSP) and Finance identify development of sources for the items for indigenisation. A Central Technical Committee headed by the Additional Secretary (Defence Supplies) reviews and oversees the work of various Technical Committees.

Targets for placement of orders during the year are fixed based on the likely quantum of work and their capacity. The total number of items projected for development by the Technical Committees, at the beginning of each year, after identification and the number of items covered by supply orders up to 31st March 1981 for each of the disciplines are given in the following table :

Technical Committee (TC)	Number of items projected up to 31-3-1981	Number of items for which supply orders were placed up to 31-3-1981	Shortfall
1. TC (Aeronautics Stores)	2,778	1,295	1,483
2. TC (General Stores)	231	208	23
3. TC (Vehicles)	973	695	278
4. TC (Medical Stores)	1,033	743	290
5. TC (Electronic/Electrical Stores)	10,414	3,483	6,931
6. TC (Vehicle Stores)	41,396	17,104	24,292
7. TC (Armament Stores)	6,297	3,491	2,806
8. TC (Engineering Stores)	6,670	2,417	4,253
9. TC (Marine Stores)	19,192	17,927	1,265
10. TC (Tank Spares) (Data not made available.)	..	..	..
TOTAL	88,984	47,363	41,621

There was an overall shortfall of about 46 per cent in the placement of supply orders. According to the DDS, a large number of items remained outstanding for want of proper particulars or samples. As against supply orders for total value of Rs. 241.54 crores placed during 1977-78 to 1980-81, the actual supplies received were for Rs. 190.60 crores as shown below :

	Total amount of supply orders placed	Total value of supplies received
	(Rs. in crores)	
1977-78	62.00	49.93
1978-79	61.09	47.16
1979-80	44.56	44.95
1980-81	73.89	48.56
TOTAL	241.54	190.60

A test check of supply orders (467 numbers) placed during 1977-78 to 1980-81 revealed the following:

Indents

1.2 Indents from users for procurement of stores are received by the Technical Committees of the respective disciplines, who float the tenders and process them up to finality. Each Technical Committee maintains a Register of Indents to indicate the date on which each indent was received, but it did not indicate in all cases whether supply orders were placed against all such indents. Delay ranging from over 12 months to over 36 months in placing supply orders against indents received from the users was noticed as shown below:

	Number of cases of delay of			
	Over 12 months	Over 24 months	Over 36 months	Total
TC (Armament Stores)	10	8	5	23
TC (Electronic Stores)	29	42	22	93
TC (General Stores)	2	1	..	3
TC (Vehicles)	1	..	..	1
TC (Engineering Stores)	52	8	13	73
TOTAL	94	59	40	193

The main reasons for delay ascribed by the DDS were non-availability of manufacturing particulars like drawings and specifications, poor response from suppliers and difficulty in locating sources and time taken in negotiations with the suppliers.

The suppliers are allowed 6 to 8 weeks for submission of samples and another 6 months to commence bulk supplies after approval of the samples. In the case of 36 supply orders of the total value of Rs. 8.97 crores placed up to June 1979, the suppliers failed to submit samples or commence supplies for over 3 years. Against 67 other supply orders (value: Rs. 33.21 crores) placed during 1972 (two), 1973 (two), 1974 (one) and

January—June 1979 (sixty-two), stores worth Rs. 12.10 crores only had been supplied till August 1982. According to the DDS (September 1983), the process of indigenisation takes lot of time and in the case of developmental items there is bound to be a gap between the placement of supply order and materialisation of supplies.

Outstanding advances ·

1.3 Financial assistance by way of development advances, tooling advances and 'on account' payments for purchase of raw materials is extended to indigenous suppliers/firms. Unadjusted advances reported by the Internal Audit Authorities were to the tune of Rs. 8.36 crores in respect of 67 supply orders as on 5th October 1981 (5 years—Rs. 1.52 crores; 4 years—Rs. 2.63 crores; 3 years—Rs. 0.52 crore; 2 years—Rs. 3.69 crores) mainly due to failure of the firms to develop the prototype or to complete supplies. According to the DDS, the amount outstanding against 28 firms as on 29th September 1983 was Rs. 1.566 crores.

Faced with blockade of large public money in the shape of advances paid to the suppliers remaining unrecovered, the DDS decided (December 1982) not to pay any 'on account' payments or advances in future contracts to be concluded by the Department save in exceptional cases to be approved by the Raksha Mantri.

1.4 Firm 'A' on whom a supply order was placed (January 1975) for 20-ton low deck trailers at a total cost of Rs. 1.27 crores (later reduced to Rs. 1.05 crores for lesser quantity) failed to submit the pilot sample within the scheduled delivery date (31st May 1975) and was granted three extensions up to 15th July 1977. The pilot sample was submitted on 13th July 1977 and was found unacceptable. The modified pilot sample submitted (March 1978) was also found defective in the user's trials. The DDS asked (April 1981) the firm to refund Rs. 13.80 lakhs paid (June 1976 and February 1977) as advance (without any bank guarantee) for purchase of raw materials. The firm expressed (November 1982) its inability to refund the advance on the ground that raw materials worth Rs. 19 lakhs had been purchased by it and unless those raw materials were disposed of, refund was not possible. Efforts made to utilise the raw materials elsewhere in similar other contracts did not succeed. The supply order was not yet (September 1983) cancelled and the advance of Rs. 13.80 lakhs continued to remain unsecured and unrealised without any delivery of stores. The DDS stated (September 1983) that it was a case of developmental failure and the contract should have been cancelled without financial repercussions which was not done because the firm failed to refund the on-account payment and that steps had been taken to recover the amount through the Director General, Supplies and Disposals (DGSD).

Risk and cost purchases :

1.5 The general conditions of the supply orders provide that in event of the contractor defaulting the balance quantity against the incomplete contract may be obtained from other sources within 6 months of the date of such failure and the resulting loss may be recovered from the defaulting contractor. Non-adherence to these provisions by the DDS resulted in extra expenditure of Rs. 10.91 lakhs to the State in the following cases :

1.6 To cover the requirement of 39,432 numbers of ammunition boxes, the DDS placed (April 1978) six supply orders on six different firms for an equal quantity of 6,572 numbers of boxes at the rate of Rs. 113 each (firms 'C', 'D' and 'E') and Rs. 115 each (firms 'F', 'G' and 'GG'). Firms 'F', 'G' and 'GG' completed the supplies. Two more orders for 6,572 numbers each at the rate of Rs. 113 were placed (January/February 1979) on firms 'F' and 'G'. Four firms ('C', 'D', 'E' and 'F') made part supplies aggregating 5,925 numbers while firm 'G' did not make any supplies. All these five firms represented (April/June 1979) for increase in price ranging from Rs. 14.33 to Rs. 29 per box on the ground that the price of raw material had increased by then. This was not agreed to by the DDS and supply orders for the balance quantity of 26,935 boxes were short-closed/cancelled (December 1979) at the risk and cost of the defaulting firms.

Meanwhile, the Technical Committee (Armament Stores) floated (20th November 1979) tender enquiry for the procurement of balance quantity. The question of recovery of extra expenditure arising out of risk purchase was referred to the Legal Adviser (Defence) who opined (March 1980) that "in order to place a valid re-purchase, the defaulting firm necessarily has to be kept in picture. Where it is effected by an advertisement tender, a copy of the tender notice should be sent to the defaulter informing him that the enquiry relates to re-purchase of stores against the contract which was cancelled at his risk and cost".

The DDS placed (June 1980) supply orders on three defaulting firms 'C' (5,000 numbers), 'F' (9,000 numbers) and 'G' (9,689 numbers) and a new firm 'H' (9,000 numbers) at the rate of Rs. 131 each. By this time, the period of 6 months reckoned from the date of breach for re-purchase at the cost of the defaulting firms had already expired. Recovery of Rs. 3.08 lakhs on account of risk purchase at extra cost could not be effected from the defaulting firms 'C' (Rs. 0.96 lakh), 'F' (Rs. 0.94 lakh) and 'G' (Rs. 1.18 lakhs). The DDS stated (September 1983) that even though no valid risk purchase could be made, the department was within its right to claim general damages from the (defaulting) firms but in view of the legal advice no further action for determining or claiming general damages could be pursued.

1.7 On receipt of an operational indent of November 1975 from the Director of Ordnance Services (DOS) for procurement of 122 numbers of trailers fire fighting large 1,800 LPM, tender enquiry was floated (December 1975) to 8 firms. Of the six firms which responded, the lowest offer of Rs. 37,500 was from firm 'J' and the second lowest of Rs. 39,550 was from firm 'K'. After holding a price negotiation meeting in May 1976, a supply order for 62 trailers was placed (June 1976) on firm 'J' at the rate of Rs. 35,500. An additional quantity of 50 trailers at the same rate was ordered (September 1976) on this firm through an amendment to the supply order. The balance quantity of 10 numbers was ordered (September 1976) on firm 'K' at the same rate. While firm 'K' completed supply of 10 trailers within the extended delivery period up to 14th May 1977, firm 'J' could submit (February 1977) only the pilot sample after obtaining extension up to 30th May 1977. After acceptance of the sample, bulk production clearance was accorded (25th June 1977) for completion of supply by May 1978. Firm 'J' could supply only 11 trailers (including the sample) by May 1978. In view of the urgency and critical nature of the stores, the DDS had meanwhile floated (April 1978) a stand-by tender for the procurement of 102 trailers. The tenders received from 6 firms (including the defaulting firm 'J') were opened on 18th June 1978. The prices quoted by the firms after negotiation ranged from Rs. 41,300 to Rs. 42,300 per trailer. The DDS referred (23rd September 1978) the short-closure of the order at risk and cost of the defaulting firm to the Legal Adviser (Defence) who observed (October 1978) that it would not be possible to enforce the claim for risk purchase since the prescribed procedure was not followed for calling stand-by tender. The contract with firm 'J' was cancelled (February 1979) at its risk and cost.

Five supply orders were placed on five different firms (including firms 'J' and 'K') in April 1979 for the balance 102 trailers; order for 22 numbers was placed on the defaulting firm 'J' at the rate of Rs. 35,000 and the balance quantity of 80 trailers was divided amongst four other firms *viz.,* firm 'K' at Rs. 42,500 (30 numbers), firm 'L' at Rs. 41,000 (15 numbers), firm 'M' at Rs. 39,250 (20 numbers) and firm 'N' at Rs. 39,250 (15 numbers). The order on firm 'K' was off-loaded by 17 numbers and was covered against the order on firm 'M'. The order on firm 'L' was also cancelled without financial repercussion and the quantity of 15 numbers was covered on two other firms (5 numbers and 10 numbers). Subsequently, the prices were increased as asked for by the various firms. The supply of all the 102 trailers was completed at a total cost of Rs. 46.19 lakhs.

Firm 'J' whose contract was cancelled (February 1979) at its risk and cost did not accept the cancellation and pointed out that in view of non-availability of engines from the manufacturers in time the reasons for non-supply of the trailers were beyond its control and it was not responsible for delay in supply. The DDS stated (September 1983) that it might not be legally possible to hold the firm responsible for the breach of contract and to claim any damages from it. Even though the delivery of trailers was not linked with the supply of engines, risk purchase was not enforced by the DDS, thereby resulting in an extra expenditure of about Rs. 7.83 lakhs to the state.

Acceptance of sub-standard stores and avoidable idle outlay :

1.8 Against the Navy's requirements for indigenous development of high pressure air compressors a supply order for development and manufacture of 25 numbers of portable air compressors at a total cost of Rs. 26.25 lakhs (at the rate of Rs. 1.05 lakhs each) was placed by the DDS on firm 'R' in September 1977. The firm was required, in the first instance, to manufacture 2 prototypes (complete with indigenous components and materials) for test and trials; the remaining 23 numbers were to be supplied after issue of bulk production clearance based on satisfactory performance of the prototype. On 25th March 1979, the firm submitted the prototypes which, on inspection, were found to be defective. The defects were rectified and the prototypes resubmitted by the firm in October 1979; bulk production clearance was given in November 1979 without the prototype being put to trials. Later when these prototypes were put to trials, the Directorate of Production and Inspection (Naval) pointed out (April 1982) that the firm had used imported components (retrieved out of the old imported compressors lying with it) instead of indigenous ones and had thereby "cheated the Government". As a result, bulk production clearance accorded (November 1979) without proper verification about the use of indigenous components in consonance with the terms of the contract was withdrawn and the firm was asked to prepare a detailed set of revised manufacturing design/drawings for approval by the inspection authorities and to produce two fresh prototypes using indigenous materials/components. The firm submitted two revised prototypes in March 1982 but the same were not put to users' trials and bulk production clearance was, therefore, not given (December 1982) for the remaining 23 numbers. The firm had been paid (October 1977—January 1980) Rs. 2.16 lakhs as on account payments towards cost of prototypes and purchase of raw materials.

Thus, indigenisation of high pressure air compressors for which firm 'R' was paid Rs. 2.16 lakhs as on account payments could not be achieved. The DDS stated (September 1983) that against advance/on account payment of Rs. 3.76 lakhs (which included Rs. 1.60 lakhs relating to another order) bank guarantees for Rs. 2.75 lakhs were encashed by the Department leaving a balance of Rs. 1.01 lakhs.

1.9 A supply order for the procurement of 230 generating sets of 2 KVA capacity at the rate of Rs. 11,850 each (total cost : Rs. 27.25 lakhs) was placed by the DDS on firm 'S' in August 1975. The firm was to submit the prototype by 15th September 1975 and bulk supply was to commence thereafter at the rate of 30 sets per month. The firm, however, supplied only 192 sets during June 1978—September 1980 and failed to make further supplies thereafter despite grant of extensions (up to 30th September 1981). The firm, having become a sick unit, had asked for (January 1980) a price increase which was not agreed to. The DDS short-closed (December 1981) the order after receipt of 192 sets at the risk and cost of the defaulting firm. COD 'XX' reported (May 1982) that out of 192 sets received, 25 sets (cost : Rs. 2.96 lakhs) were lying in repairable conditions since June 1980 and that the guarantee period of 15 months had expired. The firm had not taken any action for repairing them in spite of repeated reminders by COD 'XX'. One set which, after having been received from the firm, was taken by the Controllerate of Inspection (Electronics) for class 'C' test had also become unserviceable (October 1981).

Thus, neither 25 numbers of defective generating sets (cost : Rs. 2.96 lakhs) were got repaired/replaced by firm 'S' nor was risk and cost purchase effected for the quantity short supplied (38 sets) by it. The DDS stated (September 1983) that the amount required to be spent in repair of defective diesel sets would be got adjusted from the balance of 5% payment due to the firm still lying with the department. The DDS added that the question of risk purchase was also examined in consultation with the users who wanted the remaining sets with the revised specifications and diesel engines in place of the earlier sets with petrol engines; in the circumstances the question of any risk purchase did not arise.

Avoidable expenditure due to acceptance of offers beyond validity period :

1.10 Acceptance of offers beyond the validity period resulted in extra expenditure of Rs. 1.02 crores in the following cases :

A. An educational order for 200 shells of an ammunition 'ZA' at the rate of Rs. 370 each was placed (February 1979) by the Director General, Ordnance Factories (DGOF) on firm 'T'. The shells supplied (May-June 1979) by the firm were found satisfactory during extensive performance trials. The Ordnance Factory Board (OFB) requested (19th June 1979) the DDS to arrange procurement of 1 lakh shells from firm 'T'. The DDS issued (29th June 1979) a single tender enquiry to firm 'T' for supply of 1 lakh shells, indicating that 50 *per cent* of the shells were to be manufactured from the raw materials to be supplied by the Ordnance Factory. Firm 'T' quoted (3rd July 1979) the rate of Rs. 498 per shell for the entire quantity of 1 lakh shells with its own materials. Firm 'T' intimated (6th July 1979) that if raw materials for 50,000 shells were supplied by the Ordnance Factory, the cost thereof could be deducted. No order was, however, placed on firm 'T' before expiry of the validity date (31st July 1979) of its offer.

Firm 'T' revised (9th August 1979) its quotation from Rs. 498 to Rs. 596 per shell on the plea that it had erred in calculating the original rate and stated that the price of each shell would be more by 10 *per cent* if the quantity to be ordered was less than 1 lakh shells. It was decided in a meeting held in the DDS (17th August 1979) that a quantity of 25,000 shells would be covered (with an option for another 25,000 shells to be exercised during the currency of the contract) at Rs. 540 per shell with escalation clause. Even after this decision, no supply order was placed on firm 'T' till 5th November 1979 when it represented that due to increase in the cost of production in the intervening period, the price agreed to by it on 17th August 1979 be increased by about 20 *per cent*. Later (27th November 1979) firm 'T', however, agreed to withdraw the price escalation of 20 *per cent* on the initial quantity of 25,000 shells but insisted on allowing increase on the optional quantity of 25,000 shells. The DDS placed (10th December 1979) a supply order on firm 'T' for 25,000 shells at the rate of Rs. 540 (without any option clause for additional quantity of 25,000 numbers).

Meanwhile, the Technical Committee (Armament Stores) had invited (17th September 1979) quotations from 13 parties (including firm 'T') for supply of the remaining quantity of 50,000 shells. Eight firms responded and their offers (received between 15th October 1979 and 17th November 1979) ranged from Rs. 590 to Rs. 735 per shell with varying validity periods. Firm 'U' which was the lowest, quoted the rates of Rs. 590 (for 50,000 shells) and Rs. 600 (for 25,000 shells) with price variation clause for steel, fuel and power. Firm 'T' which had quoted Rs. 636 was the 3rd lowest tenderer. A consensus was reached in a meeting held on 11th and 12th February 1980 wherein the representatives of 8 firms were also present that a uniform rate of Rs. 615 per shell would be accepted by all the firms. Accordingly, the DDS placed (May and June 1980) four supply orders on different firms for a total quantity of 75,000 shells (quantity increased from 50,000 to 75,000 shells due to exclusion of the option clause in the supply order of December 1979 placed on firm 'T') as under :

Firm	Month of placing order	Quantity orderd	Rate per shell	Total value of order
		(Numbers)	Rs.	(Rs. in lakhs)
'T' . . .	May 1980	25,000	615	153.75
'U' . . .	May 1980	25,000	610*	152.50
'V' . . .	May 1980	15,000	610*	91.50
'W' . .	June 1980	10,000	615	61.50

*The price of Rs. 615 was reduced to Rs. 610 in the case of firms 'U' and 'V' due to proximity of their factories to the station having steel plants.

Firm 'T' completed delivery of 25,000 shells against the supply order of December 1979 by March 1981 and supplied 21,682 shells up to September 1982 against the supply order of May 1980. Firms 'U', 'V' and 'W' failed to adhere to the delivery schedule prescribed in the respective supply orders placed on them. Firm 'U' supplied 500 shells by July 1982. Firm 'V' delivered 1,000 shells during February-March 1982 and firm 'W' completed the supply of 10,000 shells by August 1982.

Thus, failure on the part of the DDS to place supply order on firm 'T' before expiry of the validity date (31st July 1979) resulted in an extra expenditure of Rs. 96.25 lakhs in procuring supplies 9 months later.

B. Based on an urgent indent placed (May 1977) by Central Ammunition Depot 'XY' for the procurement of 46,370 numbers of tail units required to put back a large number (93,666 numbers) of an ammunition "ZB' from repairable to serviceable condition, the Technical Committee (Armament Stores) invited

(September 1977) tenders from 12 firms and 5 firms responded. The Technical Committee observed (November 1977) that the firms were inexperienced and lacked capacity to undertake manufacture of the stores. The DDS placed (December 1977) supply orders for 23,185 tail units each on firms 'X' and 'Y' at the rate of Rs. 6.95 per unit (value of supply orders : Rs. 3.22 lakhs).

Both the firms ('X' and 'Y') failed to develop acceptable samples. In view of poor performance of these firms, the Technical Committee decided (27th June 1978) to cancel the orders on them and off-load the entire quantity to an established supplier *i.e.*, firm 'Z' (on whom an earlier order for 2,38,000 numbers at the rate of Rs. 8.50 had been placed in January 1977 and whose offer of Rs. 8.50 was ignored at the time of placement of the orders in December 1977 on the ground that the rates offered by firms 'X' and 'Y' were cheaper). Meanwhile, the demand of Central Ammunition Depot 'XY' increased (January 1978) to 93,370 numbers.

Firm 'Z' agreed (June 1978) to accept the order for 93,370 numbers at the rate of Rs. 8.50 and requested the DDS to issue a letter of intent immediately to enable it to commence planning and procurement of raw materials. No letter of intent was, however, issued to firm 'Z'. The DDS stated (September 1983) that the matter regarding status of the earlier order placed on the same firm with provisional price, final price to be worked out after examination, had to be considered. The supply order for 93,370 tail units was placed on firm 'Z' only in March 1979. Firm 'Z' declined (April 1979) to accept the order on the ground that its offer had not been accepted within the validity date (27th October 1978) and that prices of raw materials had gone up during the intervening period. On being persuaded to accept the order, firm 'Z' agreed (May 1979) to a price of Rs. 13.25 each. In June 1979, the Technical Committee informed the DDS that firm 'Z' had also been given an order for 1 lakh tail units by the DGOF direct at the rate of Rs. 11. In October

1979, another demand for 50,000 tail units was placed by the DGOF on the DDS. As the DDS decided to place an order for 1 lakh tail units, firm 'Z' agreed to reduce the rate further to Rs. 13.05. A supply order was thereupon placed (January 1980) on firm 'Z' for supply of 1 lakh tail units at the rate of Rs. 13.05 (total cost : Rs. 13.05 lakhs). The balance quantity of 43,370 tail units was covered by another supply order placed (February 1980) on firm 'AA' at the rate of Rs. 13.05.

The DDS stated (September 1983) that the earlier order of May 1978 had been placed on firm 'Z' at a ceiling price of Rs. 8.50 subject to cost examination and placing of another order on the firm at a fixed price of Rs. 8.50 as recommended by the Technical Committee would have prejudiced the price fixation in the earlier order, and the matter required further clarification from the Technical Committee. In view of the decision taken to cancel the orders on firms 'X' and 'Y', the reaction of firm 'Z' had to be watched for sometime before covering the cancelled quantity.

Thus, delay in placing order on the established supplier (firm 'Z') resulted in extra expenditure of Rs. 4.25 lakhs besides rendering 93,666 numbers of ammunition 'ZB' (cost : Rs. 1.31 crores) to remain repairable for want of tail units.

C. In July 1978, the DDS floated tender enquiries to 14 firms for the procurement of 10 numbers of plant dry air charging sets (engine driven) against indents raised (June 1977 and March 1978) by the DOS. No quotations were received till the date of opening of tender (21st October 1978). On a request from firm 'AB', the date of opening of tender was extended and an offer was received on 30th November 1978 from this firm but it was not found acceptable to the AHSP as the firm had not quoted for the complete set conforming to defence specifications. Fresh enquiries were floated (February 1979) to 4 firms (including firm 'AB'). As the single quotation received from firm 'AB' on retendering was incomplete, it was decided (18th October 1979) to re-tender. Meanwhile, the requirement increased to 13 sets. Fresh enquiries for 13 sets were invited (January 1980) from 10 firms and 2 firms 'AB' and 'AC' responded (February 1980). While firm 'AC' quoted Rs. 1.08 lakhs per set with price variation clause for proprietary items, which was increased to Rs. 1.39 lakhs after taking into account price variation before opening of tenders, and kept the offer open up to 25th June 1980, firm 'AB' quoted Rs. 3.22 lakhs per set with the validity period up to 27th May 1980.

The requirement for the equipment was increased (May 1980) to 31 sets. Offers of both the firms ('AB' and 'AC') met with all the defence specifications but no supply order was placed on them before the validity period. Firm 'AC' revised the price of the equipment to Rs. 1.78 lakhs per set by up-dating its price in terms of the price variation clause and simultaneously extending the validity of its offer up to July 1980. After price negotiation meeting with the firm on 5th July 1980, the up-dated price was brought down to Rs. 1.52 lakhs per set. A supply order for 31 sets was placed (4th September 1980) at the rate of Rs. 1.52 lakhs (total cost : Rs. 47.12 lakhs) on firm 'AC'.

The non-acceptance of firm 'AC's offer of Rs. 1.39 lakhs (which took into account the price increase for proprietary items) within the validity period, in spite of the specifications conforming to defence specifications, resulted in an extra expenditure of Rs. 1.68 lakhs on procurement of 13 (out of 31) sets.

Delay in supply and avoidable expenditure :

1.11 Based on the deliberations of the price negotiation meeting held in December 1977, the DDS placed (October 1978) two supply orders—one on a private firm 'AD' and the other on a public sector undertaking 'AE'—for development and supply of 50,000 shells (required for producing a particular type of ammunition 'ZC' in the Ordnance Factories) at the following rates :

	Quantity	Rate	Total cost
	(In numbers)	Rs.	(Rs. in crores)
Firm 'AD'	50,000	324	1.62
Undertaking 'AE'	50,000	356	1.78

Firm 'AD' was allowed (February 1979) an advance of Rs. 10 lakhs, bearing interest at 12 *per cent* per annum for the purchase of raw materials (mainly steel) ; undertaking 'AE' was allowed to claim 'on account' payment up to a maximum of 50 *per cent* of the value of supply order or 90 *per cent* of the cost of raw materials purchased by it, whichever was lower.

Firm 'AD' was to submit 270 numbers of advance samples for approval within 90 days of placement of the order (*i.e.* by 12th January 1979) and supply of the stores was to commence within 90 days from the date of approval of advance samples at the rate of 1,000 numbers in the first month, 3,000 numbers in the second month, 4,000 numbers in the third month and 5,000 numbers from fourth month onwards. The firm was granted extension for submission of samples up to 30th September 1979. The samples submitted (27th September 1979) by firm 'AD' were not approved (April 1980) by the Technical Committee (Armament Stores). Firm 'AD' was, therefore, asked (April 1980) to submit fresh samples after getting the delivery date extended. The firm submitted fresh samples on 9th August 1980. The samples were approved and bulk production clearance subject to elimination of certain defects was given on 12th December 1980. Firm 'AD' aksed (14th December 1980) for a price rise from Rs. 324 to

Rs. 571.87 per shell besides requesting for incorporation of a price variation clause with regard to steel as also for provision of non-refundable tooling cost of Rs. 1 lakh in the supply order. Although in a meeting held in April 1981 (which was attended by the representative of firm 'AD') the DDS agreed to incorporate the escalation clause, firm 'AD' requested (August 1981) the DDS to allow escalation on fuel and power also in consideration of which firm 'AD' was prepared to forego profit on the escalation. Since firm 'AD' had not delivered a single shell by that time, it was decided by the DDS that its request would be considered after it had supplied 2,000 shells. In July 1982, firm 'AD' again asked for revision of the price to Rs. 731.52 per shell on the ground that the cost of production had risen steeply. In February 1983, the DDS, through an amendment to the supply order, decided to increase the rate from Rs. 324 to Rs. 533 per shell. Firm 'AD' supplied 7,962 shells by March 1983.

Undertaking 'AE' failed to submit acceptable samples for about 2 years. Bulk production clearance was given to undertaking 'AE' on 29th October 1980. Undertaking 'AE' requested (February 1981) for enhancement of the price from Rs. 356 to Rs. 863 per shell on the ground that the cost of raw materials and consumables had gone up considerably during the intervening period. In August 1981, the DDS enhanced the price from Rs. 356 to Rs. 565 per shell through an amendment to the supply order. Undertaking 'AE' supplied 38,208 shells by March 1983.

The delay in submission of samples by the suppliers and subsequent delay in supply of shells caused an avoidable expenditure of Rs. 2.08 crores to the Government.

According to the DDS (September 1983), the department was dealing with the development of strategic defence stores and a number of uncertain factors come into play and it may be unreasonable to ignore such factors and insist on enforcing the contractual terms which may ultimately discourage the entrepreneurs and would be a negative step towards self-reliance in the field of defence.

1.12 On the basis of a priority indent raised (August 1978) by the DOS for procurement of 134 numbers of trailers 1 ton 2 wheeled, the DDS floated (March 1979) tender enquiries to 9 firms for procurement of 134 trailers without panel (for mounting generating sets) and 100 trailers with panel for general service. Eight firms responded and the rates quoted by them ranged from Rs. 13,200 to Rs. 22,500 each for trailers without panel. The lowest rate of Rs. 13,200 was that of firm 'AF' and the second lowest rate (Rs. 16,500 each) was quoted by firm 'AG'. Before finalising the supply orders on these two firms, the capacity of firm 'AF' (lowest tenderer) was got ascertained through the Inspectorate of Vehicles (North Zone) who reported that the firm had only limited capacity with regard to manufacture, machinery and financial resources and that the firm would not be able to give more than 5 trailers per month. Notwithstanding the report of the Inspectorate of Vehicles, 134 trailers (without panel) were covered through supply orders placed (July 1979) by the DDS on firm 'AF' (34 numbers at the rate of Rs. 13,200) and firm 'AG' (100 numbers at the rate of Rs. 16,500).

While firm 'AF' was to submit sample within 8 weeks of the date of order and to supply trailers at the rate of 8—10 numbers per month commencing within 30 days of receipt of bulk production clearance, firm 'AG' was to submit sample within 6 months of the date of order and supply at the rate of 25 trailers per month commencing 4 months after approval of the sample. The supplies were, thus, scheduled to be delivered by firms 'AF' and 'AG' during November 1979—February 1980 and January—September 1980 respectively. While firm 'AG' completed supplies within the extended date of delivery (May 1981), firm 'AF' could supply only 20 trailers, even after grant of 3 extensions, till 31st December 1982.

Another indent for 45 generating sets was raised by the DOS in August 1979. In order to procure the generating sets for mounting on the trailers to be supplied by firms 'AF' and 'AG', the DDS placed (November and December 1979) two supply orders—one on firm 'AH' for 145 sets at the rate of Rs. 0.90 lakh (total cost : Rs. 130.50 lakhs) and the other on firm 'AI' for 50 sets at the rate of Rs. 0.83 lakh (total cost : Rs. 4.15 lakhs). The delivery of generating sets mounted on trailers was to commence after 2 months (by firm 'AH') and 3 or 4 months (by firm 'AI') depending on the receipt of trailers. At the time of placement of the order, firm 'AI' had defaulted in supply of 73 sets ordered in October 1975; against that order only 19 sets mounted on the trailers were supplied till January 1981 and supply of 54 sets had not materialised. Both the firms were held responsible for installation of the generating sets on the trailers to be supplied to them free, although there was no adequate ready stock of trailers to be fed to firms 'AH' and 'AI' for mounting the generating sets.

The supply orders contained a price variation clause in respect of engines and alternators to be fitted in the generating sets, which was to be determined with reference to their base price prevailing as on 1st April 1979. The trailers to be supplied to these firms were also required to undergo a mobility test before mounting of the generating sets on them.

In view of non-adherence of prescribed delivery schedule by firms 'AH' and 'AI', the DDS decided (January 1981) to relax the mobility test and to have only limited mobility test on the trailers to be supplied by firm 'AG'. Firm 'AI' was asked (May 1981) to defer supplies of 73 generating sets against their order of October 1975 for which 73 trailers were issued to them for mounting the generating sets and utilised 54 (out of 73) trailers to execute the latest order of December 1979. The DDS decided (May 1981) to utilise 70 trailers (with panel), covered under the supply order on firm 'AG' after dismounting the panels.

While firm 'AH' completed the supplies on 17th July 1982, firm 'AI' completed the order on 31st October 1981 *i.e.* after more than a year of the original date of completion due to delay in issuing trailers to them for mounting the generating sets. Both firms ('AH' and 'AI') claimed price escalation to the extent of Rs. 22.24 lakhs (firm 'AH' : Rs. 15.43 lakhs and firm 'AI' : Rs. 6.81 lakhs) in terms of the price variation clause.

The DDS stated (September 1983) that the availability of limited numbers (only 22 numbers) of trailers with the Army Base Workshop was not known to them and that the generating sets had to be fitted on the balance trailers, which were from a different source of supply than those on which mobility test had earlier been carried out.

Thus, placement of (1) supply order for 34 trailers (without panel) on firm 'AF' in spite of its very limited capacity as pointed out by the Inspectorate of Vehicles and (2) supply orders for generating sets (to be mounted on the trailers) on firms 'AH' and 'AI' without the availability of adequate number of trailers causing delay in the execution of latter supply orders resulted in extra expenditure of Rs. 22.24 lakhs towards escalation.

Avoidable expenditure due to direct procurement of items of common utility :

1.13 In March 1976, orders were issued by Government that certain items of stores which were peculiar to defence use and were meant "exclusively for defence" could be procured by defence authorities if the value of these was less than Rs. 50 lakhs. The DDS, however, procured one such item of common utility *viz.* paint RFU which was not "exclusively for defence" use and was already being procured by the DGSD through established indigenous sources on rate contract. Procurement of paint RFU by the DDS, instead of obtaining it through the DGSD, resulted in an avoidable extra expenditure of Rs. 18.35 lakhs in the following case :

On the basis of an indent for 4,06,000 litres of paint RFU in 3 different sizes of packs required during June 1978 to December 1978 by the DOS, the Technical Committee (General Stores) invited tenders in July 1978. Of the 12 valid tenders, 6 firms quoted rates in all the 3 sizes of packs as under :

Firm	Rate (per litre) for		
	20 litre drums	5 litre packs	1 litre packs
	Rs.	Rs.	Rs.
'AM'	9.50	11.00	12.00
'AN'	9.50	11.00	13.50
'AO'	10.35	11.35	13.35
'AP'	10.49	11.99	13.99
'AQ'	11.27	12.77	14.57
'AR'	11.00	12.00	13.00

One of the firms—firm 'AJ' (which was an established supplier of paint RFU to Defence under the DGSD rate contract)-quoted for paint in 20 litre drums and 5 litre packs only (due to shortage of raw materials at that time). The rates quoted by firm 'AJ' (Rs. 8.80 per litre for 20 litre drums and Rs. 10 per litre for 5 litre packs) were the lowest. The second lowest rates were those of firms 'AK' and 'AL', both of which quoted the rate of Rs. 8.90 for 20 litre drums only.

The DDS did not finalise any supply order and passed on (November 1978) the papers to the DOS for procurement of the stores through the DGSD on the ground that paint RFU was not an item included in the 'exclusive items of stores for defence'. The DOS returned (December 1978) the papers to the DDS stating that the stores were required urgently, and should have been included in the exclusive list of stores for defence and its procurement be arranged by the DDS itself. After negotiations with the tenderers in a price negotiation meeting held in February 1979, a part order for 2,50,000 litres of paint (in 3 different packs) was placed (March 1979) on firm 'AL' at a total cost of Rs. 24.48 lakhs (although it had quoted for paint in 20 litre drums only) as under :

	Rate per litre Rs.
1,12,500 litres (in 20 litre drums)	8.80
1,00,000 litres (in 5 litre packs)	10.08
37,500 litrees (in 1 litre packs)	12.00

The main reasons for not placing orders on established suppliers were ascribed by the DDS to shortage of raw materials with them and the apprehension that adherence of delivery schedule by these suppliers was doubtful.

Firm 'AL' was required to submit acceptable advance samples by 31st March 1979 and bulk production was to commence from the date of approval of advance samples at the rate of 35,000/40,000 litres per month. Firm 'AL' failed to submit acceptance samples till February 1980 and the supply order was cancelled (February 1980) without financial repercussions on either side.

In the meantime, another indent for 8,20,300 litres of paint was placed (March 1979) by the DOS on the DDS urging immediate procurement of this quantity by June 1980. In order to cover the entire quantity of 12,26,300 litres (4,06,000 litres plus 8,20,300 litres), the DDS issued (August 1979) tender enquiries to 26 firms excluding firm 'AL' (which had failed to submit acceptable samples against the supply order placed on it in March 1979). Sixteen firms responded, most of which had quoted earlier (September 1978) but on whom the DDS had not placed any orders then. After considering these quotations, 9 supply orders were placed (January-February 1980) by the DDS on different firms for a total quantity of 12.15 lakh litres of paint in different packs (total cost : Rs. 1.75 crores) as under :

Firm	In 20 litre drums		In 5 litre packs		In 1 litre packs	
	Qty. (in lakh litres)	Rate per litre	Qty. (in lakh litres)	Rate per litre	Qty. (in lakh litres)	Rate per litre
		Rs.		Rs.		Rs.
'AJ' .	2.00	13.30	..	..	..	..
'AO' .	2.00	13.50	..	..	1.00	17.00
'AP' .	..	..	1.50	15.10	..	..
'AQ' .	..	..	1.50	15.25	..	..
'AN' .	..	..	1.00	15.30	..	..
'AS' .	1.00	12.97	..	..	..	..
'AT' .	0.50	13.25	0.75	15.10	..	..
'AU' .	0.40	12.91	..	..	..	..
'AV'	..	..	..	..	0.50	16.75
	5.90		4.75		1.50	

As per the records of the DDS, the DGSD procured (January 1979) this paint through these firms at prices ranging from Rs. 9.40 to Rs. 10.25 per litre.

The DDS stated (September 1983) that the orders on any other firms against the earlier purchases were not placed as most of the reputed firms refused to offer a firm delivery schedule during the negotiation meeting held in February 1979 and there was no purpose to cover any quantity on them.

Had the DDS placed assorted supply orders by adopting price differential treatment in the first instance, the procurement of 4,06,000 litres of paint indented in February 1978 would have cost Rs. 40.84 lakhs, as against the cost of Rs. 59.17 lakhs, under the supply orders placed in January-February 1980, resulting in an avoidable extra expenditure of Rs. 18.33 lakhs and the supplies would have been received earlier.

Other interesting points :

1.14 In March 1976 and April 1977, the DDS placed the following 3 supply orders for retreading of 537 numbers of 80 × 24 tyres (for a certain imported tractor) which were beyond local repairs (BLR) :

Firm	Date of supply order	Quantity on order	Total cost
		(Numbers)	Rs.
'AZ'	30th March 1976	397	5,14,115
'AZ'	23rd April 1977	100	1,09,000
'BA'	27th April 1977	40	43,600

Retreading of 497 tyres by firm 'AZ' at a total cost of Rs. 6.23 lakhs was completed during May 1976—October 1977 and the retreaded tyres were sent to COD 'YY'.

As per the scheduled delivery period, firm 'BA' was required to submit acceptable advance samples for approval within 2-3 weeks from the date of supply order and bulk supplies were to commence after approval of the samples at the rate of 10—15 numbers per month; the entire supply was to be completed within 4 months thereafter. The supply order did not, however, provide any safeguard for the issue of BLR tyres to firm 'BA' by COD 'YY'. In May 1977, COD 'YY' issued 40 numbers of BLR tyres to firm 'BA' without obtaining any indemnity bond from it. Firm 'BA' after having been granted extension up to 5th November 1977 submitted the samples in October 1977. The samples were found suitable by the Inspectorate of Vehicles (North Zone) for conducting road trials. No bulk production clearance was, however, given to the firm and instead, the firm was assured (December 1977) by the DDS that road trials on the samples would be completed at the earliest and acceptance or otherwise of the samples would be intimated on completion of the trials.

The road trials of the samples were conducted during August 1978—April 1979. The samples underwent 2,607 Kms. of road trials and were rejected (June 1979) as the same were not found satisfactory. Accordingly bulk production clearance was not given.

Meanwhile, the DOS had pointed out (March 1978) that in view of availability of adequate stock of new tyres, there was no need of getting the BLR tyres retreaded. The DOS also advised (May 1979) the DDS that since there was likelihood of the imported tractors being phased out in the near future, the order for retreading of tyres on firm 'BA' be cancelled. The supply order was cancelled (September 1979) by the DDS without financial repercussion on either side on the ground that the firm had failed to submit the acceptable samples. Firm 'BA' refuted the charge of failure on its part to submit the acceptable samples and stated (October 1979) that it had submitted 6 acceptable samples in October 1977 itself and was awaiting bulk production clearance. In April 1982, COD 'YY' reported that 34 BLR tyres (cost : Rs. 0.79 lakh) were lying with the firm since long (nearly 6 years) and their condition would have deteriorated under prolonged storage and adverse weather conditions and that these would be rendered unfit for retreading/future use and would cause considerable loss to the State. These tyres had not yet been returned by the firm (September 1983).

It was noticed (March 1983) during local examination in COD 'YY' that out of 497 retreaded tyres only 26 had been issued to user units, 370 had been transferred to two other ordnance depots and 101 held in stock.

Thus, the expenditure of Rs. 5.90 lakhs on retreading of 471 (out of 497) BLR tyres ex-trade when adequate stock of serviceable tyres was already available and the tractors for which the retreaded tyres were to be used were being phased out in the near future, proved infructuous. Further, 34 BLR tyres (cost : Rs. 0.79 lakh) issued to firm 'BA' without obtaining any indemnity bond or any other safeguard in the absence of a suitable provision in the supply order had not been returned (September 1983) for over 6 years and there was possibility of their getting deteriorated under prolonged storage and adverse weather conditions.

1.15 In August 1977, the DDS placed a supply order on firm 'BB' for the procurement of 300 numbers each of sight bore 104-A and 105-A at the rate of Rs. 4,150 and Rs. 4,000 each respectively. As per delivery schedule advance sample was to be submitted within 4 weeks of receipt of order and bulk supply was to commence 2 months after the date of clearance of sample at the rate of 30 numbers per month. The quantities on order were increased (December 1978) to 450 numbers each. While sight bore 105-A continued to be supplied by firm 'BB' at regular intervals, there was no progress in the supply of sight bore 104-A. The firm requested (February 1980) for extension in delivery date up to 20th September 1982. The DDS, however, granted (May 1980) extension up to June 1981 only and notified the firm that in the event of its declining the extension granted or failure to deliver the stores within the extended period, the contract would stand cancelled and the outstanding quantity would be purchased at its risk and cost.

Meanwhile, a further requirement of 669 numbers of sight bore 104-A was projected (August 1979) by the DOS. On receipt of quotations in response to a fresh tender enquiry in March 1980, a meeting was held in August 1980 for procuring the additional requirement. In the meeting the DOS clarified that there was an error in projecting the requirement earlier and their requirement for sight bore 104-A was 228 numbers only as against 669 projected earlier.

As the item (sight bore 104-A) was required urgently by the users and firm 'BB' had supplied only 6 numbers of this item, the DDS enquired (9th September 1980) from the firm if off-loading of 300 numbers of this item would be acceptable to it. Firm 'BB' agreed (20th September 1980) to the off-loading of 150 numbers only. The supply order on the firm

('BB') was amended (November 1980) accordingly and another order for 150 numbers of this item was placed simultaneously on another firm 'BC' at the higher rate of Rs. 5,550 each. By this time, firm 'BB' had supplied only 38 numbers of this item and was granted (July 1981) further extension up to 15th August 1983 for completing supply of the remaining quantity (252 numbers). Firm 'BC' completed supply of the entire quantity of the item (sight bore 104-A) by May 1981.

The DDS stated (September 1983) that cancellation of the contract at risk and expense of firm 'BB' was not considered as (i) the delivery period against the contract was still valid, (ii) the cancellation could not have been done for the part quantity and (iii) firm 'BB' was a company under government management and was under nationalisation.

Notwithstanding the unsatisfactory delivery of supplies by firm 'BB' for which extension was granted first up to June 1981 and later 15th August 1983, off-loading of 150 numbers of the item (sight bore 104-A) from firm 'BB' and ordering them on firm 'BC' at higher cost, instead of short-closing the order at the risk and expense of the former, resulted in an extra expenditure of Rs. 2.10 lakhs.

Waiver/non-recovery of liquidated damages :

1.16 The total amount of liquidated damages recoverable from suppliers on account of delayed supplies of stores in respect of 92 supply orders placed by the DDS during the period 1977-78 to 1980-81 worked out to Rs. 37.83 lakhs. Of this, an amount of Rs. 18.78 lakhs involving 44 supply orders was waived fully by the DDS. Out of the balance amount of Rs. 19.05 lakhs (48 supply orders), a sum of Rs. 1.57 lakhs (8 *per cent*) only was recovered. The main considerations on which liquidated damages were waived by the DDS were :

(a) the firms were good;

(b) the firms were executing other supply orders placed by the Department; and

(c) the consignees concerned had certified that the delay in materialisation of stores from the firms had not caused any loss real or potential to the State.

Significantly, the consignees were merely the store holding depots and had given the certificate without consulting the indentors/users whether any loss was sustained or not.

According to the DDS (September 1983), where there is no demonstrable actual loss on account of delay in supplies, liquidated damages are ordinarily limited to 10 *per cent* of the total amount of liquidated damages leviable at the rate of 2 *per cent* per month (for the period of delay), and were determined in consultation with the Integrated Finance and despite lack of any report on losses by the consignee.

The fact remains that the liquidated damages were either waived in full or token amount was levied on the basis of the certificates furnished by the consignees who are only stock holders and without ascertaining the extent of loss involved from the indentors/users.

1.17 *Summing up* :—The important points that emerge are as under :

— During last 16 years 88,984 items had been projected for development and procurement through indigenous sources and supply orders for 47,363 items only could be placed by the DDS.

— In 193 cases the DDS took 12 to 36 months in placing supply orders from the date of receipt of indents.

— While against 36 supply orders (total value : Rs. 8.97 crores) placed upto June 1979, the suppliers had failed (August 1982) to submit samples or commence supplies for over 3 years; against 67 other supply orders (total value : Rs. 33.21 crores) placed during 1972 to June 1979 stores worth

Rs. 12.10 crores only had been supplied till August 1982.

— Based on a report rendered by the internal audit on 5th October 1981, advances amounting to Rs. 8.36 crores remained unadjusted in respect of 67 supply orders for periods ranging from 2 to 5 years; the amount outstanding against 28 firms as on 29th September 1983 was Rs. 1.566 crores.

— Failure on the part of the DDS to comply with the contract conditions regarding cancellation of contract and to effect risk and cost purchase within 6 months of the date of breach of contract resulted in an extra expenditure of Rs. 10.91 lakhs.

— Air compressors (cost : Rs. 2.16 lakhs) and generating sets (cost : Rs. 2.96 lakhs) were procured although they did not conform to specifications.

— Non-acceptance of offers within the validity period in 3 cases resulted in extra expenditure of Rs. 1.02 crores.

— Delays in supplies in 2 cases resulted in avoidable expenditure of Rs. 2.30 crores.

— Procurement of an item of common utility (paint RFU) ignoring the established source of supply resulted in extra expenditure of Rs. 18.33 lakhs.

— An expenditure of Rs. 5.90 lakhs on retreading of BLR tyres ex-trade proved infructuous besides non-return of 34 BLR tyres (cost : Rs. 0.79 lakh) by the repair agency for nearly 6 years.

— Out of liquidated damages amounting to Rs. 37.83 lakhs leviable in 92 cases, a sum of Rs. 18.78 lakhs (44 cases) was fully waived.

CHAPTER 3

ORDNANCE AND CLOTHING FACTORIES

6. General

1. *Introduction*

There are 33 Ordnance Factories functioning as departmental undertakings under the Department of Defence Production producing wide variety of items for the Defence Services, para-military forces and the civil police. The overall management of the factories vests with the Ordnance Factory Board (OFB) consisting of the Director General, Ordnance Factories (DGOF) as Chairman and 7 other full time members. The responsibility for managing 29 factories are assigned to 3 members and 4 Ordnance Equipment Factories (OEF) to an Additional DGOF. Functional responsibilities on finance, planning and material management, personnel and technical development and services are vested in other members. Overall statistical data on the activities of the organisation for 1979-80 to 1981-82 is shown in Annexure I.

2. *Targets and Achievements*

The Ordnance Factories produce around 1,400 numbers of principal items for use by various Defence and para-military services. An analysis of the production performance in terms of original targets and number of items during the years 1979-80 to 1982-83 in respect of critical items for the three Services revealed the following position in regard to the extent of fulfilment of their requirements by the factories :

Range of achievement	1979-80				1980-81				1981-82				1982-83			
	Army	Navy	Air-Force	Ordnance Equipment Factories	Army	Navy	Air Force	Ordnance Equipment Factories	Army	Navy	Air-Force	Ordnance Equipment Factories	Army	Navy	Air-Force	Ordnance Equipment Factories
100% and above	43	8	8	52	78	9	6	87	94	9	11	86	85	10	6	85
90% to 99%	2	1	..	2	9	..	1	..	4	..	..	..	3	..	..	1
75% to 89%	10	1	1	2	8	2	..	..	3	1	1	5	7	..	1	1
50% to 74%	19	..	2	2	3	..	2	..	..	..	..	2	7	1	2	4
Below 50%	12	2	11	1	4	1	9	1	3	1	3	3	8	..	1	1
TOTAL .	86	12	22	59	102	12	18	88	104	11	15	96	110	11	10	92

Of the total 54,728 numbers of warrants (value : Rs. 252.75 crores) outstanding on 31st March 1982, 28,158 warrants (value : Rs. 59.29 crores) were more than one year old (1952-53 to 1980-81). Shortfall and delays in production necessitated import/procurement from trade and consequent short closure of the indents involving substantial financial repercussions. A comment on financial repercussion due to delay in setting up of production facilities for various items is included in para 7 et. seq. Paragraph 18 gives a case of import commitment due to shortfall in production of a particular weapon.

3. *Utilisation of machines*

As on March 1983, uninstalled machinery and equipments valuing Rs. 68.82 lakhs were noticed idling in various factories. Few cases of costly equipment lying idle are commented in Paragraphs 15, 17, 30 and 33.

4. *Inventory*

As on 31-3-1982, the total holding of inventories in terms of money value for various Ordnance Factories was to the extent of Rs. 583.53 crores as detailed below :

Sl. No.	Particulars	Value (In crores of rupees)
1.	Working Stock	
	A Active	448.80
	B Non-moving	26.85
	C Slow moving	30.69
2.	Waste and obsolete	24.40
3.	Surplus Stores	6.72
4.	Maintenance Stores	46.07
		583.53

Mention was made of certain aspects of inventory control in paragraph 12 of Audit Report (Defence Services) for 1981-82.

5. *Stock-taking*

Annual stock verification carried out by an independent group directly under control of the OFB/OEF headquarters found the following deficiencies and surpluses (value in lakhs of rupees) in the factories :

	Deficiencies	Surpluses
1979-80	247.02	30.67
1980-81	2.29	32.32
1981-82	18.94	10.87

The deficiencies in one particular factory were Rs. 243.99 lakhs (1979-80), Rs. 1.44 lakhs (1980-81) and Rs. 17.68 lakhs (1981-82). The surpluses in one factory were Rs. 23.83 lakhs (1979-80), Rs. 2.97 lakhs (1980-81) and Rs. 2.57 lakhs (1981-82). In another factory there were surpluses in all the three years Rs. 1.34 lakhs 1979-80, Rs. 2.47 lakhs 1980-81 and Rs. 1.15 lakhs 1981-82. This goes to show that store-keeping is faulty and needs to be improved.

6. *Execution of New Projects*

There are 28 on-going projects (including 2 new factories) estimated to cost Rs. 302.43 crores under execution at the end of March 1983. These projects were sanctioned by Government during October 1967 to February 1983 with expected dates of their completion falling during March 1971 to February 1987. Of these, 13 projects (estimated cost : Rs. 191.40 crores) were due for completion during March 1971 to March 1983 but are now expected to be completed during June 1983 to August

1985 vide details below :

Sl. No.	Name of project	Month and year of sanction		Cost (In crores of Rs.)		Completion		Expenditure March 1983 (commited value) (in crores of Rs.)	Project capacity/ capacity achieved
		Original	Revised	Original	Revised	Scheduled	Anticipated		
1	2	3	4	5	6	7	8	9	10
1.	'A'	October 1971	April 1977	46.48	77.69	October 1976	December 1983	74.40	240 guns per annum/ 160 guns per annum (1982-83)
2.	'B'	October 1967	December 1981	9.63	17.95	March 1971	December 1984	14.41	11,960 M.T. per annum/4,000 M.T. per annum.
3.	'C'	October 1972	October 1980	16.47	23.00	October 1977	June 1984	21.79	60,000 rounds per annum/total production 57,252 rounds from 1976-77 to 1982-83.
4.	'D'	July 1974	May 1981	78.92	113.43	Early 1983	1984-85	104.00	2,160 tons of D.T. Base propellant and 720 tons of Ball powders per annum/ Nil.
5.	'E'	August 1978	November 1981	3.95	7.40	August 1982	August 1983	5.66	12,600 M.T. per annum/Nil.
6.	'F'	December 1979	September 1982	4.01	4.46	January 1983	January 1985	2.64	2.5 lakhs per annum/ Nil.

1	2	3	4	5	6	7	8	9	10
7.	'G'	February 1977	September 1981	8.00	13.74	February 1982	February 1985	Nil	110 numbers per annum over and above the existing capacity of 140 numbers per annum/Nil.
8.	'H'	January 1977	..	4.49	..	January 1981	January 1984	2.78	2.00 lakh each ammunition of two types and 6,000 numbers cartridges per annum/Nil.
9.	'I'	August 1978	..	14.73	..	March 1983	March 1984	8.81	(2 weapons/5 ammunitions) seven different items of varying number per annum/Nil.
10.	'J'	July 1975	..	1.50	..	December 1977	December 1983	1.50	50 lakh G.P.D./Nil
11.	'K'	February 1979	..	1.29	..	February 1982	December 1984	NA	(*i*) 5,940 tons per annum/Nil. (*ii*) 40,000 K.L. per month/Nil.
12.	'L'	July 1978	..	0.65	..	July 1981	June 1983	0.51	14 lakh G.P.D./Nil.
13.	'M'	August 1981	..	1.38	..	February 1983	February 1985	0.03	2 lakh numbers of blanket per annum/Nil.

The following points were noticed in audit :

(i) The projected date of completion has been extended from 1 to 14 years in 13 cases. Of the 13 over-run projects, original estimated cost in respect of 7 projects (Rs. 167.46 crores) has been revised to Rs. 257.67 crores. The delay in completion of the projects has been attributed to (i) delay in completion of civil works, (ii) non-availability of funds and (iii) delay in planning/procurement of plant and machinery, etc.

(ii) Due to delay in completion of 6 projects (Sl. numbers 1, 2, 3, 5, 6 and 8) material and ammunitions worth Rs. 57.89 crores were imported and Rs. 13.45 crores were purchased from trade. Of these purchases from trade, in respect of one factory (Sl. number 6) there was an extra expenditure of Rs. 1.73 crores in a purchase of Rs. 5.94 crores as compared to the cost of production at the factory. Similarly in another case (Sl. number 3) further import of ammunition of Rs. 39.50 crores was projected.

(iii) In respect of Sl. number 9 the project envisaged a yearly saving of Foreign Exchange (FE) equivalent to Rs. 27 crores. With the delay in completion [Original Planned date of Completion (P.D.C.) March 1983, revised P.D.C. March 1984] by one year the possible saving in F.E. has been lost. In another case (Sl. number 4) the anticipated yearly saving of Rs. 29.47 crores in F. E. is lost since the P.D.C. changed from early 1983 to sometime in 1984-85.

7. Mention was made of certain aspects of execution of projects shown against serial numbers 1, 2, 3 and 8 in Paragraph

7 of Audit Report (Defence Services) for 1977-78 and Paragraphs 10, 9 and 12 of Audit Report (Defence Services) for 1980-81 respectively. Eight projects were examined in audit and important points noticed are given below :

(i) *Project 'D'*

In February 1972 the DGOF submitted a project report for setting up of a new propellant factory with a capacity of 300 tons per month of a triple base propellant by solvent process or 200 tons per month of triple base together with 75 t/m of solventless double base and 25 t/m of cast propellants to meet the requirement of the services at a cost of Rs. 66.62 crores (F.E. Rs. 15.44 crores). The project was sanctioned in July 1974 at a cost of Rs. 78.91 crores (F.E. Rs. 19.48 crores) to create a production capacity in the ordnance factory for 180 M/T of double/triple base propellant and 60 M/T of ball powder per month in 3 shifts of 8 hours each. The P.D.C. for the project was 6 years from the sanction. Due to world-wide price escalation the project cost increased and revised sanction was issued in July 1976 at a cost of Rs. 91.19 crores (foreign exchange : Rs. 32.24 crores). As per revised sanction of July 1976 the project was scheduled to be completed by early 1983. The project, however, could not be completed and two plants (Ball Powder and Nitrocellulose) were yet to be commissioned for which orders were placed only in May 1979 and February 1980 respectively due to delay in selection of suitable firms. The revised P.D.C. is 1984-85. The reasons for the delay are non-availability of funds, revision of civil works specification and cost thereof, finalisation of contracts, selection of technology and plant supplier for ball powder contract, etc. As a result the cost of the project was further increased and a revised sanction was issued in May 1981 at a cost of Rs. 113.43 crores (including F.E. Rs. 34.81 crores). The net yearly savings of Rs. 29.47 crores in F.E. envisaged on realisation of full production capacity are not forthcoming as planned for from 1983-84.

(ii) *Project 'E'*

The project was sanctioned in August 1978 at a total cost of Rs. 3.95 crores (including FE of Rs. 1.65 crores) for production of brass and Gilding metal continous cast strips/slaps at the rate of 1,050 M/T per month in 3 shifts of 8 hours each. The P.D.C. of the project was August 1982. The project was not completed due to delay in completion of civil works, ordering Milling Machine due to non-availability of funds, etc. As a result the project cost increased and a revised sanction was issued in November 1981 at a cost of Rs. 7.40 crores (including F.E. Rs. 3.63 crores). The P.D.C. of the project was revised to August 1983 and the full capacity of 12,600 M/T per annum is expected by August 1983 (OFB April 1983).

To meet the requirement of brass strips, an order was placed in September 1981 by the factory on firm 'A' for 1000 M/T of brass strips @ Rs. 4.56 per Kg. by conversion of scraps supplied by the factory. The cost of conversion was Rs. 45.60 lakhs.

(iii) *Project 'F'*

The sanction of the above project was issued by the Government in December 1979 at a total cost of Rs. 4.01 crores (F.E. of Rs. 2.65 crores) for production of forging for a shell at the rate of 2.5 lakh numbers per annum in 2 shifts of 8 hours each. The P.D.C. of the project was January 1983. OFB claimed that the project was delayed due to high capital cost of plant necessitating detailed scrutiny of offers received and further technical clarification/retendering etc. As per OFB (April 1983) advance A/T was placed in March 1982 but DGSD finalised it in February 1983. As a result the project cost was increased in September 1982 from Rs. 4.01 crores (F.E. Rs. 2.65 crores) to Rs. 4.46 crores (F.E. Rs. 2.65 crores) and P.D.C. of the project was refixed as January 1985.

Due to delay in setting up of the capacity of the project, trade purchase was made of 1 lakh shells at a total cost of Rs. 5.94 crores involving an extra expenditure of Rs. 1.73 crores in comparison to factory's cost of production.

(iv) *Project 'T'*

The project was sanctioned by the Government in August 1978 at a total cost of Rs. 14.73 crores (including F.E. of Rs. 7.75 crores) for establishment of facilities of production of a weapon and connected ammunitions in nine Ordnance Factories in 2 shifts of 8 hours each. The P.D.C. of the project was March 1983. Due to delay in completion of civil works and supply of some critical machines and in finalisation of specification of machines due to change in design of a Fuze, the project was not completed by the stipulated time. As a result the P.D.C. of the project was revised to March 1984.

The saving of Rs. 27 crores in F.E. annually by 1983-84 anticipated (February 1974) by avoiding outright purchase of ammunitions could not be achieved due to the revised P.D.C.

(v) *Project 'A'*

Certain aspects of execution of this project were commented upon in paragraph 7 of the Audit Report, Defence Services, 1977-78. The project has not yet been completed and as per OFB (April 1983), the anticipated date of completion is December 1983. As against the estimated cost of Rs. 46.48 crores (October 1971) the committed expenditure on this project as on March 1983 was Rs. 74.40 crores.

(vi) *Project 'B'*

A comment on certain aspects of progress of this project appeared in paragraph 10 of Audit Report, Defence Services, 1980-81. As against the sanctioned estimated cost of Rs. 9.63 crores (October 1967) the committed expenditure as on March

1983 was Rs. 14.41 crores. As against the targeted production of 11,960 tonnes per annum, the capacity achieved was only 4,000 tonnes (OFB April 1983).

(vii) *Project 'C'*

Mention of certain aspects of progress of this project was made in paragraph 9 of Audit Report, Defence Services, 1980-81. The project was sanctioned in 1972 for completion by October 1977. The anticipated date for completion of the project is June 1984. As against the estimated cost of Rs. 16.47 crores the committed value of expenditure as on March 1983 was Rs. 21.79 crores. As against the project capacity of 60,000 rounds of ammunition per annum in single shift the total production from 1976-77 to 1982-83 was 57,252.

(viii) *Project 'H'*

Certain aspects of the progress of this project were mentioned in paragraph 12 of Audit Report, Defence Services, 1980-81. The project scheduled to be completed in January 1981, is now expected to be completed in January 1984.

ANNEXURE I

(referred to at page 35)

		1979-80	1980-81	1981-82
1	2	3	4	5
(1)	Average value of fixed capital assets (Rs. in crores)	369.74	388.57	402.46
(2)	Man-power (No. in lakhs)	1.73	1.74	1.76
(3)	Net cost of production (excluding inter-factory demands Rs. in crores)	462.59	540.72	621.01
(4)	Capital output ratio.	1 : 1.25	1 : 1.39	1 : 1.54
(5)	Factory cost analysis in terms of percentage of value of production			
	Material	68.31	68.30	68.80
	Labour	6.95	6.74	6.45
	Others	24.74	24.96	24.75

1	2	3	4	5
(6)	Gross contributed value (value of production less materials and outside supplies and services Rs. in crores) .	190.16	212.69	245.65
(7)	Wages (Rs. in crores)	41.70	45.20	50.80
(8)	Net contributed value (gross contributed value less wages Rs. in crores) .	148.46	167.49	194.85
(9)	Net contributed value per Rs. 1 crore of fixed capital assets	0.40	0.43	0.48
(10)	Average earnings per employee (Rs.)	8,324	9,326	10,504
(11)	Net contributed value per employee (Rs.)	8,582	9,626	11,071
(12)	Value of abnormal rejection (Rs. in crores) .	1.31	4.36	4.15
(13)	Percentage of abnormal rejection on gross value of production.	0.22%	0.65%	0.53%
(14)	Customer composition			
	(Percentage of total issues net of Inter Factory Demands)			
	Army	88.89	88.72	90.48
	Navy, Air Force and others .	4.75	4.09	3.54
	Civil Trade	3.76	4.96	4.36
	Own stock and Capital works	2.60	2.23	1.62
(15)	Extent of requirement of stores met by ordnance factories in terms of percentage.			
	Army	65.98	64.04	62.53
	Navy, Air Force and others	37.10	32.43	46.98
(16)	Value of inventories (Rs. in crores) .	417.00	525.77	583.53
(17)	Surplus, obsolete, slow-moving and non-moving inventories (Rs. in crores)	71.00	88.93	88.66
(18)	Norms of general inventory holdings in terms of months' requirements .	6	6	6 months

1	2	3	4	5
(19)	Inventories in terms of months' consumption	10.29	11.21	11.08 months
(20)	Normal manufacturing cycle (normal life of manufacturing warrants) .	6	6	6 months
(21)	No. of warrants pendency .			
	Total No. of warrants on 31-3-1982			54,728
	Value of warrants on 31-3-1982 .			Rs. 252.75 crores
	No. of warrants more than one year old (1952-53 to 1980-81) . .			28,158
	Value of warrants of more than one year old			Rs. 59.29 crores
(22)	Value of components and products in stock (Rs. in crores) . . .	83.65	105.15	100.09
(23)	Components and products holding in terms of months' production . .	1.67 months	1.88 months	1.53 months
(24)	Capacity utilisation of selected new factories or projects for which information of installed capacity is available			28.75 to 74%

7. Shortfall in production of cartridge cases and consequent import

A project for production of four types of cartridge cases in factory 'A', at the rate of 10,000 numbers per month in single shift of 8 hours (25,000 numbers per month in 2 shifts of 10 hours each) sanctioned (January 1962) for Rs. 3.40 crores, for completion by early 1965, was brought into production in April 1970. The completion cost of the project is yet to be finalised (April 1983). According to the Ordnance Factory Board (OFB), the expenditure is expected to exceed the sanction by Rs. 51.04 lakhs. Factory 'A' commenced production of only one type of cartridge cases ('A' and 'B') and the actual production achieved was 11,000 numbers (1970-71) and 31,719 numbers (1971-72).

Since the factory produced much less than the rated and envisaged capacity, the position was reviewed (August 1972) and the factory reassessed the maximum obtainable capacity for cases of type 'A' and 'B' as 16,000 cartridges or 19,000 numbers of type 'A' only in two ten hour shifts. To augment the capacity to 25,000 numbers per month as originally envisaged 11 numbers of balancing plant and machinery were found to be necessary. The demands for balancing plants were processed under New Capital (NC) Grants/Replacement-Renewal (RR) Grants and not against the project. Indents for these 11 plants and machinery were raised between June 1976 to October 1982 and contracts for 8 machines were concluded between October 1976 to December 1980. All the eight machines ordered (cost : Rs. 91.35 lakhs) were received between December 1978 and March 1983, of which four have been commissioned for regular use (July 1980 to June 1983). One Hydraulic deep drawing press (cost : Rs. 33.25 lakhs) and three numbers of Head turning machines (cost Rs. 43.46 lakhs) are under trial runs (September 1983) and could not be used for regular production, due to defective conveyer system (press) and unsatisfactory performance (Head turning machines). For the balance 3 numbers of machines indented in April 1980 and October 1982 orders are yet to be concluded (September 1983).

As factory 'A' could not meet the filling requirements of factories 'B' and 'C' for type 'A' and 'B' cartridge cases, spare capacity available in factory 'D' was utilised for production of 'A' and 'B' cases. Even after utilising the spare capacity at factory 'D', there was shortfall in meeting the filling requirements of factories 'B' and 'C' during the years 1979-80 to 1981-82. The shortfall in production of the ammunition compared to original targets was 1 lakh numbers. Factory 'A' has not achieved the installed capacity so far, since the plants and machineries functioned much below the rated capacities.

In March 1979 the OFB stated that the achieveable capacity of factory 'A' was only 40 *per cent* of the installed capacity, *i.e.* production of only 10,000 numbers of cartridge cases per month. The requirements of cartridge cases by factory 'B' and 'C' during 1978 to 1981, were anticipated not to be met even after production at factory 'D'. OFB stated (October 1979) that augmentation in capacity in factory 'A' could only be achieved after installation of additional balancing equipments which were under procurement and expected to be processed in next two years and that immediate requirements of cartridge cases were to be imported.

Import of the cartridge cases of type 'A' and 'B' to meet the filling requirements of factories 'B' and 'C', was decided and two contracts were concluded (January 1981) with a foreign Government and a foreign firm, for import of 2,23,000 numbers of cartridge cases of both types 'A' and 'B', at a total cost of Rs. 7.43 crores (in Foreign Exchange), to be delivered during November 1981 to October 1982. The extra expenditure compared to the cost of production (1980-81) in factories 'A' and 'D' was Rs. 162.84 lakhs. 1,73,400 numbers of cartridge cases were received up to September 1983, of which certain consignments were found to be affected by water stains, due to inadequacy of sea worthy packing, which rendered cartridge cases defective. The defects required rectification but neither the number of cartridge cases that require rejection has been assessed nor is the cost of rectification available (October 1983).

Mention was made in paragraph 6 of the Report of the Comptroller and Auditor General of India, Union Government, (Defence Services) for the year 1973-74 of the failure to achieve the target of 25,000 rounds per month, by factories 'E' and 'C' necessitating imports of another type of ammunition. The project for the creation of facilities for production of the ammunition in factories 'E' and 'C', sanctioned in June 1965, for Rs. 313 lakhs, was revised to Rs. 651 lakhs (August 1974), and was further revised to Rs. 711.34 lakhs (July 1978), to provide balancing machines for augmenting the capacity. The balancing machines were anticipated to be commissioned by December 1979 but actually completed in July 1983.

There was shortfall in production of the shells in factory 'E' during 1979-80 to 1980-81, despite the matching capacities created for production of 15,000 each of the shell and the connected variety of ammunition.

To meet the shortfall in production of the shells in factory 'E' during 1979-80 and 1980-81, three foreign contracts were concluded in October 1981 and May 1982 for import of 80,000 numbers of shells at a cost of Rs. 419.56 lakhs (foreign exchange). The extra expenditure, compared to the cost of production (1980-81) in factory 'E' was Rs. 33.39 lakhs. No shells against the import orders have so far been received (September 1983).

The case reveals that the installed capacity in factory 'A' for cartridge cases and in factory 'E' for shells could not be achieved at all. Necessity for balancing equipments for factory 'A' was identified as early as in 1972 but processed for procurement only between June 1976 and October 1982. As on September 1983, orders are yet to be placed for three machines, and four machines already received could not be used for regular production. Though the deficiency in factory 'E' was identified in 1974, and again in 1978, the positioning of the machines could be completed in July 1983 only. While augmenting the deficiencies of factories 'C' & 'E' in August 1974, the fall in capacity of cartridge cases in factory 'A' was not considered. Non-realisation of created capacities and delay in positioning of balancing equipment resulted in avoidable imports involving foreign exchange of Rs. 11.63 crores.

The case was referred to Ministry in July 1983 and their comments are still awaited (October 1983).

8. Shortfall in production of a forging in a factory

The shortfall in realisation of capacity established in factory 'A' for production of barrel forging for a weapon and consequent import of barrels and forgings of the value of

Rs. 173.65 lakhs during 1970-71 to 1972-73, forgings of the value of 108.43 lakhs during 1973-74 and barrels of the value of Rs. 2.34 crores during 1976, were commented upon in Paragraphs 6 and 12 of the Reports of the Comptroller and Auditor General of India Union Government (Defence Services) for the years 1973-74 and 1976-77 respectively.

The Ministry of Defence (Ministry) sanctioned (February 1976) procurement of balancing machines and connected civil works and services to augment the production capacity of barrel forging in the factory, and to reduce rejections of forging in the factory to 10 *per cent* at a cost of Rs. 2.55 crores (revised to Rs. 265.57 lakhs in November 1976) which were to be erected by February 1980. The Ministry also sanctioned (December 1976) installation of a 15/17-ton Arc furnace with a capacity of 16,200 tons per annum for achieving the targeted production of 360 numbers per annum of barrel forging. Installation and commissioning of furnace as a turnkey job was to be executed by a firm by January 1979, at a cost of Rs. 2.54 crores.

All the machines were reported to have been erected by January 1981 excepting for a Hardness testing machine, which is due to be received in December 1983. The steel melting furnace was commissioned in September 1980.

The production of steel ingots from the various steel melting furnaces during 1978-79 to 1982-83 was as under:

	30 Ton Basic open hearth furnace	Old 2 Ton Electric furnace	12 Ton Electric furnace	New 2 Ton Electric furnace	15-17 Ton Electric furnace	Total
	M.T.	M.T.	M.T.	M.T.	M.T.	M.T.
1978-79.	1,234	297	8,328	1,835	..	11,694
1979-80.	..	120	8,050	1,882	..	10,052
1980-81.	..	29	7,876	1,543	2,692	12,140
1981-82.	..	..	4,196	1,224	6,599	12,019
1982-83.	..	..	4,621	1,292	5,225	11,138

The total quantity of steel ingots produced in factory 'A' was far below the capacity of the furnaces and the newly commissioned Arc furnace has never produced more than 6,600 tonnes against the capacity of 16,200 tonnes per annum, in the last 3 years.

The production of barrel forging in factory 'A' also continued to be far below the capacity as shown below :

Year	Manufacture of weapon at factory 'B'	Production of forgings by factory 'A'	Supply of forgings by a public undertaking
1976–77	110	87	67
1977–78	130	104	33
1978–79	150	120	46
1979–80	155	155	27
1980–81	162	216	37

Consequently, forgins (250 numbers) at a cost of Rs. 210 lakhs were procured from trade and barrels (225 nos.) of the value of Rs. 134 lakhs were imported to meet the requirements from time to time.

As against the projected reduction in rejection (10 *per cent*) envisaged at the time of providing balancing machines, to actual rejections before and after installation of new machines were as under :

Year	Percentage of actual rejections
1976–77	24.15
1977–78	29.30
1978–79	33.50
1979–80	24.30
1980–81	17.10
1981–82	16.58
1982–83	25.34

Apart from lack of proper planning in matching augmentation of forging capacity to steel melting capacity during the initial stage of the project, piecemeal provisioning for the Plant and

Machinery, even the installation of balancing equipments to augment capacity and reduce rejections and improve performance and commissioning of the furnace to achieve the installed capacity of 32,700 tonnes per annum and production of 360 numbers barrel forging per annum were not realised.

The Ordnance Factory Board (OFB) stated in November 1982 that integrated approach for provision of forging press and balancing machines could not be taken in 1972, when upward revision in capacity was made, since ordnance load was widely fluctuating during early seventies and it was not possible to plan and balance capacities of plants. Only when the targets were ascertained for various forgings to be manufactured, a review and re-assessment was done and sanctioned in February 1976 and in the process much time had lapsed.

The shortfall in realisation of capacity was earlier attributed by the Ministry (January 1975) due to low production from its old worn out presses. The new 2500 Tons press in replacement was, however, commissioned in August 1975. The Ministry again attributed (January 1978) that imports in 1976 due to short-fall in production were not due to inadequacy of ancillary facilities but due to delay in commissioning of the new press and unsatisfactory functioning of the old one. The OFB, however, stated (December 1981) that the capacity envisaged could not be achieved immediately after August 1975, since balancing equipments and steel melting units were not available then.

Even after commissioning of the new forging press (August 1975), the balancing equipment (January 1981) and the provision of furnace (September 1980) the anticipated augmentation of barrel forging to 360 numbers could not be achieved from 1981-82.

Year	Augmented capacity	Target Prog.	Achievement
1981–82	360	300	168
1982–83	360	300	217

Thus, even after provision of new press, balancing equipment and extra steel making capacity at a substantial outlay of Rs. 8.06 crores the projected results were not realised with consequent imports and procurement from trade.

OFB agreed (October 1983) that the rejection percentage (18 to 25 *per cent* actual) became higher than that envisaged (10 *per cent*) and the higher rejection was primarily due to steel quality for which no updated technology was imported. Also, in spite of various training programmes OFB never trained any personnel for production of quality steel.

The case was referred to Ministry in July 1983 but their comments are yet to be received (October 1983).

9. **Heavy rejections of a fuze**

Factory 'A' took up bulk production of an empty fuze in 1966-67. During 1969-70 to 1978-79 about 11.63 lakh numbers of the empty fuze were supplied to factory 'B' for filling and 10,000 numbers only failed in proof. Out of the supplies made thereafter from 1979-80 duly passed by the Inspectorate bulk failure in proof test at factory 'B' occurred from July 1980. But factory 'A' continued further manufacture and supply and out of 4.96 lakhs supplied during 1979-80 to 1982-83, 0.98 lakh of empty fuzes (cost : Rs. 143.64 lakhs) were rejected at factory 'B' till March 1983 after proof tests due to blinds and 17,340 numbers (cost : Rs. 25.17 lakhs) were rejected at factory 'A' during 1982-83 in empty proof. In addition, 0.78 lakh numbers in 78 lots (cost : Rs. 124.45 lakhs approximately) were rejected after filling during the period. The Ordnance Factory Board (OFB) stated (April 1983) that the causes of failures could not be located in spite of various investigations and trials, further investigations were continuing and with necessary precautions taken encouraging results in proof tests had been achieved. The OFB intimated (August 1983) that out of the rejected filled fuzes 62,000 numbers were used after "special proof" and the proof results for the balance were awaited.

Out of the rejections of the empty fuzes at factory 'B' 40,939 numbers (cost : Rs. 59.44 lakhs) were backloaded to factory 'A' during October to December 1981 for rectification. The OFB stated (April/August 1983) that the failed lots were expected to be gainfully salvaged after the reasons for failures were located and in order to carry out investigational trial firing, modification/rectification of 5,000 numbers of the rejected fuzes backloaded by factory 'B' had been taken up.

As a result of rejections of the fuze, there was short-fall in production of ammunition 'X' by 35.23 *per cent* in 1979-80 and 27.5 *per cent* in 1981-82 and ammunition 'Y' by 32.496 *per cent* in 1980-81 and 20 *per cent* in 1981-82. The available manpower due to the short-fall in production was reported to have been diverted to other works.

Thus, 1.15 lakhs of the empty fuze (cost : Rs. 168.81 lakhs) were rejected during 1979-80 to 1982-83 after proof test due to blinds and the causes of rejections could not be located. In order to carry out investigational firing trial, modifications/ rectifications of 5,000 numbers of the rejected empty fuze were in progress (August 1983).

10. **Delay in commissioning of a costly imported plant**

Mention was made in paragraph 7 of the Audit Report (Defence Services) for 1978-79 about the delay in modernisation of a factory under a scheme sanctioned in July 1970.

The scheme, *inter alia,* envisaged construction of a hammer shop in the factory and commissioning of a forging hammer of 3-ton capacity (alongwith two of 1-ton and 2-ton capacity) in the shop to augment the production of forgings for punches, mandrel and dies needed by another factory for production of ammunition. Subsequently it was decided (1973) to provide a 5-ton hammer in place of the 3-ton hammer as the latter was considered inadequate to forge ingots to the size required by the indenting factory. The Director General, Ordnance Factories (DGOF) placed (September 1975) an indent on the Director

General, Supplies and Disposals (DGSD) for the 5-ton hammer. The latter concluded a contract with firm 'A' (June 1977) for supply ex-works from their foreign principals within 8 months from the date of opening of an irrevocable letter of credit and supervision, erection and successful commissioning of the hammer at a total cost of DM 11.47 lakhs (Rs. 42.35 lakhs). The irrevocable letter of credit was opened in favour of the supplier in September 1977 but the 5-ton hammer and its spares were supplied ex-works after inspection during October 1978 against stipulated delivery by May 1978 *i.e.* within 8 months. These were received in the factory during January to June 1979. The total cost of the hammer including duties, freight, etc. was Rs. 96.79 lakhs.

The firm supplied the foundation drawings and other related technical documents for the 5-ton hammer only during May and June 1978, although these were to be furnished as per contract by August 1977. In the meantime, the construction of the hammer shop was taken up (August 1974) and its superstructure was completed (December 1977) as per original plan in spite of change from a 3-ton hammer to a 5-ton hammer. The Military Engineer Services (MES) observed (November 1978) that if the foundation for the 5-ton hammer was constructed at the location originally planned, it would affect the existing superstructure. To expedite the construction work for the foundation in a different site by extending the shop (estimated cost : Rs. 6.04 lakhs) the DGOF issued a go-ahead sanction (December 1978). The Ministry of Defence (Ministry) stated (July 1983) that the construction of the hammer shop was completed to accommodate other machines to be erected there and that since the foundation drawings for the 5-ton hammer were not available when the shop was constructed, its suitability for the foundation of the hammer could not be judged.

After the go-ahead sanction was issued (December 1978), the MES finalised the estimate for the foundation work at Rs. 7.63 lakhs and that for extension of the shop at Rs. 5.60

lakhs (January 1979). As the MES could not finalise a contract and they intimated (August 1979) that they had no objection in undertaking the foundation work by the Ordnance Factory Board (OFB), the OFB concluded a contract (May 1980) with firm 'B' for completion of the work by December 1980 at a total cost of Rs. 11.15 lakhs under the supervision of the factory. The security deposit was not taken from the firm. The firm did not take over the site in time and complete the work as per schedule, despite repeated reminders. The firm took over the site only in December 1980 and started the work in February 1981. The firm left the work incomplete in February 1982 and the contract was cancelled (July 1982) at their risk and cost. The firm was, however, paid (May 1981—March 1982) on *pro rata* basis Rs. 2.11 lakhs by way of running payments. A fresh contract was concluded (November 1982) with firm 'C' for completion of the balance work at Rs. 21.75 lakhs by May 1983. Firm 'C' completed about 39 *per cent* of the work till June 1983. The Ministry stated (July 1983) that the recovery of extra cost for the work from firm 'B' would be considered after the work was completed by firm 'C'.

Meanwhile, the warranty period for the 5-ton hammer had expired (July 1980) and the DGSD stated (November 1980) that it would not be possible to get the warranty extended. The DGSD subsequently added (April 1981) that the contract charges of DM 24,000 (Rs. 0.90 lakh) for supervision, erection and commissioning of the plant could not be maintained in view of increased airfare and other charges and that the supplier had advised that these charges were subject to further negotiation based on conditions prevailing at the time the plant would be offered for installation and commissioning.

The case reveals the following:

(i) Although a 5-ton hammer was decided in 1973 to be installed in place of a 3-ton hammer, the hammer was indented in September 1975 and ordered in June 1977.

(ii) The civil works for the hammer shop were completed (December 1977) much in advance of receipt of the foundation drawings for the 5-ton hammer in order to accommodate other machines in the shop. Subsequently when the foundation drawings were received (May/June 1978) alterations to the existing superstructure of the shop at an estimated cost of Rs. 5.60 lakhs were found necessary.

(iii) After the foundation drawings were received (May/June 1978), the department took about 2 years to plan the foundation work and to conclude a contract (May 1980) with firm 'B' for the purpose at a cost of Rs. 11.15 lakhs to be completed by December 1980. The firm left the work incomplete in February 1982 and a fresh contract with firm 'C' at a total cost of Rs. 21.75 lakhs was concluded in November 1982 for completion by May 1983. The work was yet to be completed (June 1983).

(iv) The warranty period of the 5-ton hammer had expired but it is yet to be erected and commissioned.

11. Irregular payment of overtime to piece workers

As per the Government orders no overtime under Departmental Rules for work up to 9 hours a day or 48 hours a week is admissible to piece workers for working overtime in the day shift. But for the purpose of distribution of piece work profits, the time wages element in respect of overtime up to 9 hours a day or 48 hours a week is to be determined at the rate of P/200 per hour ('P' represents the monthly basic pay). An extra half hour overtime bonus calculated at the hourly rate of 1/200 of the monthly basic pay plus D.A., Special Pay, Personal Pay, Pension (to the extent taken into account for the fixation of pay) in the case of re-employed pensioners and C.C.A. will be admissible to piece workers for every hour of systematic overtime worked on the night shifts in addition to their earnings.

In a factory, overtime payments were allowed to piece workers for the work done in excess of normal working hours up to 9 hours a day or 48 hours a week on the basis of an extra element of $\frac{DA + CCA}{200}$. During 1979-80 to 1981-82, Rs. 13.04 lakhs was paid as Departmental Overtime (DOT) to the piece workers by the factory. This payment was made due to a wrong interpretation of orders issued (May 1970) by the Controller of Defence Accounts (Fys) (CDA) and by ignoring subsequent instructions issued by the Controller of Acconuts (Fys) (originally CDA) in January 1981.

The Accounts Officer of the factory stated (August 1982) that such payments were being admitted since 1972; and no action for the recovery of the incorrect payments was being taken as they had made a reference to higher authorities. The Ordnance Factory Board (OFB) finally decided (January 1983) that payments of DOT be stopped forthwith and accordingly the payment of DOT had been discontinued from the pay bill of January 1983.

The Accounts Officer of the factory stated (March 1983) that an amount of Rs. 36 lakhs (approximately) had been paid as DOT to piece workers up to 9 hours a day/48 hours a week from 1972 to December 1982 and an amount of Rs. 11 lakhs of night shift bonus was admissible to piece workers for the same period. This could not be verified in audit as the relevant records were not available.

Thus, the total extra payment made by the factory due to failure to implement correct rules, on account of DOT to piece workers in excess of normal working hours up to 9 hours a day or 48 hours a week from 1972 to December 1982 was Rs. 25 lakhs (approximately) which is yet to be recovered/regularised. However, no responsibility was fixed for this irregularity which continued for a period of 11 years and the exact amount of overpayments made is yet to be worked out.

The case was referred to Ministry in July 1983, and their comments are yet to be received (October 1983).

12. Waiver of recovery of overtime allowance

Based on the recommendations of Third Pay Commission (April 1973) for introduction of special grade of Principal Foreman (PF) in Class II scale in the Ordnance and Ordnance Equipment Factories (Ord & Ord Eqpt. Fys) the Ministry of Defence (Ministry) issued during February 1975 instructions for selecting staff by the Departmental Promotion Committee (DPC) which stipulated *inter alia* that the individuals should be excellent as heads of shops but not considered suitable for promotion as officer and may be considered for posts created for meritorious work and proven efficiency. The instructions were operative from the date of the order/date the posts were filled up with effect from that or any subsequent date.

The Ordnance Factory Board (OFB) decided not to get them vetted by Union Public Service Commission since the posts did not involve higher responsibility. The orders were extended to factory 'A' during February 1977 [directly under the Ministry (Department of Defence Production) up to July 1980 and under OFB from August 1980 onwards]. The date of actual promotion was specified as 22nd February 1977 and in the case of notional promotion from February 1975 and no arrears of pay were admissible. The review/recommendation work was done by DPC during January 1977 and August 1977 for Ord & Ord Eqpt. Fys. and Factory 'A' respectively. The DPC had recommended finally 98 personnel for Ordnance Factories, 6 numbers for Factory 'A' and 4 numbers for Ordnance Equipment Factories.

The Ministry attributed (December 1982) the delay from February 1975 to January 1977 to sorting out certain administrative issues.

In March 1977 Director General, Ordnance Factories (DGOF) issued orders for creation of 98 posts of PF (of which 14 posts were withdrawn as these non-technical categories were not governed by the recommendations of Third Pay Commission) to take effect from 22nd February 1975. The exceptional circumstances which necessitated retrospective creation of posts were not recorded by the DGOF as required under the General Financial Rules. Further the implication of such retrospective orders on entitlement of overtime (OT) to some officials who had drawn during the intervening period but who would cease to become entitled consequent on promotion retrospectively was over looked. In fact, the Third Pay Commission had not intended overtime allowance (OTA) to such officials because the Pay Commission had recommended the withdrawal of the OTA even from a lower category like Foreman, Supervisor, etc. which was also not considered. While inordinate delay took place (March 1975 to March 1977—Ord & Ord Eqpt. Fys. and February 1977 to May 1978—Factory 'A') and the promotions were granted with retrospective effect the foremen continued to draw OTA for varying periods (22nd February 1975 to 1st March 1977—Ordnance Factories), (22nd February 1977 to 11th May 1978—Factory 'A') and (22nd February 1975 to 1st March 1977—Ordnance Equipment Factories). The pay fixation to PF scale was done with retrospective effect from 22nd February 1975 in respect of Ord & Ord Eqpt. Fys. and 22nd February 1977 for factory 'A'. Due to the pay scale of PF falling under the segment of class II posts and as the promotion was granted with effect from 22nd February 1975/22nd February 1977 (Factory 'A') the PF were not entitled to OTA but only arrears of pay in the revised scale with effect from 22nd February 1975/22nd February 1977 (Factory 'A').

The Ministry decided in September 1980 that the OTA paid with effect from 22nd February 1975/22nd February 1977 (factory 'A') to actual date of promotion of PF should not be recovered from individual PF but adjusted against their arrears of pay arising for the same period and the excess (after adjustment) OTA paid be written off. During October 1980 the amount *viz.* Rs. 3,65,020 (Ordnance Factories and Ordnance Equipment Group Factories) and Rs. 22,024 (Factory 'A') were written off by the Ministry and the amounts included as cash loss in the Appropriation Accounts 1981-82.

The OFB justified (July 1980) the waiver on the ground that the Foremen were detailed on overtime during the period under specific and valid order of General Managers factories and denial of OTA would be normally and legally wrong and the Chief Inspectors of factories of the State where the Ordnance Factory of promoted PF was located had declared the post of PF as 'worker'. However, the Ministry stated (December 1982) that the post of PF was non-Gazetted officers (NGO), PFs were detailed on OT like other NGOs but based on the objection by Controller of Accounts (Fys.) that PF constituted the upper segment of scale of pay, orders for stopping the OT work to PF were issued during November 1977. The OTA paid was recovered in the case of Ord & Ord Eqpt. Fys. to a restricted period of 2nd March 1977 (date of actual promotion) to 8th November 1977 and for balance period 22nd February 1975 to 1st March 1977 (retrospective promotion period) was waived. For factory 'A' OTA was drawn up to May 1978 since overtime could not be stopped pending actual issue of promotion orders and the OTA for the period 22nd February 1977 (order effective to factory 'A') to 11th May 1978 (actual date of promotion) waived.

The delay in finalising the list of persons suitable for approval as PF, retrospective promotion for no valid and exceptional circumstances and omission to examine the implication of such retrospective orders on OTA drawn by such official who would not be entitled to draw consequent on their promotion resulted in waiver of Rs. 3.87 lakhs. No responsibility was fixed for the loss to Government.

13. Export of ammunition to a foreign Government

In May 1974 Ministry of Defence (Ministry) concluded a contract (Contract 'A') with a foreign Government for the sale of 23 items (22 items by April 1977 and one item by November 1978) at a total cost of U.S. Dollars 2.98 crores (Rs. 21.70 crores) to a foreign Government. Another contract was entered into with the same Government in January 1975 (Contract 'B') for the sale of 12 items (11 items common to contract 'A') by February 1977 at a total cost of U.S. Dollars 1.47 crores (Rs. 12.05 crores). Both the contracts were priced on the basis of Free on Board of an Indian Port. The supply of stores was planned to be effected by the Ministry partly ex-stock and partly by manufacture in factory 'X'. The agreement did not provide for escalation of price, liquidated damages and penalties for delayed supplies.

At the time of conclusion of these contracts procedure outlined in Ministry's letter of July 1956 was in force, and the price to be charged for stores proposed to be supplied to foreign Government was to be calculated by the Ministry of Defence and Ministry of Finance (Defence). The basis of such calculation was not spelt out. In case of delivery of stores F.O.B. Port, the price quoted will include packing, escort, handling and inland transportation charges. The Ministry stated (May 1983) that F.O.B. costs furnished by the factory 'X' were escalated at the time of conclusion of the contracts by 70 *per cent* and 80 to 85 *per cent* in respect of contract 'A' and contract 'B' respectively.

Between October 1974 and September 1976, 11 shipments—8 in respect of contract 'A' and 3 in respect of contract 'B'—were made and payments to the extent of Rs. 22.92 crores were received, the value of balance stores to be supplied was U.S. $ 17.232 million (September 1976), against which the unadjusted advance amounted to U.S. $ 4.306 million.

In July 1976, the contract prices of various items in the two contracts were reviewed by Finance with reference to the latest production cost, which revealed that, continuance of supplies, at contracted price may involve huge losses. The estimated financial repercussion was Rs. 6.8 crores, which could be reduced by Rs. 2.3 crores as profit, if the contracts were short-closed.

The short-closure of the contracts was negotiated with the foreign Government and the contracts were short-closed and a protocol was signed in October 1978. As per protocol the foreign

Government agreed to purchase certain items worth Rs. 1.80 crores, out of the two contracts against the unadjusted portion of advance. However, the actual position as on July 1978 was that the short-closure resulted in loss of Rs. 3.61 crores. The present position of the loss is not known, as the total amount of financial repercussion involved is yet to be compiled by the Ordnance Factory Board and the action to regularise the loss is yet to be taken.

Ministry stated (May 1983) that the increase in cost of production in the factory was perhaps mainly due to revision of pay and allowances after Third Pay Commission, and the revision of piece work rates, and sufficient cushion was provided for increase in emoluments by escalating the prices by making extra provision of 15 *per cent*. In all, items worth Rs. 17.93 crores and Rs 4.99 crores were supplied to foreign Government against contracts 'A' and 'B' respectively alongwith a further quantity worth Rs. 1.80 crores at the time of short-closure.

Absence of suitable price escalation clause in the contract and *ad hoc* additions for possible increase in cost for future manufactured items resulted in premature foreclosure of the contract and substantial loss in the deal.

14. **Import of a defective component**

Against an indent placed by the Director General, Ordnance Factories (August 1979), a tender enquiry was floated by a Supply Mission abroad for supply to a factory of 40,002 numbers of a forged component (including 2 advance samples). In response, a foreign firm supplied samples in October 1979 for machined component manufactured according to their own drawings and specifications. The samples were received in the factory in December 1979 and were considered acceptable by the Controllerate of Inspection (CI) in February 1980 subject to anodisation by chromic acid process to avoid corrosion. Although the Ordnance Factory Board (OFB) intimated the Supply Mission accordingly (April 1980), a contract was concluded with the firm in November 1980 for supply of 40,000 numbers of machined finished components with alodine chemical finish as per firm's specification instead of anodisation at a total cost of \$ 1.21 lakhs (Rs. 9.50 lakhs). The factory stated (April 1983) that as the firm expressed inability to supply the component in anodised condition, alodine treatment was agreed to for which additional price of \$ 0.20 per forging was included in the unit price of \$ 3.03.

According to the contract the foreign firm was to furnish a certificate with each consignment that the component conformed to specification and had been inspected against the same quality control criteria laid down for supplies to their Government. The contract also provided that the purchaser could arrange inspection by the foreign Government on payment or themselves inspect the component at the firm's plant prior to shipment. As the contract was delayed, to meet requirements the entire quantity on order (40,000 numbers) was airlifted during July and August 1981 at a cost of Rs. 1.29 lakhs with necessary certificate of inspection from the firm. These were inspected by the CI during September 1981 to April 1982 but rejected only in April 1982 due to defects in the basic forgings. The matter was referred to the firm (May 1982) but no replacement was agreed to by them.

Meanwhile, the Supply Mission concluded another contract with the same firm in November 1981 for supply of 80,000 components as per the specification of the earlier contract at a total cost of \$ 2.70 lakhs (Rs. 24.93 lakhs) against another indent of the OFB (May 1981). The contract provided for air-lifting of the entire quantity though the indent was for shipment. This omission was not pointed out by the OFB and 10,740 numbers of the component (cost : Rs. 3.35 lakhs) were air-lifted (according to the OFB only 10,402 numbers were received) in June 1982 at a cost of Rs. 0.38 lakh. In spite of earlier experience, critical inspection of the components before despatch was not arranged. The components were received alongwith firm's certificate of inspection as per contract and were rejected (July 1982) due to similar defects as noticed earlier. Another lot of 10,402 numbers received in November 1982 by sea at the instance of the OFB was awaiting final sentencing (June 1983). Although the question of free replacement of the rejections was taken up with the firm (September 1982) no replacement was made (June 1983). In the meantime, the supplier had supplied the entire quantity, and the balance of 58,858 forgings were lying with the Supply Wing's forwarding agents (August 1983) who had claimed storage charge of \$ 1,500 (Rs. 13,950) up to May 1983. The OFB stated (August 1983) that out of 61,142 numbers of the component (Cost : Rs. 16.05 lakhs) received till June 1983 against the two contracts for 1.20 lakh numbers, 6,300 numbers were used, 3,057 numbers were awaiting utilisation, 6,167 numbers were finally rejected and 45,618 were awaiting final sentencing. Audit observed that against the two contracts the supplier had furnished performance bonds for \$ 12,620 and \$ 27,040 valid up to June 1982 (extended up to December 1982) and August 1983 respectively. These bonds were neither got extended nor forfeited despite the rejections of the component. The shortfall in production of the end product (shell for an ammunition) was 37 *per cent.*

The case was referred to the Ministry of Defence in May 1983; their comments are yet to be received (October 1983).

15. Unutilised machines in the ordnance factories

A test check in audit revealed that several machines in the ordnance factories remained unutilised. A few such cases (7 machines in 5 ordnance factories) involving Rs. 201.39 lakhs lying unutilised as at the end of March 1983 are mentioned below :

(a) *Horizontal boring machine (cost : Rs.* 127.73 *lakhs*)

To create an additional capacity at factory "R' for development of modified version of the carriage for field gun or similar new equipment the Director General, Ordnance Factories (DGOF) placed (March 1978) an order on a public sector undertaking for supply by January 1979 of a computerised numerically controlled horizontal boring machine from firm 'Q' alongwith the tools, accessories, etc. at a total f.o.b. cost of Rs. 67.67 lakhs (after 5 *per cent* discount) plus Rs. 3.69 lakhs as agency commission (5 *per cent* on ex-works price). The agency commission at higher rate of 5 *per cent* against normal 2 *per cent* was allowed mainly on grounds of discount offered and after sales service by the supplier. The machine was shipped in August 1979 and received in the factory during December 1979 to April 1980. The total landed cost of the machine including taxes was Rs. 127.73 lakhs.

The factory received the technical drawings for the equipment from the undertaking in October 1978 but the administrative approval for the foundation work was issued after a year in September 1979 and the foundation work (cost : Rs. 1.33 lakhs) was completed in November 1980. The requirements for floor plates and fixer bolts for erection of the machine were noticed only after receipt of the foundation drawings. Against an order (January 1980) the fixer bolts (cost : Rs. 1.73 lakhs) were received from the undertaking (October 1980) and factory 'R' manufactured (December 1980 to February 1981) the floor plates (cost : Rs. 3.18 lakhs).

The machine was erected in March 1981 (erection cost : Rs. 2.03 lakhs including cost of foundation work) but the undertaking did not carry out the trial of the machine with programmed tape on the ground that they were not contractually bound to show such demonstration and in the absence of tooling/punched tape demonstration was not possible. The machine was not demonstrated and commissioned even two years after erection. The officers of factory 'R' who had been trained abroad and at the works of the undertaking (cost : Rs. 0.15 lakh) were not involved in operating the machine (April 1983). The Ordnance Factory Board (OFB) stated (April 1983) that the machine could have been demonstrated without toolings, punched tape, etc. but this was not done by the undertaking and that the final commissioning of the machine was not held up for toolings but on account of the delay in rectification by the undertaking of the defects noticed in July 1982, when the machine was tried to show various operations.

The machine installed at a cost of Rs. 129.76 lakhs has remained idle (August 1983) and the personnel trained for operating the machine have not been involved in its operation.

(b) *Turning and boring machines (cost : Rs.* 64.10 *lakhs*)

The Director General, Supplies and Disposals (DGSD) concluded a contract with firm 'P' (January 1976) for supply from their foreign collaborator of two sophisticated numerically controlled (NC) vertical turning and boring machines (cost : Rs. 64.10 lakhs) to factories 'B' and 'G'. The machines were to be supplied by October 1977 ex-works. There was delay on the part of factory 'B' in supplying the components to the collaborator for trial of the machines (9 months), arranging gauges and sending the clarifications for inspection (5½ months) and revalidating import licence (5 months) which delayed the supply of the machines. The machines were supplied during April/June 1979 and received in the factories during June/November 1979. The Ministry of Defence (Ministry) stated (October 1983) that the manufacture of trial components and gauges was taken up only on specific intimation by the firm.

The machine at factory 'B' was commissioned in September 1979, but the NC panel and oscilloscope were found defective. These were replaced in July 1981 and the machine was recommissioned in September 1981. The machine broke down within 5 days after commissioning. The firm's representative visited the factory a number of times for repair and the factory reported to the OFB (August 1982) that the performance of the machine was satisfactory but it would remain under extensive production trial runs for some period. The machine was not put to bulk production so far (March 1983). The OFB stated (July 1983) that regular production on a sophisticated machine could be achieved only after continuous running of the machine for sometime so that the operators could gain confidence in its working.

After erection of the machine at factory 'G' various defects were noticed (November 1979). The firm's efforts to rectify the defects failed and the factory informed (June 1982) the firm that in the existing condition the machine could be used for rough operations only. The machine was not taken to regular production as the defects were to be set right by the firm (March 1983). The Ministry, however, stated in October 1983 that the defects had been rectified by the firm and the machine had been commissioned (June 1983) to factory's satisfaction.

Thus, the sophisticated machines installed at a cost of Rs. 65.36 lakhs to increase production, save time and obtain better quality product could not be fully commissioned and used even after 3 years and the production continued in the conventional manner.

(c) *Baling press (cost : Rs. 1.60 lakhs)*

Factory 'A' received the baling press from firm 'X' in November 1977 against an order placed by the DGSD in March 1977. A part payment of Rs. 1.58 lakhs (95 *per cent* cost of the press) was made to the firm (November 1977) for the supply. The press was required to bale scraps and turnings and borings for easy transportation to other factories for melting. It was commissioned in August 1979 but could not be used due to frequent break downs. Although a modified cylinder was supplied by the firm (September 1982) to make the press workable, the press was yet to be commissioned (March 1983).

(d) *Hardening and tempering furnace (cost : Rs. 2.28 lakhs)*

After inspection by the Director of Inspection (May 1969) firm 'Y' supplied the hardening and tempering furnaces (one each) with accessories to factory 'B' during June 1969 against DGSD's contract of May 1967. The firm was paid Rs. 1.88 lakhs (June 1969) as 80 *per cent* of the cost of supplies. During initial trials (November 1970) and subsequent operation, the hardening furnace was found to have various defects. As the firm's repeated efforts over a period of years to rectify the defects failed, the firm took the furnace back (February 1979) for rectification at their works. After rectification it was sent back to the factory (June 1980) but the firm had not been able to commission it successfully though more than 2 years had passed (March 1983). As this furnace was not ready, the tempering furnace had also not been commissioned, as both formed a combined unit (March 1983).

Factory 'B' stated (March 1982) that in the absence of the furnace the manufacture of the intended item (sheath rear for an ammunition) was done with existing furnaces in the factory on make shift arrangement and that the financial losses would be quantified and the matter taken up with the DGSD after the furnaces were successfully commissioned. The Ministry stated (October 1983) that assessment of loss is not feasible at this stage.

(e) *Electrically heated chamber type furnace* (*cost* : *Rs*. 3.65 *lakhs*)

Against the DGOF's operational indent (October 1975) on the DGSD, the electrically heated chamber type furnace with a quenching tank was supplied to factory 'B' by firm 'Z' during April to November 1978. An amount of Rs. 2.88 lakhs was paid to the firm during 1978-79 as 80 *per cent* cost of the supplies. As per contract the firm was to instal and commission the equipment within 45/60 days after their receipt at site. The erection was started in December 1978 but due to unsatisfactory performance of the equipment and appearance of flames on the surface of the quenching tank, the equipment could not be commissioned (March 1983).

According to factory 'B' (March 1982) in the absence of the furnace arrangements had been made with the existing available furnaces with various difficulties to take up the production load The Ministry stated (October 1983) that the DGSD was pursuing with the firm for satisfactory commissioning of the furnace and that it was for DGSD to initiate legal action within the terms of the contract for penalising the firm.

(f) *Crane* (*cost* : *Rs.* 2.03 *lakhs*)

For material handling of brass strips in factory 'K' the crane (5 ton electrically operated) was received from firm 'N' in October 1978 against DGSD's contract of December 1977. The crane was erected by the firm in May 1979 but as certain defects were noticed during inspection after erection (July 1979) it was not accepted by the factory. As the firm did not rectify the defects, the DGSD asked the factory (April 1982) to carry out the repairs at the risk and cost of the firm which could be adjusted against the amount due to the firm for the crane (Rs. 0.32 lakh). The rectification, however, was not done and the crane has not been commissioned satisfactorily (March 1983).

The factory stated (September 1981) that the material handling was carried out by making internal re-arrangement by deployment of personnel and equipment.

16. Procurement of aluminium ingots

An ordnance factory invited tenders (July 1981) from 4 established firms for supply of 4,077 tonnes of aluminium ingots. The offers of two firms were according to specification and both quoted (July 1981) the same price (Rs. 12,842 per tonne ex-works plus excise duty-44 *per cent*) but firm 'A' claimed 2 *per cent* salestax (State tax) against 4 *per cent* (Central tax) claimed by firm 'B'. Subsequently, firm 'B' offered (August 1981) a rebate of Rs. 370 per tonne on basic rate per tonne, which was equal to 2 *per cent* sales-tax. Consequently the rate of firm 'B' came to Rs. 18,847.37 per tonne with sales-tax against Rs. 18,862.33 per tonne of firm 'A'. However, the factory considered (September 1981) the rate in both cases as identical (Rs. 18,862.33 per tonne) after allowing the rebate offered by firm 'B' on the total cost including sales-tax. The Ministry of Defence stated (September 1983) that the rebate offered by firm 'B' being re-imbursement equivalent to 2 *per cent* central sales-tax was applicable only on the overall price including sales-tax. As sales-tax is recoverable from the dealer on the total amount received by him as consideration of sale of any goods, the omission to deduct the rebate of Rs. 370 per tonne from the basic price plus central excise duty before working out the sales-tax resulted in not availing of fully the lowest tender.

In their quotations (July 1981) firms 'A' and 'B' offered to supply 1,000 tonnes of the ingot immediately and the balance at the rate of 900 tonnes per quarter as required by the factory. Although the factory had stock and dues for about 3,202 tonnes in April 1981 against the requirements for 4,802 tonnes during 1981-82 and 2,478 tonnes during 1982-83 and the supplies from firm 'B' alone would have been adequate, the factory decided (September 1981) to place orders on both firms for supply of 2,039 tonnes by each (50 *per cent* by March 1982 and balance by June 1982) on the consideration that their rates and other terms were identical, despite, likely variation and uncertainty on sales-tax claimed by firm 'A'. The factory issued letters of intent on 6th September 1981 to both firms telegraphically. The General Manager asked (15th September 1981) firm 'A' whether the extra expenditure in the event of increase of sales tax beyond 2 *per cent* would be borne by them. The firm did not accept this (24th September 1981). The covering supply orders (cost: Rs. 384.60 lakhs each) were placed on 25th September 1981 on firms 'A' and 'B'. The incorrect working out of the total cost of the supplies from firm 'B' involved an extra expenditure of Rs. 0.30 lakh. Although the value of the orders exceeded the financial powers of the General Manager of the factory, the sanction of the higher authority was not obtained before the orders were placed. The Ordnance Factory Board stated (June 1983) that the factory was being asked to obtain *ex-post facto* Government sanction to regularise the purchases.

The State sales tax was increased from 2 to 4 *per cent* (7th September 1981) and the order on firm 'A' was amended (January 1982) to provide the increase in sales tax.

Against the orders, firm 'A' supplied 2,041.612 tonnes of the ingots during October 1981 to October 1982 and firm 'B' 2,035.442 tonnes during April to August 1982. An avoidable expenditure of Rs. 7.86 lakhs was incurred in the purchase of 2,041.612 tonnes of the ingots from firm 'A'.

17. Non-utilisation of imported precision measuring instruments

The ordnance factories require only a small quantity of precision and measuring instruments for inspection, which were imported through Indian stockists. The Ministry of Defence (Ministry) intimated (July 1976) the Director General, Ordnance Factories (DGOF) that the annual requirements of the ordnance factories for such instruments could be forwarded to the State Trading Corporation (STC) who had set up an Industrial Raw Material Assistance Centre for supply of raw materials, components and precision and measuring instruments to the Government Departments, Public Sector Undertakings and actual users. Accordingly, the DGOF advised eleven ordnance factories (February 1977) to assess their requirements for precision and measuring instruments and to forward their demands. Simultaneously, the DGOF forwarded to the factories a list of instruments available immediately from STC stock and advised them that firm 'A' (a consultant of STC and the Indian agent of foreign suppliers 'P' and 'Q') could be called for to explain the scheme and items offered. As per DGOF's advice one of the factories placed a demand (June 1977) on the DGOF on an *ad hoc* basis, after consultation with firm 'A', for procurement of various precision and measuring instruments including a validator with accessories (total estimated cost : Rs. 18.70 lakhs approximately). The factory had procured such instruments to the extent of only Rs. 0.15 lakh during the previous 3 years (1974-75 to 1976-77). The Ministry accorded sanction (October 1978) for purchasing the instruments from STC on a single tender basis and the DGOF placed an order (November 1978) on the undertaking for supply of the instruments and the validator demanded by the factory by May 1979 from foreign firms 'P' and 'Q' at a total estimated cost of Rs. 20 lakhs (FOB) plus freight, insurance, clearing and packing charges (total : 11 *per cent* of f.o.b. cost), STC's margin (5 *per cent* of f.o.b. cost) and duties prevailing at the time of supply.

The instruments and the validator were received in the factory in batches during March 1979 to April 1980 and firm 'A' was paid Rs. 42.56 lakhs (January 1979 to March 1980) in Indian currency representing 95 per cent of the cost of supplies made. Firm 'A' did not, however, undertake the demonstration of the instruments in the absence of component holding devices and the factory intimated the DGOF (May 1981) that the firm had contended that supply of these items was not a part of their contract and that these should be arranged by the factory. When the requirements of the instruments were assessed, firm 'A' did not advise nor the factory did realise that component holding devices were necessary to operate the instruments and therefore, these were not included in the factory's demand. The Ministry stated (September 1983) that the order was placed as per the recommendation of firm 'A' taking into consideration the overall requirements and the new technology, that though the jobs were required to be done as a package deal, the firm did not forward a quotation for the devices nor did they clarify that the devices were required and should be separately procured, and that this being a new technology, the factory was not in a position to assess the requirements. The Ministry also added that although a list of items to be procured was forwarded to the STC for their scrutiny and comments at the time of placing the order, no comment was received from them. Both STC and firm 'A' thus did not advice the factory of their requirements properly.

For manufacture of the component holding devices in the ordnance factories, the factory requested firm 'A' (January to March 1980) to supply the relevant drawings and to furnish a quotation for supply of the devices. The firm did not furnish the drawings on the ground that these were their trade secrets. They, however, quoted a rate (April 1980) for Rs. 5.07 lakhs for these fixtures. As the factory considered (April 1980) the quotation very high and found that the fixtures which were more or less identical had been quoted at widely varying prices and in some cases fixtures which were less complicated carried a heavier price, order for the same was not placed on firm 'A'. The factory had failed to arrange these fixtures even during the past 3 years and in their absence the instruments could not be put to demonstration and commissioned (July 1983). The validator (cost : Rs. 8.40 lakhs) also could not be put to use so far (July 1983) though received in April 1980 and erected in November 1980 as during trial run for commissioning (June 1981), certain defects were noticed and the firm in spite of several visits had failed to commission it to the satisfaction of the factory. Meanwhile, the warranty period of the instruments and the validator expired in March 1981. The Ministry stated (September 1983) that representative of the foreign manufacturer during his visit to the factory had assured to do the needful for early commissioning of the instruments and that instructions had been issued to all concerned to restrict their business with firm 'A' and not to clear their outstanding bills.

Thus, the precision and measuring instruments procured on *ad hoc* basis from STC at a cost of Rs. 42.56 lakhs were lying unutilised even after 3 to 4 years of purchase.

18. Delay in setting up of production capacity of a weapon in a factory

A project for indigenisation of a weapon imported since 1964 was sanctioned in September 1971 for setting up of facilities in factory 'A' for production of 1,000 units of the weapon per annum in two shifts of eight hours a day at an estimated cost of Rs. 508.09 lakhs [Foreign Exchange (FE) Rs. 278.64 lakhs] including Rs. 106.64 lakhs for complete knock downs (CKDs) in F.E. The collaboration agreement with the foreign firm was entered into in March 1972 for seven years, which was later extended upto March 1984.

The indigenous manufacture of the weapon was planned in phases; (i) assembly from imported components after 30 months of receipt of technical documents and know-how from collaborator (ii) trial manufacture in 66 months of receipt of particulars from collaborator and (iii) regular manufacture of 1,000 weapons per annum in the next 6 months. The project was divided in 7 distinct phases to establish the production capacity of 217 components required for the weapon during March 1976 to April 1978. The components were, however, established between October 1975 to March 1979 *i.e.* a delay of 11 months in completion of the project. The estimated requirement of the Army till March 1975 was decided to be met by import of 1,200 complete weapons (estimated cost : Rs. 60 lakhs) from the collaborator and 1,300 weapons to be assembled in the factory in the first instance mainly from imported components; thereafter, 2,000 units were to be produced supported by imported components whose production in the factory was relatively more difficult (Trigger Assy 1,300 Nos., Butt & Buffer Assy 1,300 Nos., Cover Feed Mechanism 1,800 Nos., Breech Block Mechanism 2,800 Nos. and Body assembly 3,300 Nos.—estimated cost : Rs. 106.64 lakhs).

The technical documents were required to be supplied within seven months from the date of agreement (March 1972) but they were received late by 10 months (August 1973 instead of October 1972) whereas assemblies of weapon got delayed by

18 months (October 1976 instead of April 1975). This was mainly due to delayed placement of orders (5 Nos. at a cost of Rs. 237.16 lakhs in FE) between May 1974 to March 1976 for components, raw materials, gauges, tools, etc. Further orders (11 Nos.) for the supply of various CKDs of the weapons and special type of tools and mandrils were placed on the foreign firm at a total cost of Rs. 417.85 lakhs during April 1978 to November 1980. Orders for the import of 1,200 units each of weapon and barrel were placed in May 1972 at a cost of Rs. 63.53 lakhs.

367 machines required for the project were ordered during November 1971 to August 1977 and these were received during January 1972 to March 1980. While 173 numbers were received within original date of delivery, 194 machines were received during extended delivery period ranging from 1 to 43 months. Out of these, 366 numbers were erected and commissioned during April 1972 to July 1980 and 1 number 'rise and fall milling machine' (value : Rs. 2.11 lakhs) received on 13th March 1977 in damaged condition is yet to be commissioned. Non-commissioning of the machine has hampered production. The entire project planned to be completed within April 1978 was actually completed by March 1979.

Of the total demand (up to March 1982) for 5,750 numbers, 4,409 numbers (including 440 numbers imported) were supplied during 1976-77 to 1981-82, 3,613 numbers mainly assembled from imported components and 356 numbers assembled from components produced indigenously (value : Rs. 57.72 lakhs—average cost). Since the manufacture of all the components was established in March 1979, part of the import of CKDs was avoidable. The balance 1,341 numbers of weapon is programmed to be produced as under :

1982–83.	400 numbers
1983–84.	350 numbers
1984–85.	300 numbers
1985–86.	291 numbers
TOTAL	1,341 numbers

Ordnance Factory Board (OFB) stated (November 1982) that as per Director of Ordnance Services (DOS) no further orders for the weapon were likely to be placed.

As a result of delay in establishment of production capacity in the factory, 450 numbers of complete weapon were imported from the foreign firm (over and above that envisaged in the Project Report) at a total cost of Rs. 114.56 lakhs against an order placed in June 1980 in order to meet the requirements of the Army resulting in an extra expenditure of Rs. 41.31 lakhs (unit cost of import Rs. 25,457 and unit cost of production in the factory in 1981-82 Rs. 16,277).

The total orders for barrel assembly received (up to March 1983) were 8,757 numbers against which 6,470 numbers of barrel assembly were assembled and issued to DOS till March 1983 leaving a balance of 2.287 numbers as on April 1983. Besides 1,200 numbers barrel assembly imported against order of May 1972, a quantity of 3,200 numbers barrel assembly was also imported between April 1979 and June 1980 from the foreign country at a cost of Rs. 125.76 lakhs.

The factory also produced 1,74,129 numbers of spares for 167 items during 1975-76 to 1982-83 valued at Rs. 163.18 lakhs.

Thus, the complete indigenisation of the production (1,000 numbers per annum) of the weapon from August 1979 has not been achieved so far (November 1982).

Apart from the delay attributed to late receipt of plant and machinery, equipments, tools from foreign firm/trade and change of some designs coupled with power shortage, it was also stated by the OFB that the project was started for Tank Version weapon but in the mid way of establishment priority demand for infantry and air version weapon had to be developed and it had taken time to achieve the higher skill and technology involved in manufacture of certain intricate items.

The expenditure on the project up to March 1983 was Rs. 435.61 lakhs including FE Rs. 133.03 lakhs, against Rs. 401.45 lakhs sanctioned. The foreign firm had been paid technical assistance fee in FE equivalent to Rs. 5.62 lakhs and technical know-how fee of Rs. 5.07 lakhs for 541 numbers mechanical operation till March 1982 as per agreement, included in the above amounts.

The following points emerge from the above :

(i) The project for indigenisation of weapon set up at a cost of Rs. 401.45 lakhs (Rs. 508.09 lakhs—Rs. 106.64 lakhs) was completed in March 1979 *i.e.* after delay of 11 months.

(ii) The delay in establishment of the project necessitated

(a) import of 450 weapons over and above the import of 1,200 numbers estimated to be imported during the period the factory was being set up involving a foreign exchange expenditure of Rs. 114.56 lakhs; and

(b) import of CKDs for weapons/barrels at a cost of Rs. 745.55 lakhs (estimated cost : Rs. 106.64 lakhs).

(iii) As against the established capacity of 1,000 numbers of weapon per annum in two 8-hour shifts, the actual achievement so far is 40 *per cent* and the projected production programme envisages utilisation of 29 to 35 *per cent* capacity only.

(iv) No further orders for the weapon for utilisation of created capacity are foreseen.

19. Procurement of packages for an ammunition

Prior to 1977 an ammunition produced in factory 'A' was issued to the Director of Ordnance Services in packages 'X' (inner package) and 'Y' (outer package). The Controllerate of Inspection, Ammunition (CIA) sealed the drawings for a new inner plastic package in February 1977 for easy handling and transportation. Although this new package was to be introduced from 1978, the drawings for the related outer wooden package were sealed after more than a year in May 1978. The CIA subsequently permitted (June 1982) the use of packages 'X' and 'Y' up to March 1983 so that the old packages in hand could be liquidated.

After more than 2 years of finalisation of the drawings the Ordnance Factory Board (OFB) placed 5 orders on trade in November 1979 and April 1980 for 1,15,500 numbers of the inner plastic package (total cost : Rs. 194.04 lakhs) to meet the requirements of factory 'A' during 1980-81. Simultaneous action for the procurement of the wooden outer package was, however, not taken and against the requirements for 57,750 numbers required to match 1,15,500 numbers of the inner package, two orders for 25,000 numbers were placed on an ordnance factory in May/July 1980 and another two orders for 75,000 numbers (cost : Rs. 25 each) were placed belatedly on trade only in March 1981. The orders of March 1981 on trade were later cancelled (February 1982). The Ministry of Defence (Ministry) stated (October 1983) that the gap between placement of orders for inner and outer packages was justified due to additional lead time required to manufacture moulded products like the inner package.

The inner plastic packages (1,15,500 numbers) were received during June 1980 to November 1981. Although supplies of the outer package did not materialise and the inner packages were accumulating, the OFB placed further 9 orders on trade for 1,09,000 numbers of the inner package (total cost : Rs. 160.22 lakhs) during March 1981 to October 1982. Against these orders 99,000 numbers were received during June 1981 to March 1983.

For the outer packages further orders on factory 'C' for 40,000 numbers and on trade for 49,000 numbers (cost : Rs. 26 to 33 each) were placed during June 1981 to September 1982.

As the supplies of the outer package suffered due to non-availability of timber, the CIA revised the specification (August 1981) to provide for steel package and orders were placed during March 1982 to December 1982 on other ordnance factories for 1,62,000 numbers and on trade for 51,000 numbers (cost : Rs. 73.50 each) of such package. The procurement of the steel version involved additional liability of about Rs. 86 lakhs. Based on the targeted programme for the ammunition (3.20 lakhs per annum) the use of steel package would have involved additional expenditure of about Rs. 32 lakhs annually. If the necessity of using the steel package had been known at the very beginning, whether the decision would still have been taken for the change over to the new package cannot be assured with any certainty. The orders placed for outer wooden and steel packages since 1980 covered in all supply of 3,27,000 numbers which were much in excess of the requirements (1,12,250 numbers) to match the inner packages ordered (2,24,500 numbers). Against the various orders about 32,998 numbers of the outer package were received during December 1982 to March 1983.

Due to the delay in placement of orders for the outer package and materialisation of their supplies, 1,27,000 numbers of the inner package (cost : Rs. 190.46 lakhs) procured from 1980 were lying in stock (March 1983). The Ministry stated (October 1983) that the stock of inner package was less than six months' requirements and the rate of utilisation during June 1980 to March 1983 was low due to availability of repairable packages 'X' and 'Y' from the depots. It was, however, observed in audit that 12,54,673 numbers of package 'X' (cost : Rs. 420.01 lakhs approximately) and 5,84,304 numbers of package 'Y' (cost : Rs. 315.70 lakhs) were procured during 1978-79 to 1982-83 to meet factory's requirements.

Audit also observed that though the packages 'X' and 'Y' were being used satisfactorily, the introduction of the new packages involved extra expenditure per ammunition of about Rs. 36 in case of use of steel package and Rs. 25 in case of use of wooden package. The annual liability was about Rs. 80 to 115 lakhs.

20. Sale of arms and ammunition to civil indentors

Factory 'B' supplies an ammunition to licensed dealers of arms and ammunitions at rates fixed by the Director General, Ordnance Factories (DGOF). The DGOF fixes the rates which include an element of profit in the rates fixed by him. The rates so fixed by the DGOF during 1973 to 1975 are given below :

Revision	Rate (Rupees per 100)
May 1973	95
March 1974	110
June 1975	180

The element of profit in the rates fixed in June 1975 was Rs. 55 per hundred numbers. In subsequent years there was an increase in cost of production and consequently the element of profit fell down to Rs. 49 (1976-77), Rs. 38 (1977-78), Rs. 36 (1978-79), Rs. 24 (1979-80) but no revision of rates was made by the DGOF to keep the element of profit intact until March 1981, when the Ordnance Factory Board (formerly DGOF) revised the rate to Rs. 240 per hundred numbers. The cost of production was Rs. 187 per hundred numbers during 1980-81, which was more than the price charged (Rs. 180 per 100 numbers) during the period. The element of railway freight amounting to Rs. 7 per hundred numbers during this period was not included in the price charged. There was also mistake in computing a cost element. The total loss on sale of 70.04 lakh numbers of ammunition during the period was Rs. 13.12 lakhs.

In factory 'B' and factory 'A' Government lost Rs. 1.28 lakhs on account of supplies of a gun and ammunition made during March 1970 to December 1971 to 3 firms ('X', 'Y' and 'Z') against 16 Military Receivable Orders (MROs) which turned out to be fake later on. As per orders the MROs sent by the firms were required to be paired by the Accounts Division after receipt from the factories with the duplicate copy of the MROs to be furnished by the Bank alongwith credit scrolls. Although the supplies of the arms and ammunition were made to these 3 firms from March 1970 and duplicate copies of the MROs were not received from the banks till December 1971, no action was taken to investigate the matter despite the original MROs being shown outstanding in the Accounts Division. Again, 220 numbers of the gun including a rifle (cost : Rs. 2.45 lakhs) and 3.03 lakh numbers of ammunition (cost : Rs. 1.94 lakhs) were supplied by the 2 factories during January 1972 to April 1973 to the same 3 firms, alongwith others, against 29 MROs furnished by them in support of the payment in the same bank. The bank did not furnish duplicate copies of the MROs but the Controller of Defence Accounts made enquiries belatedly from the concerned bank only from January 1973 and the original MROs were found not genuine and no money was received against them. The fraud could have been detected earlier and avoided to a large extent, if the duplicate copies of the MROs against the supplies made during 1970-71 were promptly scrutinised and verified by the Accounts Division. While remedial action was taken to avoid such losses in future, no responsibility was fixed for belated action to verify the genuineness of the MROs. The total loss suffered came to Rs. 5.67 lakhs. The case was reported to police (May—August 1973) and the investigations were still in progress (March 1983).

The matter was reported to Government in July 1982 but their remarks are still awaited (October 1983).

21. Loss due to cancellation of orders

Against three indents (May 1965, June 1965 and April 1967) of the Director of Armament Supply (DAS) for supply of 2,850 numbers of ammunition 'X' (empty), 1,825 numbers of ammunition 'Y' (filled) and 8,000 numbers of ammunition

'Y' (empty) by 1969-70, the Director General, Ordnance Factories (DGOF) placed (June 1965 and May 1967) two 'extracts' on factory 'B' for 2,850 numbers of ammunition 'X' (empty) and 8,000 numbers of ammunition 'Y' (empty) and another 'extract' (June 1965) on factory 'D' for 1,825 numbers of ammunition 'Y' (filled). Factories 'B' and 'D' did not, however, supply the ammunitions till 1969 and the DGOF off-loaded (October 1969) the two 'extracts' on factory 'B' to factory 'A' for manufacture and supply of 2,850 numbers of ammunition 'X' (empty) and 4,083 numbers of ammunition 'Y' (empty) out of the spare capacity available there. In December 1969/February 1970 the DAS amended the other order (June 1965) on factory 'D' for supply of empty shell only. The DGOF therefore cancelled the order on factory 'D' (March 1970) and placed (March 1970) a fresh 'extract' on factory 'A' for manufacture and supply of 1,825 numbers of ammunition 'Y' (empty).

Although factory 'A' was to complete the two 'extracts' of October 1969 by 1970-71 and the other of March 1970 by 1971-72 they placed an order in January 1970 on factory 'B' for 7,987 forgings and another order on factory 'C' after more than a year in March 1971 for 3,149 forgings. The Ordnance Factory Board (OFB) stated (April 1983) that delay in placement of orders was because the forging drawings were forwarded to factory 'C' for their scrutiny and comments.

The orders for forgings on factories 'B' and 'C' were to be completed by March 1970 and May 1971 respectively. In spite of very short time available with factory 'A' to manufacture and supply the ammunitions as per schedule, factories 'B' and 'C' delayed the supplies of forgings. While factory 'B' supplied only 2,018 numbers during January and February 1971, supplies from factory 'C' started from April 1972 and 1,058 numbers were received from them till August 1973. The OFB stated (April and August 1983) that considering the lead time involved in undertaking the production, there was no delay in supply on the part of factory 'B' and that as factory 'C' dealt diversified product mix identical priority could not be given to all items of production.

Although the forgings were supplied from January 1971, factory 'A' started production of ammunition 'Y' only from April 1973. As factory 'A' could not supply the ammunitions the DAS desired to cancel the indents in April 1973 (ammunition 'Y') and August 1973 (ammunition 'X'). However, supplies of forgings from factory 'C' continued and 922 numbers (cost : Rs 0.68 lakh) were received at factory 'A' during March to August 1974. Although the DGOF directed (January 1974) the factory to complete and supply 200 numbers of ammunition 'Y' most expeditiously to keep down financial repercussion on cancellation to the absolute minimum, only 50 numbers of ammunition 'Y' (cost : Rs. 0.27 lakh) were supplied to the DAS (September 1977) and the 'extracts' were short-closed/cancelled (March 1979).

The Ministry of Defence (Ministry) stated (September 1983) that although the ammunitions were established items of production, factory 'A' was not in a position to commence manufacture/supply out of the stipulated period due to bottle-necks in production of tools and gauges and non-availability/inadequate quantity of forgings. The fact, however, remains that the indents were placed during May 1965 to April 1967 for completion of the supplies by 1969-70 and the DGOF had failed to make adequate planning and execution of the indents during a period of more than 10 years and the orders were ultimately cancelled. The cancellation of the 'extracts' for 2,850 numbers of ammunition 'X' and 5,858 numbers of ammunition 'Y' involved a financial repercussion of Rs. 7.57 lakhs (surplus materials : Rs. 7.55 lakhs and semis : Rs. 0.02 lakh). The loss was yet to be regularised (March 1983). The Ministry stated (September 1983) that efforts were being made to utilise the surplus steel bars and copper tubings. No utilisation has materialised during more than 4 years after cancellation of orders.

22. Avoidable procurement of an imported machine

An ordnance factory set up in 1966 had a monthly capacity to manufacture 5,000 numbers of equipment 'A' (new) or 10,000 numbers of equipment 'A' (old), or 5,000 numbers of equipment 'B' or 750 numbers of equipment 'C' or 3,000 numbers of equipment 'B' and 300 numbers of equipment 'C' in two shifts of ten hours each.

The factory produced equipment 'B' till 1975-76 at the monthly average of 755 numbers as against the envisaged capacity of 5,000. The factory took up equipment 'A' (new) for production since 1972-73 and till 1982-83 achieved a monthly average production of 502 numbers as against 5,000 numbers envisaged.

While the existing machines were thus under-utilised (total 5 in number) the factory acquired another machine in April 1979 (imported at a cost of Rs. 15.70 lakhs) to step up production of equipment 'A' at 5,000 numbers per month. While procuring the machine the factory had a production capacity of 3,750 numbers per month of equipment 'A' and the prevailing demand envisaged a monthly production of only 1,000 numbers.

During 1976-77 to 1982-83 the factory produced equipment 'A' in a single shift ranging from 5,100 numbers to 9,000 numbers per annum against targeted demands of 5,000 to 9,000 numbers per annum. The targeted production per annum up to 1984-85 is 5,000 numbers and less

The Ministry of Defence stated (July 1983) that all the six machines were/would be required for manufacture of equipment 'A' and barrels for equipment 'C'. It was, however, seen in audit that the production actually achieved till 1982-83 and programmed to be achieved till 1984-85 did not indicate the need for even 5 old machines and only 3 of them (capacity 900 numbers per month in a single shift) were/would be actually required.

The procurement of the additional machine at a cost of Rs. 15.70 lakhs when the machines already available were underutilised and the factory had enough capacity to step up production even during emergencies, was not therefore justified.

23. Imported steel bars

In paragraph 6 of the Audit Report (Defence Services) for 1970-71 it was mentioned that 2,361.90 tonnes of steel bars imported (value Rs. 49.63 lakhs) were not suitable for manufacture of shells although the bars were tested before shipping by the Director General of an India Supply Mission abroad. The Public Accounts Committee (PAC) in para 2.92 of their 92nd Report (1972-73) (Fifth Lok Sabha) recommended that necessary steps should be urgently taken to ensure that the entire quantity of the rejected bars were put to economic use. The PAC reiterated the recommendations in their 108th Report (1973-74). They regretted the delay in deciding the utilisation of a part of the steel bars and stressed that the "personnel responsible for this serious lapse are brought to book." The Ministry of Defence then informed the PAC (May 1977) that :

— out of total supplies (2,968.29 tonnes) 1,975.95 tonnes were utilised till 1976 ;

— another 500 tonnes would be used in factory 'C' in the manufacture of ammunition 'X';

— the balance 492.34 tonnes would be retained at factory 'A' for anticipated requirements of other factories ; and

— there was no question of fixing responsibility for any lapse since by utilisation of the store by the Ordnance Factories instead of issuing to private parties a loss of about Rs. 8 lakhs was avoided.

Although the Ministry stated (May 1977) that 1975.95 tonnes of the imported bars had been utilised till 1976, 452.03 tonnes of the same were not actually used and were lying in stock of factories 'B' (41.90 tonnes) and 'C' (410.13 tonnes including 27.13 tonnes of rerolled bars) at the end of May 1983.

Against the Ministry's anticipation of substantial use of 992.34 tonnes of imported bars lying at factory 'A', only 122 tonnes could be issued to factory 'D' during more than six years leaving a stock of 870.34 tonnes (cost Rs. 17.99 lakhs) at factory 'A' (May 1983). Out of the transfers to factory 'D' 60.17 tonnes were also lying unused (May 1983).

A Board of Inquiry (BI) was set up by the Ordnance Factory Board (OFB) in September 1982 to investigate *inter alia* the action taken to utilise the bars and to suggest ways and means of their utilisation. The BI suggested (April 1983) that efforts should be made to use the bars after re-rolling and also as a substitute for other materials and that if full utilisation was not possible, disposal action for the balance could be resorted to. The OFB stated (June 1983) that re-rolling was not successful in the past, that in lieu use of the bars was under examination and that enquiry was being made from the established/likely suppliers for supply of shell bars on conversion basis against supply of the imported bars in question.

Thus no effective steps were taken to explore the possibility of use of bars since 1977, and 1,382.54 tonnes of bars (cost : Rs. 29.05 lakhs) imported in 1968-69 are lying unutilised at various factories (May 1983) and PAC's recommendations have not been fully implemented.

24. **Deficiency of castings in a factory**

As per the instructions issued by an ordnance factory (May 1976 and March 1979) the rejected castings of hand grenade shop (HGS) are to be returned to the iron foundry (IF) and melted there immediately.

At the time of transfer of charge of HGS between two foremen, the foreman taking over the charge reported (January 1982) shortages of three types of castings (about 1,71,958 numbers). The matter was investigated by a Manager of the factory (February 1982) who stated (February 1982) that there had been accumulation of hard castings (difficult to machine by the shop) in the past, which were returned to IF for melting to clear the site since 1976 after noting in the register signed by HGS and IF representatives and security staff and if the castings returned to IF were taken into account there was no shortage but suggested setting up of a Board of Inquiry (BI) to investigate the matter further. The General Manager of the factory appointed (April 1982) a BI to investigate and report whether the castings were actually returned to the IF and there was no physical loss. Meanwhile, the stock verification conducted in 1981-82 revealed (March 1982) shortage of 1,70,858 castings (cost : Rs. 21.77 lakhs) against 4 manufacturing warrants of 1981-82. The BI observed (January 1983) that due care and vigilance on the documents of various warrants was not taken but reiterated that the castings returned to the IF from 1976 were in excess of those rejected in HGS, that the excess returns (1,62,404 numbers) included hard castings and came to near about the reported shortages (1,70,858 numbers) and that there was no physical loss.

The following points were noticed in audit :

(i) Records were not available in the HGS to show accumulation of hard castings and whether the hard castings were sentenced as such by the appropriate authority.

(ii) Shortage was not reported during annual stock verifications till 1980-81 of finished and unfinished products in HGS against the manufacturing warrants by the verifiers which was expected out of returns in excess to IF from 1976 without being noted in the warrants. The Ministry of Defence stated (November 1983) that as the castings ran in thousands and remained in big heaps, it was difficult to physically count each and every casting during verification.

(iii) While the shortages occurred against the 4 manufacturing warrants issued only during 1981-82, the BI had concluded on the basis of total excess returns during May 1976 to March 1982 and that during 1981-82 there was no excess returns, the same being only 3,68,861 numbers against 4,46,510 numbers rejected.

(iv) Action on the remedial measures suggested by the BI (January 1983), for rigid adherence to the instructions issued for accounting and disposal of rejected castings, forwarding of hard castings to IF separately on nominal notes for replacement, proper control by the Head of HGS on such forwarding, check on warrants by the Divisional Officer and biannual stock verification of castings, etc. is yet to be taken (April 1983).

The case reveals unsatisfactory accounting of and inadequate control on the castings resulting in a shortage of 1,70,858 numbers valuing Rs. 21.77 lakhs.

25. **Excess provisioning of a store**

Aluminium titanium is a master alloy used by factory 'X' with other virgin metals in the manufacture of aluminium alloy billets for rods, flats etc. For production of one tonne of billets 190 kgs. of the master alloy under charge 'A' (using only virgin metals) and 76 kgs. under charge 'B' (using 40 *per cent* of virgin metals and 60 *per cent* of aluminium scrap) were required as per estimate (November 1975). Under charge 'B', one tonne of aluminium rods required 1.818 tonnes of billets, which in turn required 138 kgs. of master alloy. The actual consumption of the master alloy in production was about 25 kgs. per tonne of billets under charge 'B' during 1978-79 and 1979-80. The estimate was revised by the factory in May 1981 to 40 kgs. of the master alloy per tonne of billet.

During January 1978 to October 1980 the factory placed 6 demands on the Director General, Ordnance Factories (DGOF)/Ordnance Factory Board (OFB) for import of 200.38 tonnes of the master alloy mainly for production of 1,200 tonnes of aluminium rods from aluminium alloy billets under charge 'B'. The requirement was worked out at the rate of 160 kgs per tonne of the rods as against 138 kgs. as per estimate, and 46 kgs. per tonne during 1978-79 and 1979-80 computed at the rate of consumption of 25 kgs. per tonne of billets during the period. Even at the rate of 40 kgs. per tonne of billets provided subsequently (May 1981) the requirement of the alloy per tonne of the rods was 73 kgs. and based on this rate the excess provisioning of the alloy was about 104.4 tonnes. The Ministry of Defence (Ministry) stated (December 1982) that the requirement of master alloy was workd out at the rate under charge 'A' to cater for any requirement where charge 'A' would be required to be adopted and that the scale was maintained at the original level till such time the revised rate was finally established and incorporated in the estimate, as the alloy was of imported origin difficult to procure. Audit, however, observed that rods and billets under charge 'A' were not produced by the factory since 1975-76.

Against the factory's demands the DGOF/OFB placed 6 indents on an India Supply Mission abroad in June 1978, November 1978, September 1979, December 1979 and December 1980 (two). In response, the latter concluded 4 contracts during February 1979 to April 1981 for 200.38 tonnes at rates ranging from Rs. 16,946 to Rs. 23,088 per tonne. As the indents of September and December 1979 were placed in quick succession without clubbing although the factory's demands were received by the OFB by August 1979, two separate contracts were concluded by the Supply Mission against them in January 1980 (Rs. 21,645 per tonne) and May 1980 (Rs. 23,088 per tonne) respectively involving an extra expenditure of Rs. 1.05 lakhs in the procurement of 72.69 tonnes of the store against the indent of December 1979. The Ministry stated (December 1982) that this was due to delayed action by the Supply Mission to include the requirement in the contract of January 1980 though intimation was received by them in time.

Against the 4 contracts 200.38 tonnes of master alloy (cost · Rs. 70.41 lakhs) were received in factory 'X' during January 1980 to December 1981. However, during 1980-81 and 1981-82 the factory used only about 66 kgs. of the alloy per tonne of rods against 160 kgs. provisioned. As the store became surplus due to the over-provisioning, 104.32 tonnes (cost : Rs. 36.65 lakhs) were transferred to factory 'Y' (100 tonnes) and 'Z' (4.32 tonnes) (cost of transportation Rs. 5,558) during October 1981 to April 1982 although factory 'Y' did not indent for it. At the end of July 1983 the stock lying in the three factories was 117.882 tonnes valuing Rs. 49.59 lakhs (factory X : 42.045 tonnes, factory Y : 72.444 tonnes and factory 'Z' : 3.393 tonnes). Although the utilisation in the three factories was very low, the OFB stated (April 1983) that the stock was likely to be used by 1984-85.

Thus, due to overprovisioning of the master alloy, investment of Rs. 49.59 lakhs (foreign exchange) was locked up from 1981. As the price of the alloy showed a downward trend in 1981, the advance provisioning also resulted in an extra expenditure of about Rs. 3.74 lakhs against one of the contracts (May 1980) with reference to the rate prevailing in 1981.

26. **Abandonment of manufacture of a sighting equipment**

A development team was set up in 1965 to design and develop a new field gun accepted for introduction in replacement of an old and outdated one for re-equipping the Army. The qualitative requirement of the users for the new field gun approved in 1963 did not specify the details of the sight dial to be used in the gun. It only mentioned that the sight dial should be on the pattern of the one in use with the old field gun. An improved sight dial for the new field gun was developed (cost : Rs. 0.10 lakh) by the Instrument Research and Development Establishment (IRDE) in 1968-69 and the prototypes produced by factory 'Y' were approved by the user for use (March 1972) after technical trials along with the prototypes of the field gun (1971-72). Orders for 547 numbers of this improved sight dial were placed on factory 'Y' (February 1973 to June 1978) stipulating supply of 272 numbers by June 1977 and another 115 by April 1979. The delivery schedule for the balance (160) was not stipulated in the relevant order.

Pending establishment of bulk manufacture of the new sight dial, factory 'Y' produced 151 numbers of the old sight dial during 1973-74 and 1974-75 for use in the field gun. Production of the new sight dial commenced in the factory in 1974-75 and samples from the "first off" production were accepted by the development team (February/March 1976). Against the scheduled delivery of 387 numbers by April 1979, the factory, however, produced only 123 numbers (cost : Rs. 14.88 lakhs) during 1975-76 (4), 1976-77, (34), 1977-78 (65) and 1978-79 (20) as difficulties were encountered in producing more number of dials with the accuracy set out in the specifications for various components.

The factory requested (January 1978) the Army Headquarters for relaxation of the standard and the Army conducted trials (April 1978) on a new sight dial with inaccuracy greater than specified. Though the new sight dial was introduced (March 1972) after user's trials, the Army observed (May

1978) after new trials (April 1978) that the IRDE had drawn up the specification for the same without user's perusal. The Army simultaneously pointed out (May 1978) various deficiencies in the design of the sight dial and recommended that the sight dial should be withdrawn from use and its future production in the factory be frozen and that production of the old sight dial should be stepped up/re-established to meet the Army's requirements. After the recommendations were considered (August and December 1978) the Army Headquarters decided (December 1978) that the new sight dial should not be issued to the units as far as possible and be kept as reserve in the depot stock and that production of the old sight dial should be taken up by the factory as an interim measure till a design for a better type was finalised and made available to the users. The Ordnance Factory Board (OFB) stated (October 1982) that the inherent limitations of the new sight dial were visualised during manufacture of its prototypes. There was nothing on record to show if these limitations were brought to the notice of the IRDE, development team and the Army at that stage and what remedial measures were taken thereon. The Ministry of Defence (Ministry) stated (September 1983) that the sight dial was introduced after various trials and that difficulties to maintain specification could not be known until the mass production was carried out by the factory. The capability of the factory to produce the equipment was not properly assessed before its introduction which necessitated its withdrawal subsequently and deprived the Army of quality sight dial, which could have been developed during the period.

The development of a better sight dial was sanctioned (March 1980) at a cost of Rs. 1.97 lakhs and the prototypes were sent for users' trials (January 1983). The trial report was awaited by the OFB (July 1983). Meanwhile, in pursuance of the decision of the Army Headquarters (December 1978) production of the sight dial accepted in 1972 was discontinued in factory 'Y' after 1978-79. The semis, components and raw materials worth Rs. 6.57 lakhs became surplus to the factory.

Besides, 123 numbers of this type of sight dial (cost : Rs. 14.88 lakhs) supplied to the Army against their orders also became redundant. The Ministry stated (September 1983) that a portion of the surpluses (cost : Rs. 3.31 lakhs) are likely to be used in the manufacture of the better sight dial under development.

Against the orders for 1,337 numbers (424 numbers out of the short closed orders for new sight dial and 913 numbers of old sight dial ordered during May 1979 to August 1981), factory 'Y' produced 498 numbers of the old sight dial during 1979-80(135), 1980-81(183) and 1981-82 (180) though the installed production capacity was 240 numbers per annum in 2×10 hour sifts. To cover the shortfall in production the factory placed orders on trade (October 1979 to November 1981) through the Department of Defence Supplies for 300 numbers of the sight dial (total cost : Rs. 49.95 lakhs). Against these orders only 12 numbers were received (March 1983). The Ministry stated (September 1983) that the installed capacity was to be attained in stages and that due to change in product mix and rescheduling of priorities by the indentor the capacity had changed. Information regarding the field guns which could not be used for want of adequate number of sighting equipment called for as early as September 1982 is awaited (August 1983).

The case reveals the following :

— After development and trials the new sight dial was accepted for use in 1972 but when it was produced in bulk, deficiencies in the design and difficulties in production were noticed (May 1978).

— Against the scheduled delivery of 387 numbers of new sight dial factory 'Y' supplied only 123 numbers (cost : Rs. 14.88 lakhs) during 1975-76 to 1978-79 which became redundant. Due to the design deficiencies issue of the sight dials to the units was stopped (December 1978) and further manufacture discontinued (1978-79) resulting in surplus semis, components and raw materials at factory 'Y' worth Rs. 6.57 lakhs. To meet the requirements of the Army, order had to be placed on trade for 300 numbers (cost : Rs. 49.95 lakhs) but only 12 numbers were supplied upto March 1983.

— The development of a better sight dial was still under progress (June 1983) and to meet Army's requirement the use of an old sight dial had continued.

27. Extra expenditure in piecemeal purchase of forgings

Factory 'X' was obtaining forgings I and II from factory 'Y' for manufacture of a gun (average cost : Rs. 443 each for I and Rs. 350 each for II during 1979-80). Due to irregular and inadequate supplies, factory 'X' invited tenders from 6 firms in May 1980 for 2,000 numbers of each forging to meet the production target for 3,500 guns during 1980-81. Out of 4 firms who quoted against the tender during June 1980 (varied from Rs. 417 to Rs. 982 each for I and Rs. 200 to Rs. 310 each for II) the offer of firm 'A' which was the lowest but received late was accepted in August 1980 and an order was placed on them on 24th September 1980 for supply of 2,000 numbers each of forging I (Rs. 417 each) and forging II (Rs. 200 each). In the meantime the stock of forging I became nil (September 1980) and the factory assessed (19th September 1980) an additional requirement for 5,000 numbers of each forging for 1981-82. These requirements were neither covered in the original order ; nor was any option stipulated therein for increasing the ordered quantity at the same rate and condition. For the additional requirements fresh tender was advertised (October 1980).

Firm 'A' quoted (December 1980) Rs. 480 each for forging I and Rs. 265 each for forging II and order was placed (January 1981) for 5,000 numbers of each forging.

Against the first order (September 1980) supplies of 2,000 numbers each of forgings I and II were to commence from December 1980 and to be completed by March 1981. As the firm could not locate an indigenous source for the specified raw material for the forgings, an alternative material was approved in January 1981 and the revised drawings in April 1981. The supplies against the order were received during July 1981 to November 1982. Against the second order (January 1981) the firm supplied 1,474 numbers of forging I and 1,570 numbers of forging II during November 1982 to January 1983 (as against stipulated supply of 500 numbers of each per month during July 1981 to April 1982). No action was taken to recover the liquidated damages from the firm for delayed supplies. Although procurement of the forgings from trade was resorted to, the factory could produce only 3,321 guns during 1980-81 and 3,189 guns during 1981-82, against the targets of 3,500 numbers and 3,750 numbers respectively during the two years, despite the committed extra expenditure of Rs. 6.40 lakhs in procurement.

28. Manufacture of a defective ammunition

During February to April 1978, 18 lots of primary cartridges (3,000 numbers per lot) were filled by factory 'A' (cost : Rs. 2.03 lakhs) with a propellant (cost : Rs. 0.32 lakh) produced by factory 'B' (July/August 1977) as experimental lot. Out of these 7 lots (cost : Rs. 0.70 lakh) were rejected due to low velocity, 9 lots were approved for use (assembly) in ammunition 'X' and 2 lots for ammunition 'Y' after proof tests by the Senior Inspector of Armaments during March to May 1978. Out of the accepted primary cartridges, 26,920 numbers of ammunition 'X' and 5,920 numbers of ammunition 'Y' were assembled in factory 'A' (April/May 1978). Of them, only 20,810 numbers of the former and full quantity of the latter were issued to an ammunition depot (April/May 1978) after these were accepted in proof. As the primary cartridges used in the balance 6,110 numbers of ammunition 'X' (cost : Rs. 5.01 lakhs) recorded lower velocity at proof, the Director of Ordnance

Services did not accept them even for training purposes (July 1978) on account of risk involved in use.

Although 20,810 numbers of ammunition 'X' and 5,920 numbers of ammunition 'Y' (total cost : Rs. 22.93 lakhs) were issued to the ammunition depot after proof test and acceptance by the Service Inspectors, in March 1979 the Controller of Inspection (Ammunition) (CIA) intimated the ammunition depot that the primary cartridges filled with the propellant manufactured by factory 'B' had recorded erratic behaviour and short range during proof and that the ammunition 'X' and 'Y' held by the depot were not considered safe for issue to the units with the existing primary cartridges. The Ordnance Factory Board (OFB) stated (May 1980) that "the propellant duly inspected, passed proof and sentenced serviceable was used in filling primary cartridges and these were also sentenced serviceable by the Service Inspectors. Hence how these cartridges once found acceptable were subsequently declared rejected cannot be commented upon". The Ministry of Defence stated (November 1982) that the rejections of the ammunitions were due to the failure of the ammunition themselves and not that of the propellant and that the investigations made by the CIA to find out the causes of unsatisfactory performance of the primary cartridges were inconclusive and the matter was still pending with the CIA.

Although the CIA instructed (March 1979) replacement of the defective primary cartridges of ammunitions 'X' and 'Y' they were not replaced even after 3 years and 26,920 numbers of ammunition 'X' and 5,920 numbers of ammunition 'Y' (cost : Rs. 27.94 lakhs) remained unused in the depot and factory 'A' (March 1983). The replacement of the defective primary cartridges was stated to be under examination by OFB.

29. Rejection of a component due to bad material

An ordnance factory was producing a component for an ammunition since 1976-77. As the specified material for the component was not available, the factory procured about 167 tonnes of an alternative material (cost : Rs. 13.05 lakhs) during July 1980 to July 1981 after obtaining approval of the Controller of Inspection, Ammunition, the Authority Holding Sealed Particulars (AHSP) in December 1979. Before bulk purchase was made the suitability of the material was not tried and the Director of Inspection (DI) Metal accepted the supplies despite the material having scattered black spots which could create problems during soldering and also lead to corrosion.

Out of 92,117 numbers of the component produced from the material (April to November 1981), 25,127 numbers (cost : Rs. 9.34 lakhs) were not accepted by the Inspectorate for presence of scattered black spots. Due to heavy rejections (27 *per cent* against authorised 5) the manufacture of the component was suspended (November 1981). Subsequently the factory observed (January 1982) that if the material was sorted out before fabrication about 90 *per cent* would have to be set aside for scattered black spots. The AHSP observed (December 1981) that the presence of black spot in the component was vulnerable to corrosion and the expected life of the ammunition (8 years) could not be obtained from the defective material. However, the AHSP recommended (January 1983) use of the alternative material with two coats of varnish stoving involving an extra expenditure of Rs. 0.89 per component. The Ministry of Defence stated (July 1983) that by applying the varnish coating the life of the ammunition was expected to increase. The factory recommenced production of the component with the alternate material in March 1983. But rejections of the component continued to remain high and out of 35,000 numbers produced till August 1983, 7,500 numbers (21.43 *per cent*) (cost : Rs. 2.60 lakhs) were rejected.

The unaccepted components (32,627 numbers) valuing Rs. 11.94 lakhs and the unused material (115.69 tonnes) valuing Rs. 10.63 lakhs were lying in the factory at the end of July 1983. Meanwhile due to inadequate supplies of the component the user factory produced 35,085 numbers of the ammunition against the target of 90,000 numbers during 1981-82 and 35,382 numbers against the target of 60,000 numbers during 1982-83. The shortfall in production during the two years was Rs 45.70 lakhs.

Thus,

- acceptance of alternative material (December 1979) without examining its usefulness, resulted in rejections of 25,127 numbers of the component (cost : Rs. 9.34 lakhs) out of 92,117 numbers produced during April to November 1981.
- As per directives of the AHSP the material was continued to be again used from March 1983 by applying two coats of varnish involving an extra expenditure of Rs. 0.89 per component but heavy rejections continued and out of 35,000 numbers produced during March to August 1983, 7,500 numbers (cost : Rs. 2.60 lakhs) were rejected.
- out of 167 tonnes of the material procured (July 1980 to July 1981) 115.69 tonnes (cost : Rs. 10.63 lakhs) were lying in the factory (July 1983).

30. Non-utilisation of furnaces in a factory

As part of a project, capacity was created in factory 'A' for production of 72,000 numbers of ammunitions 'X' and 'Y' (product-mix) per annum in 2×10—hour shifts. At the time of sanction of the project (November 1964) ammunition 'X' was in use by the Army and ammunition 'Y' in rudimentary developmental stage. Ammunition 'X' has since become obsolete.

Although there was no prospect of any orders for ammunition 'X' and only 'Y' was expected to be manufactured, factory 'A' procured (April 1973) two furnaces, designed to use Liquified Petroleum (LP) Gas fuel at a cost of Rs. 8.56 lakhs and erected them (March 1975) at a cost of Rs. 0.86 lakh. As they remained idle for want of orders, factory 'A' requested (September 1978) Ordnance Factory Board for off-loading them to sister factories. While three factories expressed their inability to use the furnaces the fourth did not respond.

After installation, the furnaces were utilised for production of other components for a mere 2,400 hours (6 months) during 1976-77 to 1978-79. After the ban on use of LP Gas for industrial purposes from February 1979, their further usability has become doubtful.

The Ministry of Defence stated (September 1983) that the furnaces could be gainfully used even without LP Gas and that after development of ammunition 'Y', factory 'A' would take up its bulk production.

Thus, furnaces erected in March 1975 at a cost of Rs. 9.42 lakhs remained unutilised/underutilised.

31. Purchase of a bogie hearth furnace

Factory 'A' was manufacturing base plates for two ordnances since 1963-64. Facilities for heat treatment and annealing of the base plates were, however, not established at factory 'A' and they were being sent to factory 'B' for these operations with the facilities available there. Factory 'B' placed a demand (1973-74) on the Director General, Ordnance Factories (DGOF) for procuring a bogie hearth heat treatment furnace for carrying out the operations, but it was subsequently decided (February 1975) to instal the furnace at factory 'A' to avoid production delays. No project report was, however, prepared to justify the setting up of the plant at factory 'A'. The DGOF approved the proposal (November 1976) and placed an indent on the Director General, Supplies and Disposals (DGSD) in September 1978 for the furnace. When the proposal was approved factory 'A' had orders for base plates up to 1979-80 only.

The DGSD concluded a contract with firm 'X' (November 1979) for the furnace with two quench tanks and connected accessories (total cost : Rs. 7.08 lakhs) to be supplied to factory 'A' by October 1980, and erected and commissioned within 10 weeks of handing over site. After the order was placed, factory 'A' requested the Ordnance Factory Board (OFB) (September 1980) to advise if the furnace, when supplied could be diverted to factory 'B' for gainful utilisation as the production commitments and outstanding orders for base plates on the factory could be handled within a couple of days in a month and no new component or store was being planned in the factory which could offer steady load and full utilisation of the furnace. The OFB decided (November 1980) to allot the furnace to factory 'B'. But in January 1981 the decision was modified to instal it at factory 'A' to avoid to and fro movements of base plates between the factories and due to other heavy engagements in heat treatment shop at factory 'B'.

Factory 'A' forwarded proposals (February 1981) to the OFB for construction of heat treatment shop (estimaed cost: Rs. 9 lakhs) and procurement of a tempering furnace and a 3 ton crane (estimated cost: Rs. 14.30 lakhs) which was accepted (March 1981). The administrative approval for the shop is yet to be issued and orders for the machine are yet to be placed (July 1983). The Ministry of Defence (Ministry) stated (November 1983) that the proposed heat treatment shop would not be required.

Firm 'X' supplied the furnace in October 1980 and other accessories by January 1982. They offered (October 1981) to undertake the foundation work for the furnace at a lump sum price of Rs. 2.50 lakhs (excluding cost of cement and reinforcement rods). The offer was valid for 90 days but as the heat treatment shop was not constructed, order for the job could not be placed. Subsequently the firm made a revised offer (June 1983) for Rs. 3.30 lakhs. The Ministry stated (November 1983) that the order on the firm for the foundation work was being placed. Meanwhile, the heat treatment of the base plates was continued at factory 'B' with its existing facilities.

The furnace procured at a cost of Rs. 7.08 lakhs is lying unerected since 1980 and the foundation work for its erection is yet to commence.

32. **Purchase of radiators for Shaktiman vehicles**

Against a tender enquiry (February 1979) of a factory for supply of radiator cores for Shaktiman vehicles, quotations varying from Rs. 1,089 to Rs. 1,600 each were received (March 1979) from firms 'P' (Rs. 1,089), 'Q' (Rs. 1,150), 'R' (Rs. 1,250), 'X' (Rs. 1,535), 'Y' (Rs. 1,595) and 'Z' (Rs. 1,600). The lowest offer of firm 'P' was ignored as it had not got its samples approved against an educational order (October 1978) and the offer of firm 'Q' was not considered by the factory technically suitable (March 1979). The factory asked firm 'R' (May 1979) after expiry of the validity period of firm's offer to accept a price of Rs. 1,075 each based on ruling price of non-ferrous metals. The Ordnance Factory Board (OFB) stated (July 1983) that recommendation on the offer of firm 'R' and the counter offer to them were delayed due to in-depth study of the offers and back reference to firm 'Q'.

Firm 'R' did not accept the counter offer (9th May 1979) and simultaneously increased their rate from Rs. 1,250 to Rs. 1,348 each. On subsequent examination (6th May 1979) the offer of firm 'Q', which was lower than that of firm 'R' and was valid till 5th June 1979, was found technically suitable but it was not considered for no valid reasons. After negotiations with firms 'Q' and 'R' (June and August 1979) the factory decided (August 1979) to place orders on them for 3,389 radiators on each at their revised prices of Rs. 1,300 and Rs. 1,280 respectively but the OFB was requested only in October 1979 to accord sanction.

After the sanction for the procurement was accorded (January 1980), the factory placed two orders (February 1980) on firms 'Q' and 'R' for supply of 3,389 radiators by each of them at Rs. 1,280 each. Firm 'R' did not, however, accept

(March 1980) the order as their offer was made 7 months back (August 1979) and demanded (March 1980) Rs. 1,589 per radiator due to general increase in prices. The order on firm 'R' was, therefore, cancelled (April 1980). Subsequently, after negotiations were made on fresh offers received (July 1980) against further tender enquiry made to 8 firms (including the 6 invited in February 1979) which varied from Rs. 1,190 to Rs. 1,831 per radiator, orders were placed (August 1980) on the same firm 'R' for 2,800 numbers at Rs. 1,345 each and on firm 'X' for 589 at Rs. 1,190 each. Against the 3 orders (February and August 1980) while firms 'R' and 'Q' completed the supplies of 6,189 numbers in July 1981 and May 1982 respectively, the supplies from firm 'X' were yet to be received (March 1983).

The original offers of firms 'Q' and 'R' (February/March 1979) were based on the ruling prices for non-ferrous materials. Had the orders on them been placed within the validity of their original offers the supplies would have materialised during June 1979 to January 1980 from firm 'R' and during September 1979 to June 1980 from firm 'Q' as per delivery schedules given by them. During the period there were price increases of non-ferrous materials in September 1979. The failure to accept original offers of firms 'Q' and 'R' within their validity caused an avoidable extra expenditure of Rs. 2.23 lakhs in the procurement of 6,189 radiators after allowing the price increases. The OFB stated (July 1983) that as the factory had stock and dues of about 3,900 radiators in April 1979 against the production target for 3,000 vehicles during 1979-80, if further supplies were obtained from 1979 onwards, the inventory holding in the factory would have been very much on the high side resulting in locking up of capital. This was an afterthought as the factory was authorised as per provisioning procedure (1973) to place orders 36 months in advance of requirement. In fact the factory had placed (October 1978) orders on firms 'P' and 'R' for supply of 1,500 radiators though it had a stock for about 11 months against the authorised limit for 9 months and tenders for further supplies were called (February 1979) and processed.

As the offers of firms 'Q' and 'R' had price variation clause, if an order was placed on firm 'Q' alone (the lowest acceptable tender) within the validity of their offer for 3,389 radiators staggering delivery from October 1979 at the required quantity (300 radiators per month) when the existing stock and dues were expected to come down to the authorised limit (9 months) based on production programme, the factory could have saved at least Rs. 0.91 lakh in the procurement from firm 'Q'.

33. Unnecessary purchase of rotary indexing machines

In order to replace 4 old lathe machines procured in September 1920 and used for head turning operation in the production of a cartridge case for an ammunition, an ordnance factory placed an indent on the Director General, Supplies and Disposals (DGSD) (December 1966) for 4 automatic production lathe machines (estimated cost : Rs. 26 lakhs). In response the DGSD placed an order in January 1968 for 4 rotary indexing machines on a public sector undertaking at a total cost of Rs. 26.76 lakhs to be supplied by May 1969. The machines were received in the factory during April to October 1970. These were erected (erection cost : Rs. 3.68 lakhs) and commissioned only after 4 to 5 years in March 1974, March 1975 (two) and October 1975. Meanwhile the factory met the annual production targets for the cartridge case during 1969-70 to 1973-74 with the 4 old machines although these were condemned in April 1966 as beyond economical repair. The Ordnance Factory Board (OFB) stated (July 1983) that the supplier failed to commission the new machines successfully earlier and that there being no alternative, the production with the old machines was continued with constant care and watch till the commissioning of the new machines.

Although the annual production programmes for the cartridge case ranged from 2.40 lakhs to 3.60 lakhs during 1966-67 to 1968-69 and from 1 lakh to 1.44 lakhs during 1969-70 to 1973-74 due to paucity of orders the total capacity of the 4 new machines as per contract was 8.64 lakhs per annum in a single shift of 8 hours at 100 *per cent* efficiency and the capacity accepted by the Director General, Ordnance Factories (DGOF) (March 1974) after considering the normal inefficiency and wastage was 6.24 lakhs per annum. Thus, the capacity was created much in excess of actual requirement and out of the 4 machines the procurement and installation of 2 (cost : Rs. 13.38 lakhs and erection charges : about Rs. 1.84 lakhs) was unnecessary. The OFB stated (July 1983) that the machines were procured in replacement of the old ones on like to like basis and no additional capacity was aimed at/sought for. Thus, the actual requirements were not worked out on the basis of existing and foreseeable production programmes/orders for the cartridge case.

After the new machines were commissioned, the annual production targets for the cartridge case in the factory were only 1.20 lakhs during 1974-75 to 1976-77, 0.96 lakh during 1977-78, 0.80 lakh during 1978-79 and 0.60 lakh during 1979-80 to 1982-83 against the total accepted production capacity of the 4 machines for 6.24 lakhs per annum in a single shift of 8 hours. The actual production during the period ranged from 0.60 lakh to 1.10 lakhs per annum. Thus the rated capacity remained largely unutilised. As sufficient orders for the cartridge case were not available the OFB declared (June 1979) one of the 4 new machines (cost : Rs. 7.49 lakhs including erection charges) as surplus. The machine was yet to be disposed (June 1983). Although the remaining 3 new machines (cost : Rs. 22.95 lakhs including erection charges) were capable to produce 4.681 lakhs per annum and the commitments for the cartridge case during 1983-84 to 1986-87 were 0.40 lakh to 0.60 lakh per annum, the OFB stated (July 1983) that these machines were not likely to be rendered surplus in the immediate future.

The case reveals :

- The machines were not procured on the basis of existing or projected need. At the time of procurement of machines with a capacity of 6.24 lakhs per annum in a single shift of 8 hours, production level was 1.43 lakhs per annum.
- The machines (cost : Rs. 26.76 lakhs) were commissioned 4 to 5 years after their procurement.
- They remained largely unutilised since commissioning, the actual production of cartridge cases being 0.60 lakh to 1.10 lakhs per annum.
- One machine (cost : Rs. 7.49 lakhs) declared surplus (June 1979) is yet to be disposed (June 1983). The expected utilisation of other 3 machines (cost : Rs. 22.95 lakhs) is about 9 to 13 per cent of its capacity.

Ministry's comments on the case, referred to them in April 1983, are yet to be received (October 1983).

34. **Extra expenditure in the purchase of driver's cabin**

In response to a tender floated by a factory (September 1978) for supply of driver's cabin for Nissan Patrol vehicles (with wind shield glass but without door), firms 'A', 'B' and 'C' quoted (September/October 1978) as follows :

Firm	Rate per cabin	Promised delivery	Validity of the quotation
	Rs.		
'A'	2,740 (old drawings) 2,995 (revised drawings)	100 numbers per month after 2 months of receipt of order or immediately after completion of the existing order which ever was later	90 days from date of opening of tenders.
'B'	3,450 (revised drawings)	50 numbers in the first month and 75 numbers per month thereafter after approval of samples.	90 days from date of opening of tenders.
'C'	2,850 (revised drawings)	100 numbers per month after completion of the existing order.	3 months.

(The quotations were subject to revision with increase in steel price.

The tenders were opened on 17th October 1978. Firm 'A' was the only established source of supply for driver's cabin to the factory since 1970. Although the validity period of the quotation of firm 'C' expired on 2nd December 1978 and that of firms 'A' and 'B' was to expire on 15th January 1979, the three quotations were sent by the factory to the Ministry of Defence (Ministry) only on 23rd December 1978 for according sanction after negotiations with the firms for placing orders on firm 'A' for 2,000 numbers of the driver's cabin as per old design, out of the total requirement of 4,302 numbers, to maintain continuity in supply and another on firm 'C' out of the balance as the firm had already developed the samples. The Ordnance Factory Board (OFB) attributed (October 1982) the delay to the in-depth examination made by the factory.

Firm 'A' withdrew (January 1979) their quotation as the validity period had expired and quoted (January 1979) a revised price of Rs. 3,040 each for supply of 700 numbers of driver's cabin of old design with validity up to 28th February 1979. The Ministry negotiated the prices with the firms in April 1979 only. The Ministry stated (October 1982) that firm 'A' attended the meeting in the factory only in February 1979 and that further follow-up negotiations were held only in April 1979 as the OFB was not functioning due to temporary injunction of the High Court.

During negotiations (April 1979) it was decided to place orders for driver's cabin at provisional rates on firm 'A' for 720 numbers (Rs. 2,900 each), firm 'B' for 1,000 numbers (Rs. 3,000 each) and firm 'C' for 2,000 numbers (Rs. 2,460 each) pending settlement of prices after verification of their accounts by the Cost Accounts Officer. However, firm 'A' revised (April 1979) the price further to Rs 3,150 per cabin and stated that the price was not subject to any cost audit as suggested by the Ministry. After further negotiations (May 1979) an order was placed on them (June 1979) for supply during

October 1979 to November 1980 of 700 numbers of driver's cabin of old design at Rs. 3,050 each against Rs. 2,840.91 each as per original quotation of September 1978 (Rs. 2,740) plus price increase for steel items in April 1979 (Rs. 100.91). This involved an extra expenditure of Rs. 1.46 lakhs on the quantity ordered. The OFB stated (July 1983) that the accepted rate was reasonable as there was also price increase of Rs. 210 per cabin during the period for other materials, wages, etc. as per firm's quotation. The details of price increases for such items were, however, not furnished to audit. In fact the factory had not provided any price variation clause for items other than steel in their orders for driver's cabin.

As per the decision of April 1979 the factory placed (August 1979) orders for 3,602 numbers of driver's cabin on firms 'B' (1,000 numbers) and 'C' (2,602 numbers) at provisional rates of Rs. 3,000 and Rs. 2,460 each respectively. However, firm 'C' did not accept the order (August 1979) on the ground that the price settled on negotiation in April 1979 was Rs. 3,079 each. Later, the firm revised their price to Rs. 3,940 each in August 1979 and Rs. 4,373 each in September 1979. Although after verification of the firm's records the Senior Cost Accounts Officer of the Ministry worked out (November 1980) the fair price at Rs. 2,585 each based on the prevailing prices of raw materials (September 1980), after further negotiations a fresh order was, placed on firm 'C' in October 1981 for supply of 2,602 cabins (as amended in March 1982) at Rs. 3,990 each against Rs. 3,100.24 each (including price increases of Rs. 250.24 for steel items in April 1979, July 1980 and February 1981) as per original quotation of September 1978 and the order of August 1979 on them was cancelled (March 1982). The acceptance of higher rate involved a loss of Rs. 23.15 lakhs in the procurement of 2,602 cabins. The OFB stated (July 1983) that the rate with firm 'C' was finalised after due consideration of the prevailing market price. The fact remains that the advantage of the lower price was lost due to delay in finalisation of the initial offer.

Firm 'A' completed the supplies of 700 cabins in February 1981 against the order of June 1979. While firm 'C' supplied 1,401 cabins till June 1983 against the order of October 1981 the supplies against the other order (August 1979) on firm 'B' were yet to commence (June 1983). According to the OFB driver's cabins remained one of the bottleneck items for production of the vehicles during 1979-80 along with other constraints. Thus, due to the delay in finalisation of the original offers not only there was an extra expenditure of Rs. 24.61 lakhs in the procurement of 3,302 cabins from firms 'A' and 'C' but the production activities also suffered.

The case was reported to the Ministry (April 1983) and their remarks have not been received so far (October 1983).

35. Procurement of defective crucibles

An ordnance factory was using silicon carbide crucibles of 'Morgan' make for melting aluminium scraps. These crucibles were of imported origin and used to be supplied by the authorised dealer of the foreign manufacturer. The crucibles were accepted against maker's guarantee/warranty certificates. The crucibles gave a consistent life of 200 heats during use.

Though the particular crucible was a proprietary item of the foreign manufacturer the factory floated an open tender (February 1981) for supply of 32 crucibles. In response to the tender only 6 offers (Rs. 1,800 to Rs. 10,117 each) from 4 firms were received. Although the authorised dealer of the 'Morgan' crucibles did not respond, the factory made no efforts to get his quotation.

In May 1981 the factory decided to accept the highest offer of firm 'X' (Rs. 10,117 each) for crucibles of 'Morgan' make on the ground that crucibles of 'Morgan' and 'Gloria' makes had longer life. Accordingly an order was placed on firm 'X' (July 1981) for supply of 32 crucibles of 'Morgan' make by August 1981 at Rs. 10,117 each.

Firm 'X' supplied only 13 crucibles (cost : Rs. 1.32 lakhs) during September/December 1981 after these were inspected and accepted by the factory's representative at the firm's premises and spot payment of Rs. 1.30 lakhs (95 *per cent* cost plus sales tax) was made. When the crucibles were accepted the maker's guarantee/warranty certificate was not obtained. Since 'Morgan' make crucibles had no separate identification mark the crucibles were accepted as 'Morgan' make from the labels attached to their body. Three of these crucibles were put to practical trial during January to April 1982 and it was observed that the spout of one of them got detached after 26 heats, another developed cracks after 128 heats and the third one after 57 heats. As the performance was unsatisfactory the other 10 crucibles were not used and the firm was asked (May 1982) to replace the crucibles (13 numbers) immediately. The fact that replacements were asked for showed that a certain minimum charge on laid down performance was an essential part of the contract for which suitable safeguard was not provided. The firm, however, declined (July 1982) to replace the crucibles stating that they had supplied the crucibles as per specification, that the number of heats was not specified in the tender and the order and that the manufacturers were not giving guarantee for performance. The performance guarantee would, however, have been given as in the past, if the crucibles were obtained from the authorised dealers.

The order on firm 'X' was short-closed (September 1982) at the quantity supplied (13 numbers) and a fresh order was placed (November 1982) on the authorised Indian dealer for supply by 15th March 1983 of 24 crucibles of 'Morgan' make at Rs. 10,364 each. The OFB stated (August 1983) that 24 crucibles had been received (May 1983) against the fresh order and their performance was yet to be assessed.

Thus, the procurement of 13 crucibles from a firm other than the authorised dealer without obtaining any guarantee certificate and without making adequate provision in the contract safeguarding Government interest resulted in a loss of Rs. 1.30 lakhs.

36. Procurement of a component from trade

For production of an ammunition, factory 'A' was receiving supplies of a component from factory 'B' and trade (mainly from firm 'X'). As factory 'B' was not expected to manufacture more than 3.50 lakh numbers of the component against factory A's production targets for 4.05 lakh numbers of the ammunition per annum during 1978-79 to 1980-81 the Director General, Ordnance Factories (DGOF) invited tenders (July 1978) from 15 firms (including firm 'X') for supply of 1 lakh numbers of the component to factory 'A'. Of the 9 offers received (Rs. 8.55 to Rs. 17 each), the offer of Firm 'X' (Rs. 12.40 each) was the sixth lowest. Firm 'X', subsequently, revised their offer (September 1978) to Rs. 11 each provided the order was placed for the full quantity with an option to be exercised for increasing the quantity by another 0.5 lakh numbers within six months. On the ground that the requirement of the component was urgent and the establishment of a new source was time taking, the DGOF placed an order on firm 'X' (December 1978) *i.e.* after three months for supply of 1 lakh numbers at Rs. 11 each incorporating only a standard clause reserving the right to place further order for an additional quantity upto 25 *per cent* of the ordered quantity at the same rate during its currency. The option given by the firm for increasing the quantity by 0.5 lakh numbers was not mentioned in the order although the firm requested for its inclusion 4 times (January to April 1979) and the component was of recurring requirement at factory 'A'.

In May 1979 factory 'A' placed another demand on the DGOF for 0.3 lakh numbers of the component which was increased to 0.8 lakh numbers (June 1979). Although the offer of firm 'X' for inclusion of the option in the order of December 1978 was earlier ignored, Ordnance Factory Board (OFB) asked the firm (June and July 1979) whether they were willing to accept an increase in the ordered quantity by 0.5 lakh numbers. As the firm did not reply, to cover the factory's additional requirements the OFB increased (November 1979) the ordered quantity by 0.25 lakh numbers as per the standard clause in the order and the Department of Defence Supplies placed another order (January 1980) on the same firm 'X' for 0.5 lakh numbers at a higher price of Rs. 13.05 each. Thus, the failure to include the option of firm 'X' in the order of December 1978 involved an extra expenditure of Rs. 1.06 lakhs (including sales tax) in the procurement of the additional 0.5 lakh numbers of the component from them subsequently.

During 1979-80 there was shortfall at factory 'A' in the production of the ammunition to the extent of 39,000 numbers (cost : Rs. 41.27 lakhs approximately) with reference to the target of 4.05 lakh numbers. The Ministry of Defence stated (September 1983) that the shortfall had occurred due to inadequate supplies of the component by firm 'X' alongwith other components from the feeder factories and that although factory 'A' had expressed inconvenience due to belated supplies of the components the question of taking any penal action against firm 'X' did not arise as the inconvenience could not be quantified in terms of money.

37. Extra expenditure due to non-consolidation of indents

Ordnance Factory Board (OFB) received three demands from factories 'A' and 'B' (during October 1979 to March 1981) for procurement of 60,860 litres of Oil 'H' (for factory 'A') and 81,523 litres of oil 'T' (61,023 litres for factory 'A' and 20,500 litres for factory 'B'). The OFB placed three separate indents on a Supply Mission(SM) for 60,819 litres of oil 'H' and 81,528 litres of oil 'T' within 4 days between 16 June 1981 and 19 June 1981. The specification of 'H' and 'T' differed but they were required for the purpose of deep hole boring and trepanning operations. To an inquiry in audit as to whether one indent against the three demands for one type of oil instead of two types of oils would have served the purpose, the OFB stated (July 1983) that although "apparently" the items were required for the same purpose, they were different items and as oil 'T' 'was felt to be' superior to oil 'H', it was decided to go for this oil. It was, however, not clarified why a superior and inferior type of oil are used simultanously for the same purpose, in the manufacture of gun barrels. The OFB added that since the demands were received from different factories for different items and processed at different periods consolidation of the indents was not considered necessary or feasible.

The SM covered all the three indents separately/individually by concluding three separate contracts on 24th September 1981, 30th September 1981 and 23rd November 1981 for supply of 60,819 litres of oil 'H' at the rate of £ 0.40 per litre, 20,500 litres of oil 'T' at the rate of £0.46 per litre and 61,028 litres (reduced to 54,967 litres) of oil 'T' at the rate of £ 0.50 (reduced to £ 0.46) per litre respectively.

In all the contracts the stipulated FOB delivery period was four weeks and the stores were received in the factories during July 1982 to December 1982. The procurement of the costlier oil 'T' although cheaper oil 'H' could have met the requirements and failure of the OFB to place a consolidated indent on the SM in time for concluding a single contract in September 1981 involved an extra expenditure of Rs. 0.92 lakh.

The case was referred to the Ministry of Defence in May 1983; their comments are yet to be received (October 1983).

38. Procurement of ethyl cellulose by a factory

Provisioning procedure (June 1973) provides that indents for imported stores may be placed 36 months in advance of the period of utilisation, which will be 12 months, which amount to requirements up to a maximum period of 48 months less stocks and dues, after taking into account the life of the stores required.

An Ordnance Factory placed a demand on the Director General, Ordnance Factories (DGOF) belatedly in June 1976 for 3,100 kgs. of ethyl cellulose required for manufacture of propellants, when there was a stock of 300 Kgs. to run for only about 5 months. The DGOF placed an indent against the demand on the Director General, India Supply Mission (DGISM) abroad on 7th February 1977. Another demand on the DGOF for 14,770 Kgs. of the chemical to meet the requirement till March 1981, was placed by the factory on 15th February 1977 but was not intimated to the DGISM immediately. A further indent was placed on DGISM in August 1977 for 14,100 Kgs. When the demands and indents were placed the shelf life of the chemical was neither known nor was it ascertained. The Authority Holding Sealed Particulars also did not point out the shelf life while vetting the indents.

Based on the two indents the DGISM concluded two separate contracts (July 1977 and February 1978) with a firm for supply of 17,200 Kgs. of the chemical at Rs. 45.04 per Kg. (3,100 Kgs.) and Rs. 46.03 per Kg. (14,100 Kgs.) involving an avoidable extra expenditure of Rs. 0.14 lakh in the procurement of 14,100 Kgs. against the second indent (August 1977). The ordered quantity (17,200 Kgs.) was received in the factory during March 1978 to February 1979, of which 2,760 Kgs. were airlifted (cost : Rs. 0.38 lakh) to meet factory's urgent requirement. The supplies were taken on charge based on firm's test certificate. It was noticed in audit that the samples from the first consignment analysed by the Inspectorate showed (April/June 1978) that the chemical was not clearing the heat stability requirements and also the acidity was just on the border line of specified limit. The Ordnance Factory Board (OFB) stated (July 1983) that when the chemical was accepted tests were not carried out for determining the ethyl content and the heat stability.

In September 1979, the factory observed that the chemical was not fit for use in production. A Board of Inquiry (BI) set up by the factory (July 1981) observed (August 1981), that the loss was due to "lack of experience/adequate knowledge about the elaborate details of properties of the material and its behaviour" though the chemical was in use in the factory since 1975. No responsibility for the loss was fixed by the BI.

Out of the total quantity procured (17,200 Kgs.) against the two contracts (July 1977 and February 1978) the factory had used about 7,400 Kgs. during March 1978 to August 1980 in the production of propellants. The unusable stock (9,800 Kgs.) was returned to the supplier in May 1982 (transportation and insurance charges Rs. 0.85 lakh) and after persuasion they agreed (November 1982) to supply free of all costs 4,910 Kgs. of usable ethyl cellulose in lieu equivalent in cost at the prevailing market rate to the cost of the returned lot. Accordingly, 2,500 Kgs. were received (January 1983) and the balance 2,410 Kgs. shipped in April 1983 were yet to be received in the factory (June 1983). Meanwhile to meet the requirements due to the deficiencies on account of rejections and delay in their replacements the factory imported 3,386 Kgs. of ethyl cellulose at a higher cost (Rs. 76.80 per Kgs. on an average) during 1981/1982 of which 500 Kgs. were airlifted (air-lifting cost : Rs. 0.64 lakh).

The case reveals :

(i) Non-observance of procedure regarding advance provisioning resulted in airlifting of 2,760 Kgs. of ethyl cellulose at a cost of Rs. 0.38 lakh.

(ii) Delay in placement of order for additional requirement of 14,100 Kgs. resulted in an extra expenditure of Rs. 0.14 lakh.

(iii) Absence of information regarding shelf life of the chemical rendered 9,800 Kgs. (cost : Rs. 4.51 lakhs) unserviceable which had to be returned to the supplier at Government cost (Rs. 0.85 lakh).

(iv) The supplier agreed (November 1982) to replace 4,910 Kgs. only on grounds of increased cost.

The OFB stated (July 1983) that as quantity equivalent in cost of the rejected lot was supplied there was no loss. The fact remains that 4,890 Kgs. procured originally at a cost of Rs. 2.25 lakhs were lost and had the initial procurement been regulated as per shelf life, the cost of the quantity supplied in lieu would have been less and even at the rate prevailing in July 1981, the extra expenditure incurred was about Rs. 0.37 lakh.

The case was referred to the Ministry of Defence in April 1983 and their comments are awaited (October 1983).

CHAPTER 4

WORKS AND MILITARY ENGINEER SERVICES

39. Avoidable expenditure on reconstruction of part of a perimeter wall

Provision of a perimeter wall was sanctioned as part of a project in an Ordnance Factory in May 1971. A major portion of the wall (2,509 metres) was constructed with re-inforced cement concrete (RCC) poles and panels. 505 metres of the wall (cost : Rs. 0.87 lakh) surrounding an existing cemetery on three sides was constructed in random rubble (RR) masonry. The work though completed in October 1973 was taken over by users only in May 1976 due to non-availability of electric supply to watch towers.

A portion of the RR masonry wall, approximately 7 metres in length, collapsed in June 1976 *i.e.* just after one month of taking over and was got repaired by the factory departmentally (cost : Rs. 10,895) as the Garrison Engineer (GE) held that the collapse was due to storm. Again, another portion of the wall of more than 21.3 metres collapsed in September 1979, which was got repaired departmentally by the factory (cost : Rs. 6,313.53) considering security needs.

A Technical Board of Officers convened in April 1980 to investigate the matter and suggest remedial measures concluded (June 1980) that defective foundation work caused the collapse of the wall. (The depth of foundation at two places was 0.60 metre, as against 1.10 metres specified in the contract drawings, the foundation rested on black cotton soil and there was saturation of foundation due to water-logging caused by absence of drainage system on either side of the cemetery wall). The Board recommended provision of proper surface drainage arrangement on both sides of the wall as also removal of all vegetation and wild growth therein.

On an inspection of the site by a team of Military Engineer Services (MES) officers, the work relating to RR wall in contact with the cemetery wall revealed (8th July 1980) inadequate and weak mortar, large voids and small sizes of stones having been used, indicating below specification work. The Zonal Chief Engineer(CE), while not concurring or agreeing with the findings of the Technical Board, decided (28th July 1980) to implement the remedial measures suggested by the Board. According to the Zonal CE, the likely causes of failure of the wall were (i) Water-logging and poor drainage in the cemetery area and (ii) wild growth of bushes and trees adjoining the compound wall on the cemetery side.

On 15th December 1980, yet another portion (25 metres) of the wall collapsed and cracks developed over 300 metres on the wall adjoining two sides of the cemetery. Taking into account extensive damages that had taken place and security aspects, the factory authorities ordered (19th December 1980) reconstruction of the damaged portion (325 metres) of the wall on emergent basis. The Zonal CE advised adoption of RCC poles and panels, for reconstruction as in the case of the rest of the perimeter wall. A contract for the work (reconstruction of wall and provision of area drainage) was concluded by the GE on 7th February 1981.

Immediately after the work was commenced, a length of 30 to 35 metres of the wall collapsed on 12th February 1981. Taking into account the recurring instances of collapse of RR masonry wall in the past and condition of this wall, a Recce-*cum*-Siting Board (constituted by the factory authorities) recommended (March 1981) that the entire RR masonry wall be demolished and reconstructed. Based on the Board's recommendations, administrative approval for reconstruction of wall (including provision of area drainage) was accorded (August 1981) by the factory authorities for Rs. 3.97 lakhs. The work was completed in January 1982 at a cost of Rs. 3.03 lakhs, involving avoidable expenditure of Rs. 2.98 lakhs.

The Ordnance Factory Board stated (September 1983) that in their view old RR masonry wall collapsed mainly due to design deficiencies and executional lapses during its construction and that cases of collapse of the wall continued to recur in view of no remedial measures being taken/contemplated by the MES and thus jeopardising security of the factory. No responsibility has, however, been fixed on the concerned officials for substandard work done by the MES authorities.

The Ministry of Defence (Department of Defence Production) intimated (November 1983) that the aspect of water-logging could not be noticed at the relevant point of time due to thick undergrowth in the area during monsoon.

40. Avoidable extra expenditure due to change in specification of roof treatment

Under a contract concluded (June 1972) by a Zonal Chief Engineer (CE), the work for 'provision of technical accommodation', required for setting up overhaul facilities for aero-engines of an aircraft at a Base Repair Depot was completed in February 1975 at a cost of Rs. 59.68 lakhs.

The roof of one block forming part of the technical accommodation was constructed as per contractor's own design and specifications after acceptance by the Engineers. The block was provided with air-conditioning facilities. The air-conditioning material chosen for roof was a layer of thermocole (combined with four course treatment for water proofing) which had been provided on the top of the roof instead of on the ceiling as its use on the inner side was not considered advisable due to its combustible nature. According to the Zonal CE, the expenditure on this portion of the work was about Rs, 3.50 lakhs to Rs. 4.00 lakhs.

In June 1977, the users reported leakages in the block, which continued despite repairs carried out by the Engineers. In October 1978, the users reported to the Zonal CE that profuse leakage had continued, which had adversely affected the normal functioning of production line. In June 1979, the Garrison

Engineer (GE) opened up the roof at a number of places for repairs and noticed *inter alia* that thermocole and chicken wire-mesh plaster did not stick to each other, resulting in cracks in chicken wire-mesh plaster throughout the roof and that it was not possible to take up repairs to prevent leakage as a permanent measure. The Commander Works Engineer to whom the matter was thereafter reported by the GE, intimated (July 1979) the Zonal CE that to arrive at a permanent solution of the leakages, thermocole provided over the roof would require to be changed.

The block was got inspected (October 1979) by a specialist from the Central Building Research Institute (CBRI), who observed that condition had deteriorated to the extent that piecemeal repairs would only be temporary and recommended that the entire water-proofing treatment including the thermocole layer from roof be removed and in its place resin bounded fibre glass for heat insulation (instead of thermocole) be provided inside the ceiling and roof surface be provided with water-proofing treatment developed by the CBRI. Based on these recommendations, the local Air Force authorities sanctioned (January 1981) special repairs to the block at an estimated cost of Rs. 4.96 lakhs which was subsequently revised (November 1981) by the Headquarters Maintenance Command to Rs. 8.64 lakhs due to escalation in prices. The work was got executed through two contracts concluded in April and November 1981 at a cost of Rs. 8.50 lakhs and was completed in July 1982.

The Ministry of Defence stated (September 1983) that usually life of water-proofing on exposed surfaces is 8 years approximately as per the trade practice and as such the special repair work was carried out after 8 years.

The air-conditioning of the block forming part of technical accommodation constructed as per contractor's design at a cost of Rs. 3.50 lakhs to Rs. 4.00 lakhs remained in-effective due to heavy leakage in the roof after two years of construction, which needed to be repaired at a cost of Rs. 8.50 lakhs.

CHAPTER 5

PROCUREMENT OF STORES AND EQUIPMENT

41. Procurement of plastic containers for an ammunition

The procurement of laminated paper containers for packing a certain ammunition by the Ordnance Factories was being arranged partly by the Director General, Ordnance Factories (DGOF) and partly by the Department of Defence Supplies (DDS) through trade sources. Against an indent raised (December 1976) by an Ordnance Factory 'X', a supply order was placed (September 1977) by the DDS on firm 'A' for 2,00,000 numbers of paper containers at the rate of Rs. 44 (total cost : Rs. 88 lakhs). The delivery was scheduled to commence within 4 weeks from November 1977 at the rate of 10,000 containers per month.

Firm 'A' supplied 1,42,000 paper containers during December 1977—July 1979. On the request of firm 'A', Ordnance Factory 'X' (consignee) advised the firm, without consulting the DDS (contract concluding authority), to defer the remaining supply by 3 months in view of adequacy of stocks and inadequate covered storage accommodation. Firm 'A' assured (31st July 1979) that for re-scheduled delivery no increase in price would be asked for.

In a meeting held in December 1979, firm 'A' requested for re-fixing of delivery schedule and price increase due to deferment of delivery agreed to by the consignee. The DDS asked (January 1980) firm 'A' to complete supply by 31st December 1980 and also advised the latter to send a separate request for *ex-gratia* payment on account of price increase which would be considered on merits. Firm 'A' asked (29th February 1980) for price increase over the contracted rates on account of increase in cost of raw materials during the intervening period and for provision of air drying varnish internally and later to switch-over to shellac varnish, not contemplated in the supply order. The DDS asked (April 1980) firm 'A' to furnish the requisite details in support of its claim for price increase for consideration. Firm 'A' furnished (September 1980) these details seeking a minimum increase of Rs. 10.65 per container, adding that for provision of air drying/shellac varnish, the cost assessed by the DDS would be acceptable. These issues, however, remained unresolved and firm 'A' which had supplied 1,52,000 numbers of paper containers up to August 1980, stopped supplies thereafter.

A separate supply order was also placed (May/June 1979) by the DGOF on firm 'A' for 40,890 paper containers of the same type at the rate of Rs. 39.81 (total cost : Rs. 17.81 lakhs); to be completed by August 1980. 10,000 numbers only were supplied by firm 'A'.

Plastic containers as alternate containers to laminated paper containers were under development since 1977 by the Armament Research and Development Establishment (ARDE). According to the Directorate of Armaments (December 1979), even though initially the cost of plastic container might be more, the expenditure would be recouped by re-cycling used containers and as such in the long run cost-wise, plastic container might be more economical. But the Ordnance Factory Board (OFB) stated (September 1983) that the package drawings (of plastic containers) did not indicate re-utilisation of these containers.

The OFB pointed out (August 1980) that due to insufficient supply of paper containers from trade, issue of ammunition to Army units was held up. The OFB, therefore, suggested that immediate arrangements be made by the DDS for the procurement of 2 lakh numbers of plastic containers (which had already been designed by the ARDE) from trade sources at the rate of 30,000 numbers per month so that supplies of ammunition could be completed by March 1981. The suggestion for procurement of plastic containers was, however, made without reference to the General Staff Branch which was responsible for introduction of a new item of equipment.

Against urgent requirements of 2,00,000 numbers of plastic containers, indents for the total quantity of 1,68,000 numbers were raised by Ordnance Factories 'X' (1,00,000 numbers) and 'Y' (68,000 numbers) in September 1980 and November 1980 respectively. The reasons for raising the indent for a lesser quantity by Ordnance Factory 'Y' were that paper containers were in the production plan of the factory during 1980-81 and 1981-82. On the deficiency of 32,000 numbers in the indented quantity being pointed out by the DDS, the same was made up (2nd December 1980) by corresponding increase in the quantity indented by Ordnance Factory 'X'. The production of paper containers in Ordnance Factory 'Y' which had procured 152 tonnes (cost : Rs. 17.48 lakhs) of laminated paper, could not, however, be started for want of certain other items of raw material.

The DDS invited (August 1980) tenders from 12 firms for the procurement of 2,00,000 numbers of plastic containers. All the firms responded with prices ranging from Rs. 165 to Rs. 241 each. Only 6 firms were considered to be capable by the Technical Committee (Armaments Stores). The lowest rate of Rs. 165 quoted by firm 'B' was considered to be reasonable by the DDS and 4 firms recommended by the Technical Committee were counter-offered the rate of Rs. 165 for acceptance without any firm commitment. Another firm 'F' which had quoted the rate of Rs. 185 and was also recommended by the Technical Committee was, however, excluded by the DDS on the ground that this firm was being considered for the placement of an order (for another type of container) by the OFB. Before the expiry of the validity period of its offer, firm 'F' informed (November 1980) the DDS that it should also be given a counter-offer being one of the largest firms in the country dealing in plastic items and that it was prepared to supply the containers at the rate of Rs. 160 each further negotiable if called for entry in Defence Supply field, which, however, was not considered as a separate order for another type of containers on Firm 'F' was under processing. The DDS finally placed (December 1980) four supply orders on different firms for a total quantity of 2 lakh plastic containers at the rate of Rs. 165 each as under :

Firm	Quantity ordered	Total cost
		(Rs. in lakhs)
'B'	50,000	82.50
'C'	75,000	123.75
'D'	50,000	82.50
'E'	25,000	41.25

All the four firms ('B', 'C', 'D' and 'E') completed the supply of plastic containers against orders (placed in December 1980) by January 1982.

The matter regarding price increase demanded by firm 'A' due to extra work for provision of air drying/shellac varnish and increase in cost of raw materials was resolved in November 1982 when the DDS decided to place a fresh order on firm 'A' for (i) the outstanding quantity (88,890 numbers) of paper containers at the old contracted rate of Rs. 44 plus Rs. 3.60 extra for air drying as well as shellac varnish, and (ii) an equivalent quantity at the current prevailing rate of Rs. 51.69. Another supply order was placed on firm 'A' on 7th January 1983.

It would thus be seen that the DDS, while placing (December 1980) orders for a total quantity of 2,00,000 numbers of plastic containers (in lieu of paper containers) at the rate of Rs. 165 did not keep in view the economics of this purchase. Had the matter regarding price increase demanded (February 1980) by firm 'A' for supply of paper containers been resolved before placement of orders for plastic containers, the necessity of procurement of plastic containers at uneconomical rates would have been obviated. Against the procurement cost of plastic containers *viz*. Rs. 330 lakhs, the paper containers would have cost only Rs. 116.50 lakhs (even after taking into account the price increase of Rs. 10.65 plus Rs. 3.60 payable for extra work of varnish) which could have avoided expenditure of Rs. 213.50 lakhs.

Summing up : The following points emerge :

— Out of 2,00,000 numbers of laminated paper containers ordered (September 1977) by the DDS to meet the requirements of the Ordnance Factories, 1,42,000 numbers were supplied by firm 'A' up to July 1979; Ordnance Factory 'X' agreed (July 1979) to the balance supplies being deferred for 3 months on the ground of adequacy of stocks and inadequate covered storage accommodation during monsoon period. This led to the firm claiming price increase due to rise in cost of raw material, deadlock in further supplies and necessitating procurement of plastic containers at higher cost.

— Had deadlock over price increase and charges for extra work of air drying varnish/shellac varnish in respect of paper containers demanded (February 1980) by firm 'A' been resolved well in time and the economics of procurement cost of plastic containers *vis-a-vis* paper containers been kept in view, the extra cost of Rs. 213.50 lakhs in procurement of 2,00,000 plastic containers ex-trade would have been avoided.

— The procurement of plastic containers was made even before obtaining approval of General Staff Branch to its introduction.

— Although the production of paper containers was planned in Ordnance Factory 'Y' during 1980-81 and 1981-82 and raw material (152 tonnes of laminated paper costing Rs. 17.48 lakhs) had already been procured for this purpose, the factory could not take up production for want of certain other items of raw material.

— The plastic containers though costlier than the paper containers were considered more economical in the longer run in view of the possibility of re-cycling used containers (plastic). The drawings for plastic containers did not, however, envisage any such re-use.

42. Avoidable extra expenditure on the procurement of welding machines

The Director of Ordnance Services (DOS) placed an indent on the Director General, Supplies and Disposals (DGSD) in August 1978 (and modified in November 1978) for supply of 53 numbers of gasoline engine driven welding machines for delivery by March 1979. The indent was priced at Rs. 15,169 instead of Rs. 31,692 which was the last procurement price of the complete welding set (welding set without engine: Rs. 21,475 + cost of engine : Rs. 10,217) in 1976.

In response to a tender enquiry floated by the DGSD on 24th November 1978, offers were received (January 1979) from three firms 'A', 'B' and 'C' as under :

Firm	Rate
'A'	Rs. 14,438 (without engine)
'B'	Rs. 24,825 (without engine) Rs. 40,825 (with engine)
'C'	Rs. 41,750 (with engine)

While the offer of firm 'A' was not considered as it did not meet the requirements, offers of firms 'B' and 'C' were forwarded (19th February 1979) by the DGSD to the DOS for scrutiny/ recommendations and for provision of additional funds. The offers of firms 'B' and 'C' were sent (2nd March 1979) to the Controllerate of Inspection, Engineering Equipment (CIE) for scrutiny and comments. The CIE technically accepted these offers subject to certain conditions which were intimated to the DOS and the DGSD on 30th March 1979.

Meanwhile, during a price negotiation meeting held in the DGSD on 29th March 1979, firm 'B' offered a quantity discount of 1 *per cent* (on the original offer of Rs. 40,825) if the full quantity of 53 numbers was ordered. Firm 'C', while not reducing its offer of Rs. 41,750, asked for an additional amount of Rs. 650 for special packing. The revised offers of firms 'B' and 'C' were valid up to 21st April 1979. The DOS assured during the price negotiation meeting that it would be possible to make available additional funds by 16th April 1979 and requested (22nd May 1979) the DGSD to ask the firms to keep their offers open up to June 1979. In July 1979, the DGSD informed the DOS that in view of additional funds having not been made available and due to increase in the prices of all raw materials as intimated by firm 'B', the (revised) offer of this firm was no longer valid. The DGSD added that the indent had been cancelled/withdrawn and a fresh indent be raised when additional funds would be available.

The DOS initiated (May 1979) a case for provision of additional funds. Before giving clearance, the Ministry of Finance (Defence) enquired (3rd December 1979) the basis of pricing the indent at Rs. 0.15 lakh per machine. While admitting the error in the pricing of the indent, the DOS reduced (13th December 1979) the indented quantity to 47 numbers. Additional funds to cover the requirements of 47 numbers at the rate of Rs. 40,825 were released by the Ministry of Finance (Defence) on 19th December 1979. The indent was increased by 28 numbers in May 1980.

Fresh tenders invited by the DGSD were opened in May 1980. Firms 'B' and 'C' quoted Rs. 52,650 and Rs. 51,000 per set (without engine) respectively. These quotations included extra testing charges of Rs. 5,000 for 50 hours testing and Rs. 300 for 3 hours testing. As a result of negotiations held on 4th July 1980, firms 'B' and 'C' reduced their quotations to Rs. 47,535 and Rs. 45,900 per set (without engine) respectively. Since delivery of generators and that of engines by another firm 'D' which was asked to quote (July 1980) did not match, no order could be placed.

Another indent for 62 numbers was raised by the DOS on the DGSD in May 1980. In March 1981, the DGSD again invited tenders. Of the three tenders received, firms 'B' and 'C' quoted Rs. 57,700 and Rs. 56,800 per welding set (without engine) respectively. The third tender of another firm 'E' was not considered being late offer and not up to the specifications. After negotiations, two contracts were concluded (October 1981) by the DGSD with firms 'B' and 'C' (76 sets each) for supply of 152 sets (including another 15 sets indented in April 1981) at the rate of Rs. 49,837 per set. A separate contract was concluded by the DGSD with firm 'D' for supply of 152 engines at the rate of Rs. 18,365 for delivery of 76 numbers to each of firms 'B' and 'C' for assembly in welding sets. The cost of each complete set (including engine) worked out to Rs. 68,202. The contracts with firms 'B' and 'C' included separate testing charges of Rs. 5,000 and Rs. 300 per set for 50 and 3 hours' testing respectively. These charges were not, however, included in the earlier offers of January 1979.

Firms 'B' and 'C' supplied 76 sets each while firm 'D' supplied 102 engines up to the end of March 1983.

In view of casual estimation of price of Rs. 15,169 for the welding machine indicated in the indent of August 1978 for 53 numbers placed by the DOS instead of the last procurement price (November 1976) of the Department of Defence Supplies and inordinate delay in making available additional funds by the former, firm 'B' 's offer of January 1979 (Rs. 40,825) for supply of 53 machines could not be availed of. Consequently, subsequent procurement of 53 welding sets (with engine) at the rate of Rs. 68,202 each resulted in avoidable extra cost of Rs. 14.51 lakhs, besides incurring charges towards testing and transportation of engines from the works of firm 'D' to the works of firm 'B'.

43. **Delay in the acceptance of offer**

The Director of Ordnance Services, Army Headquarters (indentor) placed an indent for the procurement of certain equipments in May 1981, on the supply wing of an Indian Mission abroad (Supply Wing). Two of the equipments and their accessories were proprietary to a foreign firm which quoted* DM 11,00,021 (Rs. 44.00 lakhs) in July 1981 stating, *inter alia*, that the prices offered were for improved models as the indented items were no longer available and that the offer was valid upto 30th October 1981. The quotation was forwarded by the Supply Wing to the indentor in August 1981 for recommendation and the indentor communicated his acceptance of offer on 6th November 1981 by which time the validity of the quotation had expired. The Supply wing failed to write to the firm within the validity period of the offer for keeping the offer open for some more time, especially when there was lack of timely response from the indentor. It sent a telex to the firm only on 19th November 1981 asking it to extend the validity of offer upto 15th December 1981. The firm, however, refused (November 1981) to extend the validity period.

The firm quoted DM 1,207,379 (Rs. 48.30 lakhs) (November 1981), which were negotiated by the Supply Wing (December 1981—January 1982) and after obtaining only a nominal increase in discount the purchase order was placed on the firm in March 1982 for a value of DM 1,198,799 (Rs. 47.95 lakhs). This resulted in an extra expenditure of DM 98,778 (Rs. 3.95 lakhs).

*Quotation was furnished by the firm on 21st July 1981 before the issue of tender inquiry dated 31st July 1981.

The Ministry of Defence while accepting the facts (July 1983) stated that delay in consideration of the offer occurred because quotation from another firm for a third item, proprietary to it, was awaited but agreed that consideration of the offers should not have been postponed and are issuing necessary instructions in this regard.

44. Extra expenditure in the procurement of Carbamite in powder form

Mention was made of the extra expenditure of Rs. 2.90 lakhs incurred by the Director General, Ordnance Factories (DGOF) in procurement of "Carbamite undyed" (used in manufacture of propellants) in powder form instead of in flake form in Paragraph 17 of the Report of the Comptroller and Auditor General of India, Union Government (Defence Services) for the year 1977-78. A similar case of procurement of material in powder form at higher cost noticed in audit is given below :

The DGOF placed operational indent in January 1982 on the Supply Wing of an Indian Mission abroad (SW), for procurement of 90 M.Ts. of 'Carbamite undyed' of a particular specification in either flake or powder form. The consignment was intended for factory 'X'. The quantity was increased to 110.50 M.Ts. by DGOF in March 1982, based on an additional indent for 20.5 M.Ts from factory 'Y'.

In response to tender enquiry by the SW in March 1982, 3 offers were received as under :

(a) Firm 'A', after negotiation offered 90 M.Ts. in flake form and 20.5 M.Ts. in powder form (from country 'Z') at DM 12,800 per M.T.

(b) Firm 'B', in negotiation offered to supply in powder form at DM 13,250 + 2½ *per cent* agent's commission.

(c) Firm 'C' quoted a price of DM 13,500 per M.T. for supply in flake form.

All the offers were referred to the DGOF on 4th June 1982 for advice.

The DGOF advised (June 1982) that 60 M.Ts. may be procured in powder form from firm 'B' and 30 M.Ts. in flake form from firm 'A' observing that on 'adding the expenditure involved in converting flake to powder' the difference in the price offered by firms 'A' and 'B' was marginal. The cost calculations based on which the DGOF made the observations were not available in the files of the Ordnance Factory Board. Accordingly the SW placed orders on firms 'B' and 'A'. The procurement of 60 M.Ts. of stores in powder form instead of flake form involved an extra expenditure to Government of Rs. 1.87 lakhs.

The DGOF stated (March 1983) that "material procured in flake form or lump form has to be ground to powder form, involving additional expenditure and inconvenience to the user factory."

Factory 'X' had stated as early as May 1978 that they have been using 'Carbamite' in flake form during past several years and that no extra expenditure was involved in processing of Carbamite flakes. It was also noticed in audit that a further quantity of 20.5 M.Ts. intended to be procured in powder form directly from country 'Z' was subsequently ordered in flake form from firm 'A' in October 1982 on specific instructions from DGOF.

Thus, the procurement of "Carbamite undyed" material in powder form, in preference to the material in flake form, which was as per specifications and was in use by the factory since 1973, resulted in extra avoidable expenditure of Rs. 1.87 lakhs.

45. **Refurbishment of certain Defence equipments**

On 6th November 1981 the Naval Headquarters (NHQ) sent an indent to the Supply Wing of an Indian Mission abroad (Supply Wing) for refurbishment of 70 numbers of gyroscopes (item 'A') and 37 numbers of electronic pack actuators assembly (item 'B'). NHQ also informed that (a) the job was to be done by a particular foreign firm, (b) based on a quotation of 1st April 1981 of that firm obtained by the Naval Adviser of the High Commission of India the refurbishment cost of 'A' was £ 316 each and that of 'B' £ 983 each, (c) similar requirement of Army Headquarters (Army HQ) was also being worked out and their indent will be forwarded as early as possible, and (d) the firm's quotation may be got extended upto the end of December 1981. Supply Wing was further requested to take up urgently with the firm for undertaking the jobs at the earliest.

The receipt of NHQ indent was acknowledged by the Supply Wing on 17th November 1981. No action was taken by Supply Wing to get the validity of the offer extended by the firm in spite of the specific request of NHQ. The indent was transferred to the concerned Directorate in the Supply Wing for taking further action belatedly in January 1982.

On 15th December 1981, the Army HQ also indicated their requirement for refurbishment of 178 numbers each of items 'A' and 'B' as a sequel to which NHQ amended (January-February 1982) their indent increasing the quantities of 'A' and 'B' to 248 and 215 respectively. The total requirement was then communicated by the Supply Wing to the firm and the firm's fresh quotation (February 1982) pricing the refurbishment of item 'A' at £ 430 each and of item 'B' at £ 1,620 each was forwarded by the Supply Wing to NHQ for acceptance. At this stage, NHQ informed (March 1982) the Supply Wing that the firm's earlier offer of April 1981 was extended by the firm upto the end of November 1981 and the Supply Wing was required to conclude a contract within the validity period without inviting fresh tenders. NHQ also stated that the firm may be requested to hold the original price. Later, on a negotiated rate of £ 430 for item 'A' and £ 1,210 for item 'B' a contract was placed on the firm in July 1982 (£ 3,66,790 = Rs 61.99 lakhs).

40 *per cent* advance payment was released (£ 1,46,716= Rs. 24.80 lakhs) in October 1982.

It would be seen from the above that :

— after receipt of quotation of 1st April 1981, inordinate time was taken both by the NHQ and the Army HQ in finalising their indent/requirement ;

— while forwarding the indent, NHQ did not inform the Supply Wing that the firm's offer, initially valid up to the end of May 1981, was extended by the firm (September 1981) upto the end of November 1981; nor did the Supply Wing make any effort to obtain this information from the Naval Adviser of the High Commission of India who had obtained the extension of the validity of the offer ;

— the original offer remained open for acceptance for 8 months from April to November 1981, the Army HQ, however, communicated their requirement only on 15th December 1981 *viz.*, 15 days after the expiry date ;

— after the receipt of the indent, no steps were taken by the Supply Wing to have the validity period extended upto the end of December 1981, as suggested by the NHQ ; and

— there was failure on the part of Supply Wing to finalise contract with the firm in November 1981 itself when its April 1981 rates still subsisted, at least for the quantities indicated by NHQ in their urgent indent of November 1981 with provision for increase of quantities at a later date.

These failures on the part of NHQ/Army HQ and the Supply Wing resulted in an avoidable extra expenditure of £ 77,077 (Rs. 13.02 lakhs) as under :

Item	Original rate	Revised rate	Difference	Quantity (in Nos.)	Extra expenditure
'A' .	£ 316	£ 430	£ 114	248	£ 28,272
'B' .	£ 983	£ 1,210	£ 227	215	£ 48,805
				TOTAL :	£ 77,077

Supply Wing stated (October 1983) that "the failure to take advantage of the previous offer is primarily attributable to NHQ/Government who took seven months to finalise the indent and omitted to mention the most vital fact that the offer had been extended up to 30 November 1981".

Rules stipulate that payment to contractors should not be released before shipment and advance/part payment should not be made without sanction of the Government. Forty *per cent* advance payment was, therefore, contrary to the Rules. The entire amount is still (August 1983) outstanding and the interest implication, so far, of this financial accommodation works out to £ 11,004 (Rs. 1.86 lakhs).

It may be mentioned that the Deputy Head of the Mission to whom this case was submitted requested the Director General of the Supply Wing to "investigate the circumstances and reasons for the procrastination". Though an 'in depth study' was stated to have been carried out, final action thereon was awaited (October 1983).

46. **Procurement of extruded aluminium tubes**

For the procurement of 10,000 numbers of extruded aluminium tubes an indent, at an estimated cost of Rs. 8.15 lakhs was placed by the Director General, Ordnance Factories (DGOF) in

December 1980 on Supply Wing of an Indian Mission abroad (SW). The indent indicated the likely source of supply as firm 'A' of country 'X' from whom earlier purchase of same item was made in June 1978.

SW issued limited tender enquiries to 5 firms including firm 'A' on 2nd March 1981. The indentor by telex dated 21st January 1981, increased the requirement to 20,000 numbers. In May 1981, a fresh limited tender enquiry was issued by SW to six firms including firm 'A' and the three firms submitted their quotations given below :

	Rate	Total price
(*i*) Firm 'B' . . .	£ 5.786 per Kg.	£ 1,91,600.00
(*ii*) Firm 'C' . .	£ 5.33 per Kg.	£ 1,67,000.00
(*iii*) Firm 'D' . .	DM 1,879 per 100 Kgs.	DM 629,465.00

Firm 'A' did not respond to either of the enquiries.

In May 1981 the Chairman and Director General, Ordnance Factory Board, informed SW that the tubes were required for manufacture of important Defence Service Store and that the source of supply was firm 'A' as the item was earlier purchased twice (1976 and 1978) from this firm. He also specifically asked SW to seek the assistance of the Military Attache of that Country in obtaining a quotation from firm 'A'. SW made no special effort to obtain quotation from firm 'A'.

The quotation of firm 'D' was negotiated with the firm in July 1981 and their rates were brought down from DM 18.79 per Kg. to DM 18.50 per Kg. (£ 4.45 per Kg.). The firm also agreed to give SW the option to increase the number of tubes up to 40,000 at the same rates when 20,000 tubes were offered for inspection. The purchase proposal for 20,000 tubes, at a price of DM 1850 per 100 Kg. and total cost of DM 619,750.00 (£ 148,950) was approved and firm 'D' was informed about acceptance of their offer by telex on 22nd July 1981. The contract was concluded on 23rd July 1981.

The following points were noticed in audit :

(a) The indenting authority did not assess initially the requirements of the material correctly which necessitated in inviting quotations twice and delayed procurement action.

(b) When the purchase proposal was under consideration, firm 'B' submitted a revised quotation by telex on 16th July 1981 at a total cost of £ 125,600 for 20,000 tubes of same specifications. This offer was lower by £ 23,350 as compared to the negotiated offer of firm 'D' and it had been received before the acceptance of the offer of that firm. SW failed to take any action on this revised offer of firm 'B'. However, SW stated (January 1983) that the revised telex offer of firm 'B' could not be dealt with as the concerned file was "somewhere between Minister(s) and F.A." and came back to the Section on 22nd July 1981 and at the same time telex acceptance was issued to firm 'D'.

(c) In telex dated 10th August 1981 the DGOF intimated SW that he was forwarding by post a quotation from firm 'A' (the firm suggested earlier by him), quoting for 20,000 tubes at a price of FF 27,300 per 100 Kgs. and requested SW to consider the quotation, which was technically acceptable. A copy of the quotation dated 8th July 1981 obtained by Audit, from the indentor in September 1982, disclosed that the actual rate quoted by firm 'A' was FF 2,730 per 100 Kgs. and not FF 27,300 per 100 Kgs. as erroneously transmitted in the telex dated 10th August 1981 of the DGOF. The rate quoted by the firm 'A' *viz.* FF 27.3 per Kg. or £ 2.83 per Kg. was thus lower than the contracted rate of £ 4.45 per Kg. of firm 'D' by £ 1.62 per Kg. Had SW obtained the quotation from firm 'A' as desired by Chairman and Director General, Ordnance Factory Board in his D.O. letter of May 1981, the extra expenditure of £ 51,735 in the purchase of 20,000 tubes could have been avoided.

(d) The first lot of 26,566 Kgs. of the material supplied by firm 'D' was inspected and passed on 31st August 1981 and shipped on 17th November 1981. On 23rd December 1981 the indentor instructed SW to increase the quantity by 18,000 numbers (29,092 Kgs.) by exercising the option under the contract, which SW did on 29th December 1981. Even at this stage the SW failed to take into consideration the lower offers of firms 'A' and 'B' in spite of the fact that the financial implication was considerable. Consequently, the exercise of the option involved further avoidable expenditure of £ 47,129 with reference to the rate quoted by firm 'A'. SW stated that the indentor despite being aware of the cost *vis-a-vis* price quoted by the firm 'A', directed SW to avail of the option clause on the firm 'D' and as such SW had no choice in the matter. The indentor, however, maintained that DGOF had already apprised SW of the cheaper offer of firm 'A'. SW, however, concluded contract on firm 'D' at high cost. It did not also make any attempt to obtain a copy of the firm's quotation from DGOF.

The deliveries under the contract were effected in four shipments of 17th November 1981 (26,566 Kgs.), 27th November 1981 (5,369 Kgs.), 17th May 1982 (24,603 Kgs.) and 12th November 1982 (4,489 Kgs.). The indentor asked SW on 4th

May 1982 by telex to suspend despatch of further quantities because the material supplied was showing serious defects on machining. SW sent a telex on 11th May 1982 to the firm but by then the shipment had already been made. The indentor agreed (August 1982) that the balance quantity could be shipped after ensuring that all residual stresses in the material had been relieved and the final shipment (4,489 Kgs.) was made on 12th November 1982.

According to the indentor's letter of August 1982 the stores received till then had developed distortion after machining operation and were being used by multiple machining operation with intermediate ageing treatment between successive machinings, resulting in more time for production and increasing the cost of machining. The indentor was requested by Audit (December 1982) to intimate the additional cost due to multiple machining operations and intermediate ageing treatment and increased production time for 56,538 Kgs. of supplies. The indentor stated (July 1983) that the information was being obtained from the factory.

Thus, failure by SW to take the lowest bid of firm 'A' into consideration when initially entering into the contract, and the failure by DGOF to take that bid into consideration while exercising the option for additional quantities had resulted in extra cost of £ 98,864 (Rs. 16.70 lakhs) to Government apart from the additional expenditure involved in multiple machining operations and intermediate ageing treatment and delay in production.

47. Delay in the award of contract

The Defence Research and Development Laboratory (indentor) placed (October 1978) an indent for a proprietary equipment (estimated cost : Rs. 5 lakhs) on the Supply Wing of an Indian Mission abroad (SW) from a particular foreign firm to be procured by March 1979.

A single tender enquiry was issued (November 1978) by the SW to the firm, who sought some technical clarification and also stated that the specification contained in the tender inquiry was inaccurate and that they would be supplying correct specification with their formal offer. No offer was, however, received from the firm nor did SW pursue the matter further with the indentor/firm, despite repeated reminders from the indentor.

The indentor supplied (March 1981) to SW a copy of their original indent for immediate action stating, *inter alia*, that foreign exchange of Rs. 13 lakhs was available and specification of the equipment had been changed to make it agree with the firm's booklet of March 1976. The SW obtained (June 1981) a telex quotation from the firm who quoted £ 93,350 (Rs. 15.78 lakhs) and a contract was placed (June 1981) on the firm for delivery by March 1982. The equipment was delivered in November 1982.

The following points were noticed in audit :

(i) Foreign exchange for the procurement of these goods was sanctioned in January 1978 and as early as May 1978, the firm had communicated to the indentor the fixed price of the equipments at £ 59,942 FOB foreign port valid for the period of delivery (delivery period being 15—18 months from receipt of order). While sending the indent, the indentor did not mention it to the SW. When the SW had enquired (November 1978) from the indentor the basis of indent estimate and the last purchase price, the latter informed (December 1978) that this was the first purchase and the estimate was based on information available with them in 1976/1977 but did not link up the firm's offer of May 1978. Failure to take advantage of the price initially quoted by the firm to the indentor resulted in an avoidable expenditure of £ 33,408 (Rs. 6.01 lakhs).

(ii) There was a delay of over 3½ years in delivery of stores.

SW stated (May 1983) that they were not responsible for the extra expenditure as they were not aware of the firm's offer of May 1978, adequate foreign exchange was not provided with the indent, and specification in the indent was not correct. Earlier in reply to a reference made by audit, the indentor had stated (March 1982) that "..........Delay has occurred from SW side in finalising the contract..................If SW had approached us we would have contacted our R&D headquarters to take appropriate action by making available FE at the time of finalising the contract".

The case was referred to the Ministry of Defence in July 1983 and their comments are yet to be received (October 1983).

CHAPTER 6

UTILISATION OF EQUIPMENT AND FACILITIES

48. Procurement of spring assemblies

A Central Ordnance Depot (COD) placed an indent on 30th January 1965 on the Director of Ordnance Services (DOS) for procurement of 18,590 spring assemblies for Shaktiman vehicles at an estimated cost of Rs. 34.54 lakhs. The Technical Development Establishment (TDE) (Vehicles) located at station 'X', while intimating (on 3rd February 1965) change in the design of spring assemblies to a new one of reinforced type, requested the COD to take action to supersede the old part numbers and to ensure procurement/stocking action for the new design. The TDE (Vehicles) also informed (24th February 1965) the COD, the DOS and the Director General, Supplies and Disposals (DGSD) to cater for the procurement of reinforced spring assemblies against the indent of January 1965.

On 28th April 1965, the DOS forwarded the indent (which indicated part numbers of spring assemblies of old design) to the DGSD. The latter placed (26th and 29th July 1965) two supply orders for 1,800 numbers (cost : Rs. 2.99 lakhs) and 16,790 numbers (cost : Rs. 32.76 lakhs) on firms 'A' and 'B' respectively against rate contracts for spring assemblies (as per old design) entered into with them on 16th July 1965. On 11th August 1965, the COD requested the DGSD to issue necessary amendment to the supply order of 26th July 1965 so as to indicate part numbers as per the new design. The DGSD asked (31st August 1965 and 17th September 1965) the two firms to suspend production of spring assemblies. The TDE (Vehicles) decided that procurement of spring assemblies of old design (which were still in use in production line) should continue as there was no scope in the rate contract already entered into by the DGSD for change in design. The suspension orders given to the two firms were withdrawn (October 1965).

To meet the replacement demands of about 7,000 vehicles (fitted with old spring assemblies) on road, further supply orders for 4,400 spring assemblies of old design (cost : Rs. 10.78 lakhs) were placed by the COD on firm 'B' during June and December 1966. In all, 22,990 spring assemblies (cost : Rs. 46.53 lakhs) were supplied by firms 'A' and 'B' during November 1965—May 1967.

In January 1968, Electrical and Mechanical Engineering Directorate at the Army Headquarters issued instructions that spring assemblies of the old design, as and when broken, be replaced with the new reinforced design as the breakages of spring assemblies of the old design, were attributed to inherent weakness in the design. In March 1970, the DOS communicated to the COD the remarks of inspection authorities to the effect that spring assemblies of the old design should be utilised on old vehicles fitted with the same after modification by Base Workshop even though this meant accepting a little less efficiency.

One Base Workshop was nominated (November 1973) for carrying out modification of old spring assemblies. Out of 22,990 spring assemblies procured over 15 years ago, 1,200 numbers were modified during 1978—1982; remaining 21,790 numbers (cost : Rs. 43.59 lakhs) were yet to be modified (March 1983).

Out of modified spring assemblies, 1,077 numbers were issued to various units up to March 1983. In the meantime, the question of utilisation of old spring assemblies after modification had been under consideration of the vehicle factory since January 1979. The vehicle factory intimated (December 1981) that it would not be advisable to utilise the modified spring assemblies as original equipment since these were not likely to meet original requirements. During joint inspection by the Inspectorate of Vehicles of the Zone concerned and the vehicle factory in October 1982, the modified spring assemblies were again not found suitable for use as original equipment.

The Ministry of Defence stated (July 1983) that delay in utilisation of old spring assemblies was due to less wastage on account of use of reinforced spring assemblies in new vehicles, replacement of original spring assemblies fitted with vehicles on road by modified/reinforced ones and late decision by the technical authority/delay in modification.

The case reveals the following points :

— Notwithstanding the supersession (February 1965) of old spring assemblies by reinforced type 22,990 spring assemblies of old design (cost : Rs. 46.53 lakhs) were procured during 1965—1967 on clearance given by the TDE (Vehicles) without first exploring the possibility of their utilisation.

— While the decision to modify the old spring assemblies was taken in early 1970, only 1,200 spring assemblies were modified up to end of 1982, indicating very slow progress of modification over a period of 13 years.

— 21,790 old spring assemblies (cost : Rs. 43.59 lakhs) procured more than 15 years ago still (March 1983) remained unutilised and prospects of their utilisation in future are bleak.

49. Procurement of X-Ray machines

The Director General, Armed Forces Medical Services (DGAFMS) raised (May 1972) an indent on the Director General, Supplies and Disposals (DGSD) for procurement of 20 sets of X-Ray machines (total estimated cost : Rs. 12.20 lakhs) by December 1972 or earlier for replacing the existing old X-Ray machines in Service Hospitals. In response to a tender enquiry floated in July 1974, the DGSD received quotations from four firms ('A', 'B', 'C' and 'D') and forwarded (16th September 1974) the same to the DGAFMS for scrutiny and recommendations. The DGAFMS recommended (December 1974) acceptance of the quotation of firm 'D' (Rs. 21.17 lakhs) and rejected the quotations of other firms ('A'—Rs. 14.90 lakhs; 'B'—Rs. 17.22 lakhs and 'C'—Rs. 20.02 lakhs) as they did not conform to specifications or found technically unsuitable. This was not agreed to by the Ministry of Finance (Defence) and finally the machine offered by firm 'B' was selected and the decision was communicated (28th February 1975) by the DGAFMS to the DGSD.

A contract was concluded (May 1975) by the DGSD with firm 'B' for supply of 20 sets of the machine at a total cost of Rs. 17.32 lakhs. The first two sets were to be supplied in 8 weeks after acceptance of the advance sample which was to be installed in a Command hospital at station 'X' by 15th July 1975 for initial trial run for a month and thereafter two sets every month. The firm could not, however, instal the advance sample at the hospital by the stipulated date and consequently the contract was cancelled (4th October 1975) by the DGSD at the risk and expense of the defaulting firm.

In December 1975, a fresh contract was concluded by the DGSD with a State Government undertaking (which was actually the manufacturer of the make and brand of the machines offered earlier by firm 'B') for supply of 20 sets at a total cost of Rs. 16.40 lakhs. The undertaking was to supply two machines per month from the date of approval of the advance sample which was to be installed at the hospital by 5th January 1976 for initial trials by the users for one month and thereafter the advance sample was to be installed in a hospital at station 'Y' for intensive trials by a Senior Advisor in radiography for a further period of two months and after obtaining its approval, the undertaking was to commence bulk production. According to the Ministry of Defence (Ministry), this arrangement was made to ensure quality control.

The advance sample of the machine was installed (January 1976) in a hospital for initial users' trials during which a number of drawbacks and deficiencies were noticed (June 1976). Thereafter, the machine was transferred to the Army hospital at station 'Y' and installed there in early November 1976. A Board of Officers held at the Army Hospital on 12th November 1976 examined the machine and listed 16 deviations from the specifications (which were either acceptable or waived) and suggested modifications in respect of 8 features. The DGAFMS, therefore, requested (7th December 1976) the DGSD to ask the undertaking to incorporate the modifications as suggested by the Board and to take up bulk production. Approval of the Director General of Inspection to bulk production was accorded in February 1977.

Supplies commenced from February 1978 and were completed by August 1979. The undertaking was paid Rs. 14.76 lakhs being 90 per cent payment of contract value. 20 sets were installed during April 1978—September 1981 and their final inspection was carried out during December 1980—April 1983; the period intervening between installation and final inspection ranged from 3 to 57 months (in 10 cases the intervening period was over 36 months).

Another indent for 24 sets of the same type of X-Ray machines was raised (June 1977) on the DGSD for delivery during March—August 1978. In response to a tender inquiry floated in August 1977, the DGSD received (October 1977) quotations from three firms (including the State undertaking). A Board of Officers held in December 1977 recommended that the State undertaking be advised to arrange supply of machines with modifications already agreed upon. The DGAFMS informed (March 1978) the DGSD that necessary contract with the undertaking could be placed after obtaining confirmation that the latter would commence supply against current demand not later than July 1978. A contract with the undertaking for supply of additional 24 sets at a total cost of Rs. 20.07 lakhs at the rate of 4 machines per month (supply to be completed by 31st December 1978) was placed by the DGSD in June 1978. The supplies against the second contract commenced from July 1978 and were completed by July 1980; the State undertaking was paid Rs. 18.06 lakhs being 90 *per cent* payment of contract value. These 24 sets were installed during September 1979—April 1983 and were finally inspected during September 1980—April 1983 (final inspection of 14 sets was done only in 1983); the maximum period between installation and final inspection was 43 months.

The inordinate delay in installation of the machines was attributed (July 1983) by the Ministry to the State undertaking being new and raw in dealing with the procedure of supplies through the DGSD, not having the efficient repair backing for a large number of machines within the given time and the rigid stand taken by the State undertaking of not taking up installations pending clearance of payments for the machines already installed.

In November 1979 and March 1980, the DGAFMS had pointed out to the DGSD that complaints had been received from various consignees about the machines installed not functioning satisfactorily; even where the defects were rectified by the State undertaking, their performance over a period of one year was very poor and repeated break-downs hampered the clinical investigation work seriously. As a result of final inspection of the machines carried out by the technical engineer authorities of the Armed Forces Medical Stores Depots, deficiencies/defects in the machines installed in 16 Service hospitals were noticed and the same were reported by the Service hospitals to the undertaking from time to time. In June 1981, the DGAFMS invited attention of the undertaking to the defect reports of Service hospitals and requested rectification of the defects and supply of discrepant items to enable the hospitals to make use of the machines. After the undertaking attended to these defects, the machines were in use off and on though with limitations. As on March 1983, 7 machines though installed were not functional due to defects such as non-working of bucky, spot film device, spot film device lock and vertical column lock; the machines also required calibration to cater to specific technique. The machines installed at three hospitals had also developed (July 1983) certain defects.

The Ministry stated (July 1983) that the State undertaking was not able to rectify the defects arising in the machines after installation due to non-availability of servicing/repair manuals which delayed the final inspection of the machines. The old machines of second world War vintage with limited capacity were reported to have been made use of for radiological investigation work during the period of delayed supplies.

The case revealed the following points :

— 44 X-Ray machines (cost : Rs. 36.47 lakhs) were contracted with a State undertaking in December 1975 and June 1978; these machines were supplied after acceptance/waiver of 16 deviations from the specifications.

— Inordinate delay occurred in installation/final inspection of the machines, the delay ranged from 3 to 57 months in respect of 20 machines procured against the contract of December 1975 and up to 43 months in respect of 24 machines procured against the contract of June 1978.

— There were repeated complaints of breakdowns and non-functioning of the machines from Service hospitals (where the machines were installed) and the machines could be used off and on with limitations.

— 7 machines (cost : Rs. 5.80 lakhs) were yet (July 1983) to be made functional.

CHAPTER 7

ARMY

50. De-requisitioning of land and purchase/hire of flats constructed on it

An area of 1,21,969 square yards (sq. yds.) of land in a metropolitan city was leased by Government to firm 'X' for a period of 999 years from 1st January 1874 at an annual rental of Rs. 8,000. The Defence Department requisitioned 32,250 sq. yds. (6.66 acres) of this land in 1943 at an annual recurring compensation of Rs. 56,016. The land was used both by the Army and Navy for a supply depot, victualing yard and workshop since the date of its requisition.

In March 1971, the Ministry of Defence (Ministry) decided to acquire an area of 9,680 sq. yds. (2 acres) out of the requisitioned land for use of the Navy and to de-requisition the balance area as the cost of acquisition of balance land was estimated to exceed Rs. 3 crores. The Town Planning and Valuation Department of the State Government assessed (January 1972) the value of the requisitioned land at Rs. 400 per sq. yd.

In 1958, firm 'X' went into liquidation and the official liquidator appointed by the High Court advertised (February 1972) for the sale of reversionary interest of a portion (measuring about 18,200 sq. yds.) of the requisitioned land. The High Court directed (March 1972) the official liquidator to accept and confirm the offer of firm 'Y' to purchase the title to this property for Rs. 12.11 lakhs (at the rate of Rs. 66.54 per sq. yd.) subject to the requisitioning agreement of 1943.

After ascertaining the requirements of the three Services and considering the vantageous location of the area, the Military Estates Officer (MEO) took up (September 1972) the matter with the Command Military Lands and Cantonments authorities for acquiring the entire requisitioned land (6.66 acres) at the rate at which its rights were sold to firm 'Y'; the MEO recommended (May 1972) the valuation of this land at Rs. 850 per sq. yd. (*i.e.* about 1275 *per cent* of the actual sale value) assessed in 1971.

Firm 'Y's request for de-requisitioning of land measuring 15,580 sq. yds. was accepted (April 1973) by the Ministry subject to fulfilment of certain conditions, although necessity for requisitioning had not ceased to subsist. The considerations on which land was de-requisitioned, were later ratified by entering into agreements with firm 'Y' in August 1975 and January 1978. Under these agreements, firm 'Y' evolved a scheme for construction of multistoreyed ownership flats and sale of 65 flats at concessional terms to Service Officers, who would in turn hire them to Government in consideration of Government agreeing to de-requisition the land. Under a sanction issued in October 1977, the Ministry agreed to purchase from firm 'Y' 24 flats (with an area of 800 sq. ft. each) and 12 garages at a total cost of Rs. 22.80 lakhs and to hire 41 flats from the Service Officers through firm 'Y' at Rs. 1,000 per month per flat for a period of 10 years. The local Naval authorities were required to become members of the association or society to be formed later under the State law. Firm 'Y' provided the Service Officers with loan facilities (at the instance of the Ministry) of Rs. 50,000/60,000 each and they, in turn, executed an agreement with firm 'Y' agreeing to hire these flats to Government at Rs. 1,000 per month for 10 years and allowing firm 'Y' to deduct the instalments of loan from the rent payable by Government. The Service Officers also executed another agreement with the Government to this effect.

Ninety-five *per cent* of the value of 24 flats purchased by Government from firm 'Y' was paid by March 1979 and possession of the flats was taken during July 1978—April 1979.

Forty-one flats were also taken on hire by Government during June 1978—March 1979; out of which 3 flats were de-hired by Government between May 1979 and June 1981 against condition of hire for a period of 10 years stipulated in the agreement of August 1975. Three more flats were subsequently de-hired on compassionate grounds. Though 95 *per cent* of the value of the flats purchased by Government was paid, according to legal opinion the property could not be said to have become the property of the Government by reason of the agreements entered into with firm 'Y'.

The Ministry stated (October 1983) that the considerations underlying the purchase of flats as opposed to their being taken on hire were (i) rather than paying Rs. 1,000 *per mensem* for 10 years and giving up the flat after 10 years, it would be more economical to purchase the flat at Rs. 95,000 per flat and the flat would vest with the Government including the proportionate rates on the land under building and (ii) construction of similar accommodation from Government resources could cost more *i.e.* Rs. 1.10 lakhs approximately (per flat). The Co-operative Society was reported to have been registered on 29th September 1983 and the conveyance deed was yet to be executed.

The following are the salient features of this case :

— Out of 32,250 sq. yds. of land requisitioned (1943) in a metropolitan city, 15,580 sq. yds. was sanctioned (April 1973) for de-requisition, although necessity for requisitioing had not ceased to subsist.

— Although the value of requisitioned land was assessed in 1971 at the rate of Rs. 850 per sq. yd. which was very high as compared to the value of Rs. 66.54 per sq. yd. at which sale of right of title of 18,200 sq. yds. of land to firm 'Y' was effected, the Defence Department lost an opportunity of acquiring the land (under requisition since 1943) at a cheaper cost.

15,580

— In consideration of de-requisitioning of ~~18,200~~ sq. yds. of land, firm 'Y' offered to sell 41 flats at concessional rates to Service Officers who were to hire them to Government, which resulted in pecuniary gains to firm 'Y' and Service Officers.

— Government indirectly guaranteed re-payment of private loans taken by Service Officers from firm 'Y'.

— As per legal opinion, Government has no legal title to the property purchased in spite of payment of 95 *per cent* of the cost of flats having been made to firm 'Y'.

— Six flats were de-hired within 2 to 5 years of their hiring as against the stipulated period of 10 years.

CHAPTER 8

NAVY

51. Loss due to non-revision of charges for handling of explosives by the Navy

Based on the recommendations of the Ports Dangerous Goods Committee, the Ministry of Defence (Ministry) decided (May 1957) that the Navy would undertake the entire work of handling of all explosives (commercial as well as those belonging to the Defence Services) including technical supervision of loading/unloading, repacking, repairing and demolition as necessary and their despatch to ultimate consignees. The charges on account of such services rendered by the Navy to commercial firms, etc. are recovered from the parties concerned at the rates fixed from time to time by the Ministry. For this purpose formal agreements are entered into with the commercial firms on whose behalf the explosives are handled by the Navy.

The rates notified by the Ministry in January 1972 for handling of explosives by the Navy were to remain operative for a period of 5 years after which the same were to be reviewed. On being pointed out (March 1973) by Audit that in the context of fast rising costs, the period of 5 years was too long for any rates to remain fair, the Ministry considered (April 1973) that a review after 3 years would be alright. Accordingly, the rates fixed in January 1972 were revised (November 1975) keeping in view the increase in pay and allowances of the staff (from 1st January 1973) and escalation in general price level. The revised rates were made effective from 1st December 1975 and were to remain operative till reviewed.

The local Naval authorities at Port 'X' entered into (August 1976 and May 1978) agreements with firms 'A' and 'B' for handling etc. of explosives for a period of 5 years with retrospective effect from 1st December 1975 and 6th September 1975 respectively at the following rates :

Nature of charges	Rates (per tonne) effective from	
	6th September 1975	1st December 1975
Handling charges . .	Rs. 120	Rs. 200
Loading/unloading charges	Rs. 60	Rs. 105
Afloat storage charges . (average)	Rs. 183	Rs. 310

The agreement with firm 'A' provided that the rates mentioned therein were subject to revision by Government on 3 months notice. The agreement with firm 'B' stipulated that these rates were subject to revision at any time and would be binding on the firm.

In May 1977, the Naval HQ requested the local Naval authorities at Port 'X' to carry out a full review of the rates. Finalised proposals were received in the Naval HQ by end February 1982 (*i.e.,* after about 5 years) and the case was put up to the Ministry in May 1982. The proposed revised rates per tonne (handling charges : Rs. 300, loading/unloading charges : Rs. 180 and afloat storage charges-average—Rs. 715) proposed (May 1982) by the Naval HQ are substantially higher than the existing rates and are yet to be approved (July 1983). Meanwhile, the agreements with firms 'A' and 'B' had expired on 30th November 1980 and 5th September 1980 respectively.

Fresh agreements concluded with firm 'B' in November 1981 (for 5 years from 6th September 1980) and with firm 'A' in April 1982 (with retrospective effect from 1st October 1981) at the existing rates (effective from 1st December 1975) provided that the rates were subject to revision by the Government at any time. Although the existing rates notified in November 1975, which were to be considered for revision after an interval of 3 years, were already in the process of revision at the time of concluding the agreements with firms 'A' and 'B', the agreements did not contain any provision for retrospective application of the revised rates.

The Navy was also handling explosives on behalf of 5 public sector undertakings and charging the rates effective from 1st December 1975.

Due to non-revision of rates to be charged for handling explosives by the Navy, recoveries continued to be effected at the existing rates (effective from 1st December 1975).

The loss suffered for handling of explosives on behalf of private firms and public sector undertakings during 1979 to 1982 amounted to Rs. 51.58 lakhs and Rs. 53.71 lakhs respectively. According to the Ministry (August 1983), the situation arose since there was no escalation formula for automatic revision of rates and action was in hand for finalisation of the case relating to revision of rates.

52. Delay in setting up repair/overhaul facilities for a certain helicopter

Helicopters of a certain type purchased from abroad were introduced in the Navy in 1971. The Naval Headquarters (Naval HQ) proposed (July 1972) the setting up of repair/overhaul facilities for its airframe at an estimated cost of Rs. 80 lakhs (Rs. 60 lakhs in foreign exchange) at a Naval repair establishment on the ground that the helicopter had no commonality with any other helicopter being operated by the Air Force or manufactured by a public sector undertaking and no repair facilities existed with either of these agencies. The Ministry of Finance (Defence) agreed (January 1973) in principle subject to the Naval HQ furnishing the costed details of tools and test equipments, details of repair documentation, training of personnel abroad, spread of expenditure, etc. for further examination.

Based on an evaluation carried out by the Naval HQ between 1972 and 1976, the information obtained (1972) from the manufacturers of the helicopter and updated in cost for the intervening period, the Naval HQ sought (August 1976) sanction of Government to an expenditure of Rs. 117 lakhs (foreign exchange : Rs. 92 lakhs) for setting up the repair/overhaul facilities. According to the Naval HQ, obtaining (fresh) quotations and costing of the project in its totality would be time consuming and the prices obtained would remain valid for not more than 3 to 6 months.

The Ministry of Finance (Defence) asked for (January 1977) system-wise estimates for all the major systems of the helicopter for considering sanction to the project. The Naval HQ gave (July 1977) a revised proposal for Rs. 154.40 lakhs (Rs. 134.57 lakhs in foreign exchange) indicating system-wise estimated cost in respect of components/assemblies for which repair facilities were to be established. The increase in cost was reported to be due to escalation of prices in the country of manufacture of the helicopter. On commencement of the project, the expenditure on repair abroad was expected to reduce which would reach 80 *per cent* of the repair task done abroad on completion of the project. The Government sanction for the project was accorded in November 1979.

The project was taken up for execution soon after and according to the Naval HQ, establishment of the repair/overhaul facilities would be completed during 1984-85. The expenditure incurred on the project up to June 1983 was Rs. 77.20 lakhs. Meanwhile, the helicopter had completed 12 years' life with the Navy and the repairable arisings of its components and assemblies (including those for which facilities were being set up) continued to be sent abroad for repairs. The total expenditure incurred on their repair during 1976—82 amounted to about Rs. 281.05 lakhs (in foreign exchange) which included Rs. 87.58 lakhs on repair of components etc. covered by the project.

The unusually long time taken in sanctioning and establishing the repair/overhaul facilities for the airframe of the helicopter not only resulted in escalation in the cost (93 *per cent*) for setting up these facilities but also necessitated their sending abroad for repairs, which involved an expenditure of Rs. 87.58 lakhs (in foreign exchange) during 1976 to 1982.

The Ministry of Defence stated (September 1983) that even though the number of components sent abroad for repair progressively decreased, there was no obvious reduction in expenditure in repair abroad, which is attributable solely to increased cost of repair of each item sent abroad for repairs.

53. Extra expenditure on import of an indigenously available item

Based on a demand projected (June 1977) by a Naval Dockyard, the Naval Headquarters (Naval HQ) placed (January 1978) an indent on the Supply Wing of an Indian Mission abroad for procurement of 81 items (including 227 numbers of item 'A') of machinery spares estimated to cost Rs. 8.82 lakhs. While forwarding (June 1978) the quotations for 73 available items received from 3 sources, the Supply Wing stated that the total cost based on the lowest quotations worked out to £ 209,535.71 (Rs. 33 lakhs) and asked the Naval HQ for additional foreign exchange. After examination the Naval HQ reduced the quantities in respect of 12 items and cancelled 3 items of the original indent (the indented quantity of 227 numbers in respect of item 'A' for which the lowest quotation was £ 45,030, was reduced to 110 numbers) and requested (14th July 1978) the Supply Wing to conclude contracts for earliest delivery by covering total Free Foreign Exchange through delegated powers. The Supply Wing concluded three contracts on 21st July 1978. The total cost of 110 numbers of item 'A' contracted was £ 24,220.97 (or Rs. 3.81 lakhs *i.e.,* Rs. 3,468 each). The contracted quantity of item 'A' was received during March and November 1981.

After raising the demand, the Naval Dockyard had placed (November-December 1977) local purchase orders for 82 numbers of item 'A' on an indigenous firm at the rate of

Rs. 1,200 each (plus Central Sales Tax @ 4%) *i.e.* much below the cost at which the item was later imported. The entire quantity was received during March 1978.

According to the Naval HQ, the local purchase of item 'A' by the Naval Dockyard was not known to them. Neither indigenous availability of item 'A' nor the comparative costs of the imported item *vis-a-vis* the indigenous item was kept in view while communicating the revised requirements in July 1978.

The Ministry of Defence stated (October 1983) that the whole quantity of item 'A' received against the local purchase orders was issued out by September 1978 and after issue the performance of the item had to be evaluated before cancelling the quantity indented on the Supply Wing, which had not been done within the short period and hence considered advisable in the interest of operational efficiency of the fleet to retain the dues-in of the indented (reduced) quantity from abroad.

As the Naval HQ were not even aware of the local purchase of item 'A' effected by the Naval Dockyard at the time of projecting (July 1978) the revised requirement on the Supply Wing and since substantial quantity of the item could be procured indigenously during the short period, import of the item at a cost of Rs. 3.81 lakhs in foreign exchange resulted in an avoidable extra expenditure of Rs. 2.44 lakhs.

54. Unnecessary and in-judicious local purchase of boiler tubes for the Naval ships

Boiler tubes steel solid of the patternised class used in Naval ships were being procured from abroad in the absence of development of indigenous sources of supply. In March 1979, March 1980 and November 1980, the Naval Headquarters (Naval HQ) raised three indents on the Supply Wing of an Indian Mission abroad for procurement of boiler tubes of different patterns. Against the indents of March 1979 and March 1980, the Supply Wing concluded contracts with firm 'A'

(August 1979 and August 1980). Supplies in different patterns of 4,692 boiler tubes (cost : Rs. 6.70 lakhs) against the first contract materialised during September and December 1980; supplies of 6,254 boiler tubes (cost : about Rs. 10.90 lakhs) against the second contract materialised during April and July 1982. Supplies against the third indent which were covered by a contract concluded (July 1981) with firm 'C', materialised in January 1983. The Naval Stores Depot at station 'X' received the entire supplies of these tubes.

In September 1980, the Naval Dockyard at station 'X' decided to resort to emergent local purchase of items critically required for issue, in view of pendency in items demanded by users. Based on a study by a project team of two officers constituted for this specific purpose, the Naval Dockyard placed 29 local purchase orders on two firms 'D' and 'E' during October—December 1980 for the procurement of boiler tubes (1,312 boiler tubes of the "patternised" class costing Rs. 2.87 lakhs and 137 boiler tubes of the "non-patternised" class costing Rs. 0.87 lakh). The supplies materialised in February 1981. The local purchase rates for boiler tubes of the "patternised" class (ranging from Rs. 198 to Rs. 252) were found to be higher as compared with the corresponding f.o.b. rates for tubes procured from abroad (ranging from Rs. 137 to Rs. 191 plus transportation charges). The value of each local purchase order was within the financial powers delegated to the Dockyard authorities.

The boiler tubes purchased locally could not be utilised as prior approval of the Naval HQ for use of the indigenous item had not been obtained by the Dockyard. The approval was still to be accorded (October 1983). 14,984 boiler tubes (13,535 imported and 1,449 purchased locally) costing Rs. 22.55 lakhs were lying in stock in April 1983.

The Ministry of Defence stated (October 1983) that test report of boiler tubes covering all the parameters of specification was awaited from the Dockyard authorities.

CHAPTER 9

AIR FORCE

55. Non-utilisation of indigenously developed equipment

In November 1968, two orders for the manufacture and supply of 893 numbers of an indigenously developed equipment intended for use by certain subsonic aircraft were placed by the Air Headquarters (Air HQ) on a public sector undertaking on cost plus 10 *per cent* profit basis. The estimated unit cost of the equipment shown in these orders was Rs. 1,648 (total cost : Rs. 14.72 lakhs) to be amended on receipt of cost from the undertaking. The delivery schedule given by the undertaking was 320 in 1971, 530 in 1972 and 43 numbers in 1973.

The undertaking supplied 116 numbers of the equipment during March 1973—August 1976, 73 numbers during 1976-77 and 1978-79, making a total of 189 numbers as against 893 numbers ordered. The shortfall in supply was 704 numbers, which was met by imports. The Ministry of Defence (Ministry) attributed (January 1980) the delay and shortfall in the delivery of the equipment to non-supply/late supply of materials and difficulties encountered in the manufacture of casting by the undertaking during 1972-73, change in design of the equipment in 1974 and the technical problems encountered in the production of the modified design.

Out of 189 numbers supplied up to 1978-79, 13 were used in trials during January 1979 and the remaining 176 could not be put to use for want of one critical component of the equipment without which the equipment could not be put to operational use. Trials conducted (September 1980) with the help of a substitute component developed by the undertaking were also not successful and structural defects were observed.

Meanwhile, the fleet of one type of subsonic aircraft was phased out from service with effect from 1st April 1976; the squadron strength of another type of such aircraft also started decreasing from 1st April 1980. As no stabilised production of the equipment could be achieved and as the subsonic fleet on which the equipment was to be used was expected to be out of service from 1985-86 onwards, the Air HQ recommended (October 1980) that the balance order of 704 numbers of the equipment on the undertaking be cancelled and the undertaking be asked to develop the deficient component fot the equipment already delivered so that the same could be utilised on the fleet of subsonic aircraft before being finally phased out.

The undertaking supplied another 13 numbers during 1980-81; no further supplies were made thereafter. Thus, only 22.5 *per cent* of the quantity ordered was supplied by the undertaking and even the quantity supplied (excluding 13 numbers consumed in trials) remained non-operational for want of a critical component. An expenditure of Rs. 142.97 lakhs (including Rs. 27.98 lakhs on account of redundant materials) was incurred by the undertaking up to March 1982 on the production of the equipment, against which 'on account' payments amounting to Rs. 73.89 lakhs were made.

The Ministry stated (February 1983) that the Design complex of the undertaking had established that the equipment could be adopted for another new aircraft and that the possibility of utilising this equipment on other aircraft was still being explored. The value of redundant materials lying with the undertaking at the end of March 1982 was Rs. 27.98 lakhs.

While the possibility of utilising the equipment on which an expenditure of Rs. 142.97 lakhs had been incurred up to March 1982, was still being explored, the equipment supplied by the undertaking 4 to 10 years ago could not be utilised due to deficiency of a critical component.

56. **Overpayment due to incorrect fixation of pay of airmen**

Government orders regarding the revised pay scales for Air Force personnel effective from 1st January 1973 were notified in August 1974. During implementation of the Government orders, the Air Force Central Accounts Office (AFCAO) noticed anomalies in the fixation of pay in respecpt of airmen promoted as Corporals (in Group III) because the juniors were getting more pay than their seniors. Since the Air Headquarters (Air HQ) desired (August 1975) to take up the anomaly with the Ministry of Defence for clarification/amendment of the Government orders, the Controller of Defence Accounts (CDA) concerned was requested to give his Report on the matter. The CDA advised (December 1975) the Air HQ to obtain the orders of the Government for removal of the anomaly in pay fixation.

In February 1977, a corrigendum was issued to Government orders stipulating *inter alia* that in cases where an airman promoted to a higher rank after 1st January 1973 was getting more pay in the revised scales than another airman belonging to the same pay group and promoted to the same higher rank before 1st January 1973, the pay of the senior airman would be stepped up to a figure equal to the pay as fixed for the junior airman, but the actual benefit would be available from 18th July 1974 or from the date of promotion of junior airman whichever was later. Cases of senior airmen drawing less pay in the revised pay scales than their juniors in respect of promotion occurring on or after 1st January 1973 were also to be regulated in the same manner.

In May 1978, the internal audit authorities observed that in certain cases where the promotion of the "senior" airman took place after the promotion of the "junior" airman and when the "senior" airman got more pay after his (delayed) promotion than the junior airman who was promoted earlier, the pay of the junior airman promoted earlier was stepped up by the AFCAO to the level of pay as fixed for the senior airman promoted later. The internal audit authorities pointed out that the benefit of stepping up of pay in such cases was not free from doubt being contrary to the basic concept of stepping up. Such fixation of pay was formally placed (July 1978) under objection. In August 1978, the Air HQ took up the case with the CDA stating that the pay fixation had been done correctly in terms of the corrigendum of February 1977.

In September 1978, the Air HQ advised the AFCAO to discontinue stepping up of pay in fresh cases and effect recoveries provisionally from airmen leaving service. Payments in respect of already stepped up cases were, however, continued to be made. The continuance of payments, considered inadmissible by the internal audit authorities pending a final decision of the competent authority, was contrary to the instructions issued by the Government in May 1961. While not accepting the contention of the Air HQ, the CDA advised (December 1978) the Air HQ that in case the latter did not agree to review pay fixation cases of affected airmen, the matter should be taken up with the Government for clarification. In September 1979, the Air HQ sponsored another corrigendum clarifying the intention of the earlier corrigenda and the same was issued (1st August 1980) indicating that the benefit of stepping up of pay was to be allowed subject to fulfilment of the following conditions :

- the senior airman was senior in lower rank too ;
- the senior airman was not drawing less pay than his junior in the lower rank ; and
- the anomaly should be the direct result of the pay fixation in the revised pay scale.

This corrigendum was deemed to have been issued with the original orders (of August 1974) as it was viewed as a mere clarification of the earlier orders.

Thereafter, instructions were issued (22nd August 1980) by the Air HQ for reviewing cases of pay fixation done under the corrigendum of February 1977 and re-fixing the pay with retrospective effect wherever it was not in conformity with the provisions of the latter corrigendum of 1st August 1980. Pay at the refixed rates was to be allowed from 1st August 1980. The overpayments for the period up to 31st July 1980 due to incorrect fixation of pay were worked out by the Air Force authorities as Rs. 97.13 lakhs.

The whole matter was examined by the Ministry of Defence in consultation with the Ministry of Finance (Defence) and Ministry of Finance (Department of Expenditure) and the following decisions were taken in a meeting held on 18th February 1983 :

— Cases in which the fixation of pay under the corrigendum of February 1977 had been stopped as a result of audit objection should not be reopened.

— In cases in which pay had already been fixed under the corrigendum of February 1977 and payments were made till the issue of corrigendum of 1st August 1980, were not to be disturbed.

— The provisional recoveries effected from the airmen at the time of their leaving service be refunded.

The Ministry of Defence accorded (April 1983) sanction to the waiver of recoveries of overpayment made to airmen as a special case and to refund the amount provisionally recovered from non-effective airmen. The sanction did not, however, indicate the financial effect of the overpayments.

The case reveals that even after incorrect fixation of pay of airmen was formally placed (July 1978) under objection by the internal audit authorities, payments considered inadmissible were continued to be made by the Air Force authorities in contravention of the Government instructions of May 1961. Although the corrigendum of 1st August 1980, being clarificatory in nature, was deemed to have been given retrospective effect, continuance of overpayments up to 31st July 1980 due to incorrect fixation of pay left the Government with no alternative but to waive recovery of huge amount of Rs. 97.13 lakhs.

57. Avoidable extra expenditure on repair of rotables

Repair/overhaul of aircraft, aero-engines and rotables is undertaken by the repair agencies concerned on the basis of repair/overhaul task assigned to them with the approval of the Ministries of Defence and Finance (Defence). The repair/overhaul requirements are worked out annually with reference to anticipated repairable arisings during the task period and other relevant factors like total serviceable/repairable stock held, repair cycle, forecast rate of consumption, etc. The firm task is fixed for the succeeding year and forecast task for the next four years to enable the repair agencies to plan for repair/overhaul programme.

Based on a review carried out by the Air Headquarters (Air HQ) in October 1977, the approved repair task of rotables pertaining to two types of helicopters for the years 1978-79 to 1982-83, was communicated (November 1977) to the repair agency—a public sector undertaking (hereinafter 'undertaking'). The total repair task calculated (at the time of review) and task approved (firm/forecast) assigned to the undertaking for 1978-79 and 1979-80 vis-a-vis the actual output for 1978-79 in respect of 6 items of rotables was as under :

Sl. No.	Description of rotable	Total repair task calculated (as per review)		Task approved		Task assigned to the undertaking		Actual output
				(Firm)	(Forecast)			
		1978-79	1979-80	1978-79	1979-80	1978-79	1979-80	1978-79
		Nos.	Nos.	Nos.	Nos.	Nos.	Nos.	Nos.
1.	Main Gear Box	68	74	40	40	24	24	30+1*
2.	Main Rotor Head .	48	51	45	45	45	45	25
3.	Clutch Unit	33	51	30	35	30	35	41
4.	Tail Gear Box .	67	68	50	50	50	50	48
5.	Tail Rotor Head .	65	68	50	50	50	50	41+1*
6.	Hydraulic Drag Damper .	47	36	20	35	20	35	24+1*

*Beyond Economical Repairs.

The firm and forecast tasks approved were less than the total repair task calculated for the related periods. In respect of one of these rotables (Main Gear Box), the task assigned to the undertaking was even less than the approved task (24 numbers as against the approved task of 40 numbers). This was stated to be due to a typographical error. The undertaking in fact exceeded the repair task assigned in respect of 3 items of rotables (Sl. Nos. 1, 3 and 6); in respect of 2 other items (Sl. Nos. 2 and 5) the undertaking claimed that the shortfall was due to technical difficulties and in respect of 1 item (Sl. No. 4) the shortfall was marginal.

The next annual review of the repair task for these rotables was carried out in October 1978, according to which the total repair task calculated was more than the forecast task worked out earlier (October 1977) and as such firm and forecast task for the year 1979-80 and succeeding four years, which were approved and assigned to the undertaking in January 1979, were more than those assigned to the undertaking in November 1977. The undertaking expressed (February 1979) its inability to accept increase in the repair task for two years *i.e.* 1979-80 and 1980-81 as provisioning action for the spares had been taken only for the forecast task already intimated in November 1977 for these two years, but agreed to accept marginal increase in the repair task for the years 1979-80 and 1980-81 and noted the additional forecast projection for subsequent years (1981-84).

The Air HQ pointed out (July 1979) that repair of these rotables was causing concern due primarily to low production by the undertaking against the approved repair task during the last few years resulting in the grounding of a sizeable helicopter fleet. In order to maintain the serviceability of these helicopters, the Air HQ initiated (July 1979) a case for repair of these rotables by the manufacturer abroad. It was also indicated that though the cost of overhaul abroad would be almost double the cost of overhaul by the undertaking, there was no other option available. The Department of Defence Production, however, stated (August 1979) that the agreed task in the previous 4 years had been met by the undertaking except for marginal shortfall in respect of two rotables.

After considering the critical position of the rotables, the Ministry of Defence sanctioned (November-December 1979) the repair/overhaul of the following quantities of 6 items of rotables from either the manufacturer or repair agencies abroad at a total cost of Rs. 79.45 lakhs including transport charges :

Sl. No.	Item	Numbers
1.	Main Gear Box	25
2.	Main Rotor Head	20
3.	Clutch Unit	20
4.	Tail Gear Box	5
5.	Tail Rotor Head	5
6.	Hydraulic Drag Damper	20

A contract was concluded (January 1980) with the manufacturer for repair of the above rotables (only 18 numbers in the case of Sl. No. 6) at a cost of Rs. 62.26 lakhs. These rotables were despatched (December 1979) partly by civil airways and partly by service aircraft and received back after repairs in batches during April 1980—November 1981. The cost of repair of these rotables abroad was Rs. 13.93 lakhs more than what would have been incurred if these had been repaired by the undertaking. In addition, the expenditure on transportation of these rotables through civil airways amounted to Rs. 13.49 lakhs

The task (firm/forecast) approved, accepted by the undertaking and the actual output for the years 1979-80 to 1981-82 is given below :

Sl. No.	Description of rotable	Task approved (Firm)	(Forecast)		Task accepted by the undertaking			Actual output		
		1979-80	1980-81	1981-82	1979-80	1980-81	1981-82	1979-80	1980-81	1981-82
		Nos.	Nos.	Nos.	Nos.	Nos.	Nos.	Nos.	Nos.	Nos.
1.	Main Gear Box	70	70	70	40	76	83	47	73	85
2.	Main Rotor Head	60	52	48	35	52	47	38	42	47
3.	Clutch Unit	70	70	70	40	60	83	40	42	83
4.	Tail Gear Box	60	76	76	50	50	105	51	45	105
5.	Tail Rotor Head	60	70	70	50	60	74	35	41	74
6.	Hydraulic Drag Damper	60	56	56	40	65	87	47	65	125

The undertaking was able to show significant improvement in the repair output in 1980-81 and 1981-82.

The Ministry of Defence stated (November 1982) that the necessity for the despatch of these rotables abroad for repair was inescapable and was due to the undertaking's inability to meet the requirements of the Air Force. The Ministry added that if the undertaking had taken provisioning action for spares for the full 54 months and not for 2 years, that would have catered for any fluctuation in the revised task intimated to the latter from year to year.

It would thus be observed that though the public sector undertaking had sufficient capacity for repair of certain rotables of helicopters, some of these rotables had to be sent abroad for repairs due to (i) incorrect estimation of forcast task by the Air HQ and (ii) non-provisioning of spares by the undertaking on long-term basis, thereby resulting in avoidable extra expenditure of Rs. 27.42 lakhs.

K N Row

(K. N. ROW)

NEW DELHI   Director of Audit, Defence Services.

Dated the 14 FEB 1984

Countersigned

G Prakash

(GIAN PRAKASH)

NEW DELHI   Comptroller and Auditor General of India.

Dated the 15 FEB 1984