REPORT

OF THE

COMPTROLLER AND AUDITOR GENERAL

OF INDIA

FOR

THE YEAR 1980-81

Presented in Lok Sabha on..... 5 APR 1982

Laid in Rajya Sabha on.....................

UNION GOVERNMENT (DEFENCE SERVICES)

ERRATA

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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 1980-81 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 1980-81 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 1980-81 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 1981 with the amount of original and supplementary appropriations and grants for the year :

(*i*) *Charged Appropriations*

	(Rs. in crores)
Original	*1.74*
Supplementary	*1.90*
Total	*3.64*
Actual Expenditure	*3.44*
Saving	*0.20*
	(*per cent*)
Saving as percentage of the total provision . . .	5.49

(*ii*) *Voted Grants*

	(Rs. in crores)
Original	3796.36
Supplementary	237.11
Total	4033.47
Actual Expenditure	4090.93
Excess	57.46
	(*per cent*)
Excess as percentage of the total provision . . .	1.42

2. Supplementary grants/appropriations

(a) In respect of 4 Grants, supplementary grants (Voted) aggregating Rs. 237.11 crores, obtained in March 1981, proved inadequate as indicated below :

(Rs. in crores)

Grant No.	Amount of Grant			Actual expenditure	Excess (+)
	Original	Supplementary	Total		
21—Army	2158.35	101.96	2260.31	2306.27	(+)45.96
22—Navy	216.54	18.00	234.54	240.51	(+)5.97
23—Air Force	866.48	82.47	948.95	952.01	(+)3.06
24—Pensions	228.52	34.68	263.20	266.88	(+)3.68
TOTAL	3469.89	237.11	3707.00	3765.67	(+)58.67

(b) Supplementary appropriations (Charged) aggregating Rs. 190 lakhs ('Army' : Rs. 30 lakhs and 'Capital Outlay' : Rs. 160 lakhs) were obtained in December 1980 (Rs. 100 lakhs) and March 1981 (Rs. 90 lakhs) to meet decretal payments.

In the case of 'Army', the original appropriation of Rs. 70 lakhs was increased to Rs. 100 lakhs by obtaining supplementary appropriations of Rs. 30 lakhs in December 1980 and March 1981. Against this, the actual expenditure came to Rs. 94.10 lakhs, leaving a balance of Rs. 5.90 lakhs remaining unutilised, whereas surrender of Rs. 11.75 lakhs had been notified on 31st March 1981.

Against the total appropriation of Rs. 260 lakhs (original : Rs. 100 lakhs and supplementary : Rs. 160 lakhs) for 'Capital Outlay', the actual expenditure came to Rs. 249.19 lakhs, leaving a balance of Rs. 10.81 lakhs remaining unutilised ; surrender of Rs. 10 lakhs had been notified on 31st March 1981.

3. Excess over Voted Grants

Excess aggregating Rs. 58,66,58,788 over voted portion of 4 Grants, as indicated below, requires regularisation under Article 115 of the Constitution :

Grant No.	Total Grant Rs.	Actual Expenditure Rs.	Excess Rs.
21—Army	2260,31,19,000	2306,27,01,358	45,95,82,358
	The excess was mainly under Ordnance Factories, Research and Development Organisation and Works.		
22—Navy	234,54,50,000	240,51,04,577	5,96,54,577
	The excess was mainly under Pay and Allowances of Navy personnel (including Civilians) and Stores.		
23—Air Force	948,95,00,000	952,01,12,952	3,06,12,952
	The excess was mainly under Pay and Allowances and Works.		
24—Pensions	263,19,65,000	266,87,73,901	3,68,08,901
	The excess was mainly under Pensions and other Retirement Benefits (relating to Army).		
TOTAL	3707,00,34,000	3765,66,92,788	58,66,58,788

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
21—Army						
A.1—Pay and Allowances of Army	723.74	45.19	768.93	748.53	20.40	(—)5.22
A.3—Pay and Allowances of Civilians	116.99	8.28	125.27	122.88	2.39	(—)2.75
23—Air Force						
A.5—Stores . .	649.74	68.13	717.87	710.86	7.01	(—)2.98
A.8—Other Expenditure . .	8.61	1.09	9.70	9.10	0.60	(—)0.53
24—Pensions						
A.2—Navy						
(1) Pensions and other Retirement Benefits .	6.75	0.04	6.79	4.05	2.74	(—)2.49
A.3—Air Force						
(1) Pensions and other Retirement Benefits . .	12.19	1.45	13.64	11.60	2.04	(—)2.17

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

(Rs. in crores)

Grant No. / Sub-Head	Sanctioned Grant	Amount re-appropriated	Final Grant	Actual Expenditure	Excess(+) Saving(—)
22—*Navy*					
A.5—Stores	120.50	(—)6.50	114.00	123.76	(+)9.76
A.6—Works	18.50	(+)1.50	20.00	17.47	(—)2.53
25—*Capital Outlay*					
A.1—Army					
A.1(2)—Construction Works	90.00	(—)8.50	81.50	90.72	(+)9.22
A.4—Ordnance Factories					
A.4(1)—Construction Works	15.75	(+)0.25	16.00	15.58	(—)0.42

5. **Injudicious surrender of funds**

Out of the provision of Rs. 326.47 crores (Voted) relating to Grant No. 25—Capital Outlay on Defence Services, surrenders aggregating Rs. 29.35 crores were notified under certain sub-heads on 26th February 1981 but the overall amount surrendered was reduced to Rs. 26.06 crores on 31st March 1981 as indicated below :

Sub-Head	Amount surrendered on 26th February 1981	Amount surrendered on 31st March 1981
	(Rs. in crores)	
A.1—*Army*		
A.1(2)—Construction Works	2.50	1.15
A.1(4)—Military Farms	0.15	—
A.2—*Navy*		
A.2(3)—Naval Fleet	11.04	7.43
A.2(4)—Naval Dockyards	0.74	4.66
A.3—*Air Force*		
A.3(3)—Special Projects	0.10	0.10
A.4—*Ordnance Factories*		
A.4(2)—Machinery and Equipment	8.77	6.22
A.4(3)—Suspense	6.00	6.00
A.6—Inspection Organisation	0.05	0.50
TOTAL	29.35	26.06

The amounts surrendered on 26th February 1981 in respect of Sub-Heads A.1(2), A.1(4), A.2(3) and A.4(2) were subsequently partly/wholly withdrawn and re-appropriated to other Sub-Heads within the Grant.

Against the total provision of Rs. 326.47 crores for the Grant as a whole, the actual expenditure came to Rs. 325.26 crores, resulting in a saving of Rs. 1.21 crores only. Thus, surrender to the extent of Rs. 24.85 crores out of Rs. 26.06 crores, notified even on 31st March 1981, proved injudicious.

CHAPTER 2

MINISTRY OF DEFENCE

6. Procurement and utilisation of 10-ton chassis and vehicles built thereon

1. Vehicles (10-ton 6×4) were intended for use in the Army mainly for the following roles :

- — General Services (GS) role in the transport companies of the Army Service Corps (ASC); and
- — tractor role for towing of 20-ton trailers.

2. A test-check in audit of the procurement and utilisation of 10-ton chassis and vehicles built on these chassis for GS and tractor towing roles disclosed the following :

(A) *GS role*

3. In October 1968, the Ministry of Defence sanctioned the raising of two 10-ton Transport Companies of ASC. In the provision reviews carried out by the Director of Ordnance Services (DOS) at the Army Headquarters (HQ) during 1969 and 1970, 680 numbers (taking into account 330 numbers for 2 new transport companies) of 10-ton vehicles were found deficient for GS role. To meet this deficiency, 3 indents were placed by the DOS on the Director General, Supplies and Disposals (DGSD) in May 1969 (230 chassis), April 1970 (150 chassis) and May 1970 (300 chassis).

The DGSD concluded two contracts with firm 'A' located at station 'Q' for supply of 680 numbers of 10-ton chassis manufactured indigenously at a total cost of Rs. 11.26 crores; the first contract was concluded for 230 chassis (cost : Rs. 3.19

crores) in January 1970 (and modified in May 1970) and the second for 450 chassis (cost : Rs. 8.07 crores as revised) in July 1971. While 230 chassis against the first contract were supplied by firm 'A' by August 1972, the supply of 450 chassis against the second contract was completed in February 1975 after 3 extensions to the scheduled delivery period were granted. All the 680 chassis were delivered to a Central Vehicle Depot (CVD) located at station 'X' (nearest to the location of firm 'A').

4. Soon after placing indents on the DGSD for procurement of 680 chassis, the DOS had also placed (June 1969, May 1970 and June 1970) 3 indents for fabrication and mounting of cabs and bodies over the chassis (for 230, 150 and 300 numbers respectively). These indents were covered by the Department of Defence Supplies (DDS) by placing supply orders as under :

When placed	Firm on which placed	Number of chassis to be fabricated	Rate per unit Rs.
August 1971 .	. 'B' of New Delhi	300	9,530
October 1971	. 'C' of Bombay	250	8,195
February 1975	. 'D' of Jullundur	127	10,250

The remaining 3 chassis were issued (June-July 1973) to Electrical and Mechanical Engineering (EME) units (2 chassis) and an ordnance factory (1 chassis) for development and training purposes.

5. Firms 'B' and 'C' completed fabrication of cabs and bodies on 300 and 250 chassis (contracted quantities) by November 1975 and July 1977 after 6 and 4 extensions to the scheduled completion period were granted to them respectively. Firm 'D', which was awarded (February 1975) the fabrication work of 127 chassis on the basis of a limited tender enquiry was to commence body-building work within 45 days after approval of the prototype. One chassis was issued to firm 'D' for this purpose in June 1975 after obtaining indemnity bond and insurance

cover. The prototype submitted by the firm in August 1975 was approved by the Director General of Inspection in October 1975. Thereafter, 30 chassis were issued (January 1976) to firm 'D' from the CVD at station 'Y' (to which station 427 chassis had been earlier moved) for fabrication work (at the rate of 15 bodies per month). As firm 'D' failed to deliver even a single built vehicle despite extensions of time (the last extension up to July 1976 was granted in May 1976), the supply order was cancelled (January 1977) at its risk and cost and it was asked to return all the 31 chassis (including the one issued for prototype). It was noticed in audit that no security deposit was made by firm 'D'.

6. A Board of Officers held (August-September 1977) for the purpose of assessing the condition and collecting the chassis from firm 'D' found that :

- the firm had fabricated bodies on only 9 chassis (including the prototype) but those had certain deficiencies;
- floor and certain other components only had been fabricated on another chassis; and
- no fabrication work had been done on the remaining 21 chassis.

Twenty-one chassis, on which no work had been done by firm 'D', were taken over by the Board of Officers in September 1977. In order to enable firm 'D' to complete work on the remaining 10 partly built chassis, the supply order was partially reinstated (September 1977). The firm, however, failed to complete even the reinstated order.

7. Another Board of Officers, convened to take over 10 partly built chassis from firm 'D', reported (October 1979) that all these chassis were lying in the open with a large number of fitment items missing. As the whereabouts of the owner and/or the partners of the firm were not known, the Board could not take over these chassis. Yet another Board of Officers, detailed in

February 1980, took possession of these chassis with the help of civil police and municipal authorities. The cost of damages/ deficiencies in these chassis was assessed (June 1980) at Rs. 0.48 lakh by the workshop attached to the CVD at station 'Y'. It had not been possible for the Ministry to recover the amount from the firm so far (November 1981).

8. In the meantime, due to non-availability of adequate number of 10-ton built vehicles, the units requiring 10-ton vehicles had to be issued 3-ton vehicles. Consequently, the raising of one of the two 10-ton transport companies of ASC, sanctioned in October 1968, was cancelled by the Ministry of Defence in January 1976. The review carried out in October 1976, however, revealed a surplus of 183 vehicles of 10-ton (built vehicles : 66 and chassis : 117).

9. While examining a proposal of the General Staff Branch for utilisation of the surplus 10-ton vehicles for GS role in the transport platoons of the ASC and in Ordnance units in place of 3-ton vehicles which these units had been using, the Quarter Master General (QMG) and the Deputy DOS did not recommend (May and June 1977) the induction of 10-ton vehicles for GS role in place of 3-ton vehicles. The QMG stated (May 1977) that there was very limited use for 10-ton vehicles in an operational environment and suggested that the existing fleet of 10-ton vehicles should be gradually replaced by 3-ton 4×4 vehicles. The Deputy DOS stated (June 1977) that lorries 10-tonne could not be usefully employed in ordnance installations because transportation of such heavy loads was not a normal feature in the depots and that for day-to-day depot functioning, lorries 3-tonne had been found to be most suitable. Accordingly, he said, he had no requirement of lorries 10-tonne.

10. With a view to utilising the 183 vehicles (built vehicles : 66 and chassis : 117) rendered surplus (cost : Rs. 3.45 crores), a proposal for reorganisation of 3 existing 3-ton independent transport platoons (Civilian GT) into 10-ton platoons having been agreed to by an Army Command, was mooted (April 1978)

by the GS Branch and the same was sanctioned by the Ministry of Defence in May 1978. The total requirement of these (re-organised) platoons was worked out at 113 numbers of 10-ton vehicles, against which the DOS proposed (June 1978) to issue to them 66 built vehicles held as surplus and 44 vehicles out of 117 surplus chassis, after getting cabs and bodies fabricated thereon. In October 1978, the Ministry of Finance (Defence) approved the fabrication of cabs and bodies on 44 chassis by the EME at a total cost of Rs. 8.14 lakhs. At the request of the DOS, HQ Technical Group EME nominated (November 1978) an Army Base Workshop located at station 'ZZ' to do the job as two other Army Base Workshops (one located at station 'Y' where the CVD was holding the surplus chassis and the other at station 'YY') either did not have the requisite equipment and machinery or were fully booked up to 1980 to fabricate cabs and bodies on chassis of another make. All the 44 chassis were stock-moved (December 1978) from the CVD at station 'Y' to the CVD at station 'X', involving an expenditure of Rs. 1.92 lakhs on freight. 44 chassis were issued during January 1979—January 1980 to the Workshop at station 'ZZ', which commenced work in April 1980 and completed fabrication of 25 chassis till the end of March 1981.

11. With a view to utilising the remaining 73 chassis, it was decided (July 1979) to issue 18 chassis to Ordnance units for GS role, after fabrication of cabs and bodies thereon at an estimated cost of Rs. 18,500 per vehicle. The authorisation of 18 lorries 10-ton to 11 ordnance/vehicle depots, by a corresponding reduction of 36 lorries 3-ton was sanctioned by the Ministry of Defence in December 1979. The "authorisation" of 18 vehicles was raised (January 1980) to 23 by including a reserve of 25 *per cent*. These 23 chassis were moved (July 1980) from the CVD at station 'Y' to the CVD at station 'X' (transportation cost : Rs. 0.60 lakh) for feeding the Army Base Workshop at station 'ZZ' nominated to undertake the job. Out of these 23 chassis, 22 were sent to the Workshop in March and July 1981.

As regards the remaining 50 surplus chassis (held with the CVD at station 'Y'), the Ministry of Defence stated (November 1981) that a proposal had been initiated for utilising 48 chassis for fabrication of 10-kilolitre petrol tankers.

12. The Ministry of Defence stated (November 1981) that :

— because of failure of body-building firm 'D', chassis could not be built according to schedule;

— reduction in the requirements due to cancellation of raising of one transport company (10-ton) contributed to delay in utilisation of chassis; and

— against the total commitment of 67 chassis, 51 had been fabricated by the Workshop at station 'ZZ' till September 1981 and were under release to the units.

13. Thus, an expenditure of Rs. 2.27 crores on 117 chassis (50 lying with the CVD at station 'Y', 51 built by Workshop at station 'ZZ' up to September 1981 and awaiting release to units and the remaining 16 awaiting body-building) procured in 1974-75 remained unproductive for over 5 years.

(B) *Tractor role*

14. Vehicles (10-ton 6×4) were introduced in the Army for tractor role (towing of trailers) after the same were tried out successfully in plains in 1971. A provision review as on 1st October 1971 carried out by the DOS in respect of 10-ton vehicles for tractor role revealed a deficiency of 462 vehicles, against which the DOS placed (July 1972) an indent on the DGSD for procurement of 400 numbers of 10-ton chassis from firm 'A'. According to the indent, the chassis were required during 1973-74 and 1974-75 at the rate of 200 numbers per year and were to conform to a particular specification. The estimated price (per unit) of chassis, as indicated in the indent on the basis of last procurement rate, was Rs. 1.44 lakhs.

The indent could not, however, be processed by the DGSD mainly because the Army HQ could not finalise the specifications for 1½ years (July 1972 to January 1974) because of the difficulties faced by the Director of Inspection (Vehicles) in finalising the drawings for winches, tow hooks, power steering and tyre sizes. Another indent for procurement of 62 chassis (10-ton) was placed (January 1975) by the DOS on the DGSD.

15. In a meeting (March 1975) attended by the Engineers, the DOS decided to procure :

— 200 chassis as per the existing specification *i.e.* without power steering, within a year of the conclusion of contract ; and

— 262 chassis to be procured later as per the revised specification (to be finalised after extensive technical trials).

It was also decided (April 1975) that body-building on 200 and 262 chassis would be entrusted to trade and the Army Base Workshop at station 'ZZ' respectively.

16. In July 1975, the DGSD concluded a contract with firm 'A' for the supply of 200 chassis with the existing specification at the rate of Rs. 2.45 lakhs per chassis, later revised (June 1977) to Rs. 2.45 lakhs (for 102 chassis) and Rs. 2.79 lakhs (for 98 chassis) per chassis. The chassis (200 numbers) were delivered by firm 'A' to the CVD at station 'X' during September 1975—February 1977. Under the same contract, one more chassis was procured for the Director General, Ordnance Factories.

17. In December 1975, the DOS placed supply orders on firm 'E' and a public sector undertaking for fabrication of bodies on 100 chassis each at Rs. 17,770 and Rs. 18,500 per chassis respectively. Firm 'E' and the undertaking were to commence delivery of built vehicles at the rate of 10 and 15 numbers per month respectively within 4 weeks after approval of prototype. While the undertaking completed supply of 100 vehicles in May

1977. firm 'E' was able to complete only 15 out of 30 chassis fed to it within the extended date of delivery (November 1977). At the request of firm 'E' for off-loading the remaining work to some other firms, the supply order was short-closed (January 1978) at 15 numbers. However, as firm 'E' had done certain amount of fabrication work on the remaining 15 chassis, a separate supply order was placed (September 1978) on it for those 15 chassis at Rs. 16,500 per unit and the work was completed by 9th February 1979. For the balance 70 chassis a supply order was placed (May 1978) by the DOS on firm 'F' at Rs. 16,500 per unit. Supplies were completed by firm 'F' in April 1980. Out of 200 built vehicles, release orders were issued for 182 numbers against which 171 were released to various units during July 1977—July 1981.

18. In the meantime, in a meeting held (July 1977) in the GS Branch, the Engineers expressed their reservations about the suitability of 10-ton vehicles for tractor role with particular reference to desert and riverine/canal based operations. It was accordingly decided in this meeting that the Research and Development Establishment (Vehicles) should undertake a project to introduce certain modifications in the (built) vehicles to enhance their performance and that the deficiency of 262 chassis should be left uncovered till a more suitable vehicle was developed. Thereafter, firm 'A' incorporated certain improvements (like power steering, single rear wheel, etc.) in the chassis. As a result of review carried out on 1st October 1977 (which revealed surplus of 71 vehicles) and after taking into account 71 vehicles of another make already issued to units, the DOS requested (March 1978) the DGSD to procure only 110 (out of the balance requirement of 262 held in abeyance) chassis with revised specification. As the price quoted by firm 'A', *viz.*, Rs. 3.83 lakhs per chassis (as against Rs. 2.45 lakhs/Rs. 2.79 lakhs for earlier supply of 200 chassis) was considerably higher, concurrence of the Ministry of Finance (Defence) was sought (30th December 1978). While the matter was under consideration, firm 'A' increased the price to Rs. 4.46 lakhs per chassis

with effect from 1st April 1979. Since the increased price demanded by firm 'A' was considered (July 1979) by the DOS to be 'abnormal', opinion of the Engineer-in-Chief was sought, who observed (19th July 1979) that the vehicle was not suitable for the role due to its poor cross-country performance in the desert and riverine/canal based terrain and should not be used in this role. However, 127 (out of 171) vehicles were released/ issued to the Engineer units for maximum possible use as they had already been procured.

19. The requirement for balance quantity (262) of chassis was, thereupon, cancelled in August 1979. However, in view of the decision already taken in April 1975 to entrust 262 chassis for construction of bodies to the Army Base Workshop at station 'ZZ', stores valuing Rs. 5.78 lakhs had been procured by it. Consequent on the above cancellation, the stores became surplus and instructions were issued (January 1980) for back-loading these stores to the depots concerned.

20. The Ministry of Defence stated (November 1981) that :

- the vehicles were procured for a specific role as tractor towing in plains after successful completion of trials and being a specialist vehicle, its alternative utilisation in GS role would not be cost-effective ; and
- the actual position regarding utilisation of items out of stores (value : Rs. 5.78 lakhs) procured against the commitment of construction of bodies on 262 chassis by the Army Base Workshop at station 'ZZ' and rendered surplus due to subsequent cancellation of the commitment was being ascertained.

21. *Summing up.*—The following are the main points that emerge :

(A) *GS role*

- Fabrication of cabs and bodies on 127 chassis was entrusted (February 1975) by the DOS to firm 'D' which could not deliver even a single built vehicle despite extension in the scheduled delivery period (July 1976).

— Although supply order on firm 'D' was cancelled (January 1977) at its risk and cost, 10 chassis (partly built) held by the firm were found (October 1979) to be lying in the open with a large number of fitment items missing; the damages/deficiencies to these chassis, on being taken over, were assessed (June 1980) at Rs. 0.48 lakh.

— Due mainly to cancellation (January 1976) of the sanction for raising one 10-ton transport company as a result of non-availability of adequate number of built vehicles 66 built vehicles and 117 chassis became surplus to requirements (total cost : Rs. 3.45 crores) ; out of these, 66 were issued to reorganised 10-ton platoons.

— An expenditure of Rs. 2.27 crores on 117 chassis (50 lying with CVD at station 'Y', 51 built by the Workshop at station 'ZZ' and awaiting release, and 16 awaiting body-building) procured in 1974-75 remained unproductive for over 5 years.

— 67 chassis were back-loaded to the CVD at station 'Y', involving freight charges of Rs. 2.52 lakhs, for fabrication by an Army Base Workshop at station 'ZZ' ; out of these chassis the Workshop had fabricated bodies on 51 chassis up to September 1981.

(B) *Tractor role*

— Due to delay of 1½ years in finalising the specifications of chassis, 200 chassis with existing specifications were procured at the rate of Rs. 2.45 lakhs (for 102 chassis) and Rs. 2.79 lakhs (for 98 chassis) per chassis against the rate of Rs. 1.44 lakhs prevailing at the time of placing the indent in July 1972.

— Despite the reservations of the Engineers that the vehicles with existing specifications were not suitable for tractor role due to their poor cross-country performance in the desert and riverine/canal based terrain and their suggestion that these vehicles should be utilised elsewhere due to their not meeting the operational requirements, various Engineer units were saddled with 127 (out of 171) such built vehicles (cost : Rs. 3.55 crores).

— Stores valued at Rs. 5.78 lakhs procured for fabrication of 262 chassis (with revised specifications) by the Army Base Workshop at station 'ZZ' became surplus due to subsequent cancellation of the order.

7. **Purchase of second-hand transport aircraft from a private firm**

Having regard to the depleting strength of a transport aircraft with the Air Force and the delay anticipated in the induction of a new version, the need to purchase 4 to 6 of these aircraft was accepted by Government in September 1975. These aircraft being no longer in production, purchase had to be made of second-hand aircraft only.

The Ministry of Defence issued (September 1975) letters of interest to 4 foreign firms 'A', 'B', 'C' and 'D' (from whom offers had been received earlier) for the purchase of 4 to 6 second-hand aircraft. The letter of interest, *inter alia,* specified that :

— the aircraft offered should conform as close as possible to the standard of preparation of military version ; and

— the aircraft and engines should have at least 50 *per cent* flying hours available before next overhaul, incorporate modifications and avionic equipment fits as specified and should be arranged to be delivered in India after satisfactory acceptance flight(s) and checks.

Firm 'A' offered (September 1975) 6 aircraft conforming to the prescribed standard of preparation and specification at a total price of US \$ 3.66 million for 6 aircraft (\$ 2.665 million for 4 aircraft). Firm 'B' offered (October 1975) 4 aircraft in 'as is where is' condition at a price of US \$ 420,000 each and 2 more at US \$ 390,000 each. Both the firms offered to supply spare engines at prices of US \$ 22,000 and US \$ 26,000 each respectively and spares as well at a negotiated price. The offer of firm 'C' did not give any estimates of prices and that of firm 'D' stipulated conditions in regard to payment, which were not acceptable ; hence these offers were not considered.

The aircraft offered for sale by firm 'A' were registered in the name of Mr. 'M' of foreign firm 'E', who represented firm 'A' during negotiation of the purchase. The aircraft offered by firm 'B' belonged to Governments of country 'X' (4 numbers) and country 'Y' (2 numbers). Firm 'B' was represented by an Indian firm 'F', which previously represented firm 'E'. The Negotiating Committee constituted for this purpose discussed (October 1975) these offers with the representatives of firms 'A' and 'B' and on its advice the aircraft offered for sale by these firms were inspected at their locations by the representatives of the Air Force (November 1975) and a public sector undertaking, hereafter 'undertaking', (December 1975) respectively. Only 5 aircraft (from which the engines, avionic equipment and cockpit instruments had been removed) were made available by firm 'A' for inspection; external corrosion on these aircraft was noticed, but the internal structure and flooring were found corrosion free. The 4 aircraft belonging to Governments of countries 'X' and 'Y' offered by firm 'B' were found to have been maintained in a satisfactory condition except for one in which corrosion was noticed.

Negotiations with these two firms were resumed in July 1976 and as a result firm 'A' gave a revised offer of US \$ 612,000 each for 6 aircraft and US \$ 646,000 each for 4 aircraft (later reduced to US \$ 596,000 each) alongwith spare engines up to 10 units at US \$22,000 each and spares at US \$45,000. Firm 'B', however, intimated (July 1976) that 4 aircraft belonging to Government of country 'X' were no longer available and instead offered 2 aircraft each belonging to Governments of countries 'Y' and 'Z' at US $ 368,000 and US $ 420,000 per aircraft respectively. The offer also included 6 spare engines at US $ 252,000 and 10 propellers at US $ 48,000 ; besides, spares valued at US $ 1,300,000 were offered free of cost. The Guidance Committee constituted to advise the Negotiating Committee considered (July 1976) the relative merits of the two offers and on its direction enquiries were made from the Governments of countries 'X', 'Y' and 'Z' if the aircraft offered by firm 'B' were available for direct purchase and if so, their price and condition. The enquiries confirmed that 2 aircraft (with spare engines and spares) of country 'Y' were available at US $ 1 million as a package deal and 2 aircraft (with spare engines and spares) of country 'Z' at US $ 750,000. The availability of the aircraft from country 'X' was, however, not clear. The Guidance Committee discussed these offers in September 1976 and came to the conclusion that in spite of the offers from the Governments concerned being lower than those of firm 'B', there were certain advantages in procuring these aircraft through agents who would be responsible for carrying out necessary checks and delivering the aircraft in fly-worthy condition. The Guidance Committee, therefore, directed that if any party offered the aircraft at prices 10 *per cent* below those quoted by the Governments of countries 'Y' and 'Z', the deal might be finalised. On a fresh offer received (August 1976) for the first time from an Indian firm 'G' for 2 aircraft from country 'H' at US $ 360,000 per aircraft, the Guidance Committee considered all the offers again on 10th November 1976 and decided that arrrangements should be made for the inspection of aircraft of country 'Z' (as those were not inspected earlier), that negotiations be made with firm 'B' to obtain the aircraft at prices offered by the Governments of countries 'Y' and 'Z' and that no other offer be considered.

Meanwhile, on 19th November 1976 a representative of firm 'A' delivered in person a revised offer at US $ 510,000 per aircraft with 2 spare engines at US $ 22,000 each (total value of the offer for 4 aircraft with 2 spare engines came to US $ 2,084,000). Firm 'B', on its part, offered (7th December 1976) to sell 4 aircraft with 6 spare engines and spares at the prices quoted by the Governments of countries 'Y' and 'Z' *i.e.* US $ 1,750,000 which included spares valued at US $ 1,200,000 at the invoice price. The offer of firm 'A' was further brought down (7th December 1976) by negotiations to US $ 1,950,000. The comparative costs of the two offers of firms 'A' and 'B' on a like-to-like basis were arrived at Rs. 191.70 lakhs (US $ 2.13 million) and Rs. 199.30 lakhs (US $ 1.89 million plus Rs. 28.84 lakhs).

The cost of spares (with an invoice value of US $ 1,200,000) offered free of cost by firm 'B' was excluded in computing the comparative costs. It was, however, conceded that the difference in the offers was marginal and there would be saving in foreign exchange in accepting the offer of firm 'B' as the overhaul of these aircraft was to be carried out in India by the undertaking. The lead time for making available the aircraft for deployment was 18 months in the case of firm 'B' against 3 months in the case of firm 'A'. This delay was not acceptable to the Air Force. Thus, the offer of firm 'A' was accepted and Government sanction was issued in March 1977 for the purchase of 4 aircraft and two spare engines from firm 'A' at a cost of US $ 1.950 million.

A contract was, therefore, concluded in February 1977 with firm 'A' represented by firm 'E' in the person of Mr. 'M' for the supply of 4 aircraft and 2 spare engines at US $ 1.950 million. According to the terms of the contract the aircraft with certificate of airworthiness from the Federal Aviation Administration of country 'U' were to be made available at station 'V' for inspection and acceptance between 45 to 110 days from the date of opening a letter of credit for payment due under the contract. Ninety-five *per cent* of the contract price was payable through letter of credit on delivery of each aircraft/engine and the balance within 30 days of its acceptance. The terms of contract excluded all warranties of performance except those as were available from the repair agencies for the repair/overhaul work done on these aircraft. The letter of credit under the contract was issued and opened in March 1977 for the contract amount and the aircraft were, therefore, to be delivered between May and July 1977. Before the aircraft were made available for acceptance, a petition was filed (17th May 1977) by firm 'F' against firms 'E' and 'A' in a court of law in India, claiming to be the authorised agent of firm 'E' and for the payment of 5 *per cent* commission to it on the sale of the aircraft. The court restrained (May and June 1977) the payment of any amount to Mr. 'M' and firms 'E' and 'A'. The order could be got vacated partially only in July 1977, when payment was authorised to be made retaining 5 *per cent* of the contract amount. 95 *per cent* payment due under the contract was, therefore, released on 29th July 1977. Thereafter, a revised delivery schedule of the aircraft between 10th August 1977 and 14th December 1977 was mutually agreed.

Meanwhile, on inspection of the aircraft by the representative of the undertaking in June 1977, it was noticed that the aircraft did not conform to the military version as was understood at the time of negotiations. Also, certain modifications (90 numbers, cost of which was not available) had not been incorporated. The brake system fitted to the aircraft was also not the same as the one in use with the Air Force. Since the contract did not clearly lay down these requirements and the certificate of air-worthiness had been obtained from the agency mentioned in the contract, the contractual enforcement of these requirements (financial effect not available) became doubtful. However, to avoid delay in ferrying the aircraft, the first aircraft was accepted on 15th August 1977 with these deficiencies after notifying firm 'A'. The aircraft was accordingly ferried from station 'V' to India on 29th August 1977 when *en route* at station 'W', the engine of the aircraft failed and the aircraft had to be feathered. A spare engine of the Air Force was flown from India and the aircraft after repair was ferried to India on 25th September 1977.

Arising out of the failure of the engine and the disputes regarding deficiencies noticed in the aircraft, further negotiations were held in India with Mr. 'M' (of firm 'E') and a supplementary agreement was concluded in January 1978. Under the terms of this agreement, the seller was to arrange the overhaul of the defective engine free of cost and also to provide warranty against defects or damages that would become apparent before 25th June 1978 in the engines, propellers and relifed rotable components of the aircraft supplied. The seller also agreed to supply free of cost modification kits in respect of 11 modifications, wherever not already incorporated in the aircraft as well as sets of spares for the brake system fitted with aircraft. A sum of US $ 35,000 was to be retained for this purpose from the payment due to the firm. The modification kits and spares for the brake system had not been supplied so far (October 1981).

The other 3 aircraft were made available for inspection on 27th January 1978 and after acceptance were ready to be ferried on 21st February 1978. On 14th February 1978, firm 'A' informed Government that Mr. 'M' no longer represented it and that it would, in future, be represented by another person Mr. 'P' of country 'AA'. The aircraft had not been deregistered from the name of Mr. 'M' and registered in the name of the Government of India. On 28th February 1978, Mr. 'P', the new agent of firm 'A', claimed payment of US $ 599,915.41 (later in March 1978 an additional sum of US $ 22,114) towards expenditure incurred on additional modifications incorporated, other incidental charges and hangarage and detained the aircraft pending payment of these claims. In March 1978, the agency which overhauled the aircraft obtained a court order of country 'AA' restraining the release of the aircraft until the payment of Swiss Francs 1 million due to it from Mr. 'M' for the overhaul work done on these aircraft. The Ministry of Defence stated (October 1981) that no payment was made and the aircraft were got released on 13th December 1978 "without the intervention of court". The legal expenses incurred in foreign exchange amounted to Rs. 2.82 lakhs. Since these 3 aircraft had been parked for over a year with no maintenance, they could not be ferried before they were rechecked for their flight-worthiness. This work had to be entrusted (December 1978) to the repair agency at an expenditure not exceeding Swiss Francs 55,000 (Rs. 2.96 lakhs).

The Air Force crew of 21 sent abroad on 25th January 1978 for ferrying the aircraft had to be detained in country 'AB' for varying periods up to 1st February 1979 pending the release of the aircraft. An expenditure of Rs. 11.56 lakhs (in foreign exchange) was incurred on the stay of these personnel. The aircraft were ferried to India in February 1979. As regards the engine of the first aircraft that failed *en route*, the cost of overhaul/replacement was to be borne by firm 'A'. But the Ministry of Defence authorised (November 1979) the payment of £ 3,150 (Rs. 56,170) to the repair agency. The recovery of the same from firm 'A' was yet (October 1981) to be effected. The final payments under the contract were also yet to be settled (October 1981).

The Ministry of Defence stated (October 1981) that :

— in computing the comparative costs of offers of firms 'A' and 'B', cost of spares (US $ 1.2 million) offered free of cost by firm 'B' was taken into consideration, but was rejected as it was a 'non-asset' ; and

— in any contract, it was only possible to lay down the broad standard of preparation and not to go into details of individual items and modifications.

Although the 4 aircraft were in use, the following are the important points noticed in the deal :

— The contract for the purchase of the aircraft was concluded with firm 'A' which did not own the aircraft.

— The offer of firm 'A' was considered as cheaper than that of firm 'B' by Rs. 7.60 lakhs without taking into account the spares (invoice value : US $ 1.2 million) offered free of cost by firm 'B'. Besides, the acceptance of the offer of firm 'A' involved an additional expenditure in foreign exchange to the tune of US $ 236,000 (Rs. 21.24 lakhs).

— As the contract did not clearly specify the standard of preparation required of the aircraft, certain requirements as understood at the time of negotiations not complied with, could not be contractually enforced (the financial effect of the same was not known).

— One of the reasons for preferring firm 'A' was stated to be that the aircraft would be available for deployment within 3 months of the date of signing the contract against 18 months if the offer of firm 'B' had been accepted. In fact, 3 out of the 4 aircraft were available for deployment after a delay of 19 months.

— Government had to incur extra expenditure of Swiss Francs 55,000 (Rs. 2.96 lakhs) on the recheck of 3 aircraft before they were ferried and Rs. 11.56 lakhs on the crew detained abroad besides legal expenses of Rs. 2.82 lakhs in foreign exchange.

8. **Procurement of cables**

A project office of the Ministry of Defence was entrusted (April 1970) with the setting up of a number of closely connected and inter-phased systems and installations. The initial requirements of 759 kms. of special type of cables for stage I of the project were met through a contract concluded in November 1973 with a foreign firm. The contract contained an option to order stage II requirements at the stage I prices subject to the order being placed within 6 months *i.e.* by 9th May 1974.

In connection with the import of cables to meet stage II requirements, the question of manufacture of these cables by a public sector undertaking (hereafter called 'undertaking') was considered (November 1973) by the Steering Committee of the project in order to conserve foreign exchange. Accordingly, a letter of intent was placed (14th May 1974) on the undertaking for supply of 420 kms. of cables in various sizes (as per the laid down specifications) during January—September 1975. The job of laying the cables by the Posts and Telegraphs Department was to be completed by 31st March 1976.

During discussions in the meeting of the Steering Committee held on 22nd May 1974, the following points were brought out :

— Even though the undertaking had not productionised these types of cables before, it was hopeful of manufacturing the same with the technical assistance of its foreign collaborators. The Air Headquarters being the users had, however, reservations about this as the expertise in the undertaking had not been proved.

— The requirement of cables for stage II should be obtained from the foreign firm which held the offer open up to the extended date, *viz.* 29th May 1974 at the original prices (applicable to stage I requirements). Import of 420 kms. of cables for stage II would cost Rs. 70 lakhs as against Rs. 180 lakhs (including foreign exchange of Rs. 66 lakhs) indicated by the undertaking.

— The letter of intent should be placed on the undertaking for stage III requirements (about 1,000 kms.) so that the latter could undertake experimentation and development activities to manufacture the cables as per required specifications.

However, based on the assurance given by a member of Steering Committee representing the Ministry of Communications that the cables manufactured by the undertaking would meet users' specifications fully, a decision was taken on 1st July 1974 to place orders on the undertaking on or before 5th July 1974. Accordingly, a firm order was placed (2nd July 1974) on the underaking for supply of 420 kms. of cables between 15th May and 15th October 1975 without placing initially a development order. The agreed compliance chart for specifications formed part of the order. A price of Rs. 130 lakhs (including an *ad hoc* discount of about Rs. 8 lakhs) was indicated in the order, but this was subject to negotiations on receipt of information of cost per km. for each type/size of cable. As per the supply order, the Directorate of Technical Development and Production (Air) was nominated as Inspectors. Test plans for testing of material and finished products to be proposed by the undertaking and accepted by the project office were to form part of the contract and the formal contract was to be concluded later on finalisation of the rates, etc. In the meeting of the Steering Committee held on 5th November 1974, it was decided in consultation with the undertaking that the contract would be at a fixed price with a provision for escalation in prices of raw material and wages. The quantity of cables to be supplied was, however, reduced to 400 kms. in June 1975 and a final price of Rs. 157.87 lakhs (excluding Rs. 1.26 lakhs being the cost of joining tool kits and joining material) projected by the undertaking was accepted after examination by the Ministry of Defence of the cost details given by the undertaking.

At the request of the undertaking, Rs. 120 lakhs were advanced by the Ministry of Defence on different dates during August 1974—March 1975 on an *ad hoc* basis to enable it to purchase raw materials, although there was no provision for such advance in the supply order. The advance was to be adjusted against payments due to the undertaking under the provisions of the contract (which was to be finalised later).

As the cables in question were being manufactured indigenously for the first time, a Technical Co-ordination Authority (TCA) was nominated by the Ministry of Defence in October 1974 and its Advisory Committee (in which the undertaking was represented) made it clear that the test plans approved by this committee would be the basis for acceptance/check out of the cables by the Inspectors. The test plans were discussed in the TCA and finalised in February-March 1975.

Certain cables offered by the undertaking from the first production batch were inspected by the Inspectors during June-July 1975. The cables did not pass the prescribed stability tests. In the meantime, in order to adhere to the stipulated dates of supply, the undertaking manufactured 155 kms. of cables before the initial production batch of 25 (out of 155) kms. was tested by the Inspectors as 'First Article Test' (FAT). The report of the Inspectors was discussed in the meeting of the TCA held on 28th July 1975; since the cables had failed in the FAT, the undertaking was advised (July 1975) by the TCA to stop subsequent production. While contesting the findings of Inspectors, the undertaking stated in the meeting of the TCA held on 15th September 1975 that with a view to adhering to the delivery schedule, it took a calculated decision to proceed with the manufacture of 130 (out of 155) kms. of cables in anticipation of the approval of the Inspectors.

To resolve the deadlock, the Steering Committee formed a sub-committee to examine the issue from technical angle. After repeated deliberations, the sub-committee recommended (February 1976), *inter alia*, that the users/purchasing authority should accept the lengths of the cables already produced as a special case to avoid national wastage. On inspection of the cables already manufactured, a quantity of 95 kms. was found (July-August 1976) otherwise acceptable, of which 91 kms. of cables (valued at Rs. 31.63 lakhs) were supplied by the undertaking to the project authorities. Expressing its inability to meet the required specifications, the undertaking finally advised (June 1976) the project authorities to obtain the future requirements by import.

Accordingly, a further quantity of 351 kms. to meet a part of stage II and III requirements (including maintenance reserve) was obtained (April 1977) from the same foreign firm at the rates obtaining in the earlier contract of November 1973. The cables were received during January-February 1978.

In January 1977, the undertaking had been asked to refund the balance of advance amounting to Rs. 88.37 lakhs, out of which Rs. 34 lakhs were refunded in September 1978, leaving a balance of Rs. 54.37 lakhs with the undertaking. In the meantime, the undertaking presented a counter-claim for Rs. 35.80 lakhs on account of loss sustained due to disposal of balance of cables at low price (Rs. 6.80 lakhs), loss of profit and under-utilisation of factory (Rs. 24.00 lakhs), material procured but not used (Rs. 5.00 lakhs).

The counter-claim was refuted (June 1979) by the Ministry of Defence. The undertaking having not shown any inclination to refund the balance, the matter was taken up (October 1979) with the Bureau of Public Enterprises (BPE) for settlement through arbitration.

The arbitrator gave (May 1981) his award as under :

— the loss of Rs. 7.15 lakhs sustained by the undertaking due to excessive scrappage should be shared in the ratio 2 : 1 between the undertaking and the Ministry of Defence;

— the difference between the book value of the surplus non-utilized stock of raw material valued at Rs. 5.11 lakhs and actual realisation on its disposal should be borne by the Ministry of Defence; and

— the undertaking should refund the balance amount of advance of Rs. 54.38 lakhs after retaining a fair and reasonable amount to cover themselves against the loss arising from disposal of surplus raw material.

The award was accepted by the Ministry of Defence in June 1981. The undertaking refunded (July 1981) Rs. 49.25 lakhs after retaining Rs. 2.38 lakhs towards Ministry's share on account of excessive scrappage and Rs. 2.75 lakhs to cover loss arising from disposal of surplus raw material.

It will thus be seen that the Ministry had to incur an expenditure of Rs. 19.44 lakhs on the procurement of 91 kms. of sub-standard cables and additional charges amounting to Rs. 5.13 lakhs as a result of the award. This could have been avoided, but for its decision of placing a bulk order for supply of 400 kms. of cables instead of placing development orders for small quantities in the first instance, although it was aware of the fact that the cables were being manufactured by the undertaking for the first time. According to the Ministry of Defence (December 1980), the decision to place (bulk) order on the undertaking for supply of cables was a part of Government guidelines regarding self-reliance and the capability of the undertaking was endorsed by the technical authorities. But evidently neither self-reliance nor saving in foreign exchange could be achieved in this case when the attempts at indigenous production had eventually to be given up; as enough time was not allowed for development of the cables, a normal requirement in such cases which could hardly be in apposition to the guidelines laid down by Government.

CHAPTER 3

ORDNANCE AND CLOTHING FACTORIES

9. Establishment of production facilities for an ammunition

Introduction.—A new medium range gun had been introduced in service since 1966. Both the new gun and its ammunition were, however, being imported from a foreign country. As the new gun was expected to be in service for the next 20 years or so, it was proposed (1965) to establish facilities for indigenous production of the ammunition to achieve self-sufficiency. According to the Ministry of Defence (November 1980), the gun would remain in service at least till the end of this century. In November 1965, a contract was concluded with the foreign country for supply of licence and technical documentation for the establishment of indigenous production of the ammunition. The documentation was received by Government in April-May 1966.

In April 1968, it was decided in a Defence Ministry Production Committee (DMPC) meeting to set up facilities for production of 5,000 rounds of both HE and AP types of the ammunition in a single shift of 8 hours per month. In July 1968, a contract was concluded with the foreign country for supply of 8 items (16 numbers out of 159 numbers required) of plant and machinery at a cost of Rs. 5.43 lakhs. In February 1969, a protocol was signed for preparation of a limited technical project report (LTPR) to cover the technological process of production of shell body and cartridge case as well as of filling of fuze detonator and primer. In June 1969, it was decided to restrict the production to 5,000 rounds of HE type ammunition only as the AP type was not required to be produced indigenously. The foreign country was requested to prepare the LTPR accordingly.

Meanwhile, in view of delay in finalising the project report by the foreign country, the DMPC decided (July 1971) with the approval of the Defence Production Board (October 1971) that the Director General, Ordnance Factories (DGOF) should go ahead with the import of plant and machinery from other sources, if assistance from the foreign country was not forthcoming. The project was finally sanctioned in October 1972 at a total cost of Rs. 16.47 crores comprising plant and machinery (Rs. 12.27 crores), civil works (Rs. 3.50 crores) and inventory items/contingencies (Rs. 0.70 crore). It envisaged production of 5,000 rounds of HE type ammunition in a single shift of 8 hours per month in three factories, *viz.*, factory 'A' (shell body), factory 'B' (cartridge case) and factory 'C' (final assembly and filling of shell, cartridge case and fuze). Empty fuze required for the ammunition had already been decided (1969-70) to be produced in factory 'A'. However, according to the Ministry (November 1981), the production of fuze in small quantity could be expected only in the year 1980-81.

The project was expected to be completed within 5 years from the date of its sanction (by October 1977). The date of completion of the project was revised to August 1978 and finally to June 1984. The production cost of the ammunition was then (May 1972) estimated to be Rs. 1,100 per round against the then import price of Rs. 1,350 per round.

2. *Execution of the project*

2.1 Till February 1978, 3 administrative approvals for civil works aggregating Rs. 304.66 lakhs had been issued, the details of which are indicated below:

Factory	Month of issue of administrative approval with cost	Probable date of completion	Actual date of completion
'A'	February 1978* (Rs. 39.12 lakhs)	September 1978	October 1978
'B'	October 1973** (Rs. 97.50 lakhs)	December 1975	June 1976
'C'	November 1973** (Rs. 168.04 lakhs)	March 1976	October 1976

*Delay in issue of administrative approval was due to delay in finalisation of procurement action for shell forge plant, for which the works were intended.

**Delay in issue of approval was due to time taken in processing of cases for Government sanction.

The administrative approval of November 1973 pertaining to factory 'C' provided for part air-conditioning of the shell filling shop at a cost of Rs. 6.62 lakhs. The works were completed in October 1976, but without air-conditioning as it was not considered (May 1974) to be a technical necessity at a temperature of 60 degree centigrade. However, later (August 1977) it was decided to air-condition the building as the operators felt uncomfortable in working continuously on the plant and as other forms of forced ventilation could not be adopted due to presence of explosive dust. In November 1978, therefore, a supplementary approval was issued by Government for air-conditioning of the shop involving additional cost of Rs. 10.68 lakhs. In July 1980, the Ordnance Factory Board (OFB) revised the approved cost upwards under its own powers to Rs. 16.03 lakhs due to increase in tendered rates and non-acceptance of an offer before its date of validity (20th February 1980).

Consequent on delay in obtaining financial concurrence, the air-conditioning work was completed in July 1981 but the plant was yet to be commissioned (October 1981).

2.2 The position of plant and machinery (excluding accessories) in respect of the 3 factories as on 31st March 1981 was as under :

	Factory 'A'	Factory 'B'	Factory 'C'	Total
(*i*) Number initially assessed as required . . .	75*	56	97	228
(*ii*) Number finally assessed as required . . .	114	57**	166	337
(*iii*) Number ordered . .	88	55	160	303
(*iv*) Number received . .	78	52	156	286
(*v*) Number installed/commissioned	73	48	136	257

*Includes 16 numbers contracted for in July 1968.

**Includes an additional tapering press for cartridge case shop at factory 'B' sanctioned for procurement (Rs. 44 lakhs) by Government in April 1981. According to the Ministry (November 1981), the press was not meant for this project whereas the Government sanction indicated that it was meant for this project.

2.3 In October 1980, the project estimate was revised from Rs. 16.47 crores (1972) to Rs. 23 crores comprising plant and machinery (Rs. 17.97 crores), civil works (Rs. 4.73 crores) and inventory items/contingencies (Rs. 0.30 crore). The increase (Rs. 5.70 crores) in the cost of plant and machinery had been attributed to escalation of prices between the period of preparation of estimates and actual procurement as well as to additional requirement, and in that of civil works (increase : Rs. 1.23 crores) to additional requirement for shell forge shop in factory 'A' and for production of smoke pellets in factory 'C'.

The expenditure booked against the project up to 31st March 1981 was Rs. 15.43 crores comprising plant and machinery (Rs. 12.30 crores) and civil works (Rs. 3.13 crores).

3. *Production.*—During January 1974 to April 1978, the Army authorities placed 5 indents on the DGOF for total 2.33 lakh rounds of the ammunition. The DGOF planned (July 1976/1977) to produce 2,675 lakh rounds during 1976-77 (500 rounds), 1977-78 (2,000 rounds), 1978-79 (15,000 rounds). 1979-80 (50,000 rounds), 1980-81 (1 lakh rounds) and 1981-82 (1 lakh rounds), although some vital items of plant and machinery were yet to be received and/or commissioned. According to latest indication (November 1981), however, 5,000 rounds (1979-80) and 11,000 rounds (1980-81) were produced and issued. The production planned for 1981-82 was 25,000 rounds. According to the Ministry (November 1981), the shortfall in production was due to shortage of shell forging and also problems of selection/procurement of material for fuze body. As on 31st March 1981, the position in the 3 factories was as under :

3.1 *Factory 'A'.*—During December 1973 to April 1979, it received 6 demands aggregating 1,99,500 numbers of shell body from factory 'C', production against which was expected (February 1972) to commence by October 1976 with the commissioning of the shell forge plant. The plant was ordered on a Government undertaking in June 1977 at a cost of Rs. 4.13

crores after issue of a letter of intent earlier in December 1976 and it was received during July to December 1978. But it was yet to be commissioned and taken on charge (November 1981). The delay in ordering the plant was attributed by the Ministry (November 1980) to delay on its part in taking a decision (April 1975) for procurement of the plant with a capacity for forging of higher calibre shells, together with the time taken by the DGOF in discussing technical aspects of the offers received and provision of additional funds for the purpose.

Factory 'A' produced 400 numbers of shell in 1976-77, 1,095 numbers in 1977-78, 1,000 numbers in 1978-79, 1,995 numbers in 1979-80 and 510 numbers in 1980-81 from 5,000 numbers of imported shell body (2,500 numbers bottled and 2,500 numbers unbottled) received during May to July 1975 at a cost of Rs. 14.81 lakhs under a supplementary contract concluded with the foreign country in October 1974. During 1980-81, it produced in addition 5,680 numbers of shell indigenously. Thus, factory 'A' could produce, in all, 10,680 numbers of shell against a demand of 1,99,500 numbers.

For fuze, factory 'A' received demands for 3,43,190 numbers during December 1972 to April 1979 from factory 'C' and produced 22,522 numbers (256 numbers in 1977-78, 2,692 numbers in 1978-79, 11,764 numbers in 1979-80 and 7,810 numbers in 1980-81).

3.1.1 Other points of interest noticed in factory 'A' were as follows :

(i) On the basis of a request of the Army authorities, it was decided by the Ministry (May 1977) to set up a capacity of 2 lakh numbers of shell per annum in factory 'A' covering 20,000 numbers forged shell and 17,000 numbers of finished shell per month. However, the capacity of the shell forge plant ordered (June 1977) was 72,000 numbers in a single shift of 8 hours assuming 50 *per cent* efficiency. According to the Ministry (November 1981), it was decided in December 1978 that the production of ammunition should be restricted to 1.20 lakh rounds per annum in two shifts and that the balance requirements should be imported.

(ii) In addition to the import of 5,000 numbers of shell body as indicated above, and against a demand submitted by factory 'A' in March 1977 for 60,000 numbers of forging (15,000 numbers unbottled and 45,000 numbers bottled) estimated to cost Rs. 1.57 crores, 7,500 numbers of unbottled forging valued at Rs. 32.32 lakhs were received from the foreign country in August—September 1979 under a supplementary contract of August 1978; out of 500 numbers (bottled) of this forging earlier ordered by the DGOF in April 1978 at a cost of Rs. 3.37 lakhs, 382 numbers were received in August 1980 and the balance quantity was yet to be received (November 1981). The Ministry stated (November 1981) that the remaining 52,000 numbers could not be ordered since the foreign country expressed its inability to supply, having gone out of production.

(iii) For indigenous production of shell, factory 'A' placed an order (September 1975) on trade for 600 tonnes of steel of a particular specification and against it, 640 tonnes (cost : Rs. 29.78 lakhs) were received during February 1976 to March 1977. In March 1977, the Chief Inspector acting as the authority holding sealed particulars (AHSP), however, deleted the specification indicated in the order although it was originally approved by it. In October 1978, another order was placed on trade for 1,000 tonnes of steel of specification as prescribed subsequently by the AHSP at a cost of Rs. 49.75 lakhs, against which 1,043 tonnes were received during September 1979—September 1981 (50 tonnes were used for commissioning trials of the plant up to October 1980 and 602 tonnes were drawn for use in production up to March 1981). Further orders were placed on trade in November 1979 and December 1980, 3,560 tonnes of steel of the latter specification at a total cost of Rs. 231.40 lakhs under normal procedure in anticipation of commissioning of the steel forge plant in the later half of 1980; 1,274 tonnes (Rs. 82.81 lakhs) were received against these orders during September 1980—July 1981. Out of 2,957 tonnes of steel received up to July 1981, 2,024 tonnes (cost : Rs. 118.96 lakhs) were yet to be used (November 1981). This included 359 tonnes (cost : Rs. 16.70 lakhs) lying unused since March 1977.

3.2 *Factory 'B'*.—During December 1973 to April 1979 it received 6 demands for total 1,75,500 numbers of cartridge case. Against the first demand for development of 500 numbers, 415 numbers were completed by February 1978 and issued in June 1979 after acceptance by Services Inspector against the expected date of commencement of production by June 1977 and the balance quantity was yet to be completed (November 1981). Besides, 5,500 numbers of blanks were produced in February 1979. There was no further production (November 1980) due to non-commissioning of an induction annealing furnace imported from the foreign country in November 1974 (cost : Rs. 6.50 lakhs). The furnace could not be commissioned due to not ordering, at the same time, a high frequency generating set and its controlling equipment as it was assumed in the absence of full details from the foreign country that the same would be supplied complete in all respects. This omission was pointed out by factory 'B' only on receipt of the furnace. Efforts to procure them from the foreign country having failed, action was initiated in August 1976 for their procurement from trade sources, and finally in January 1977 an order was placed on a trade firm for import at a cost of Rs. 4.63 lakhs. The supply was received in December 1977—January 1978 and the furnace was commissioned in August 1978, but it was taken on charge in November 1979 after pre-commissioning trials. During August 1980 to March 1981, two orders for 19,500 numbers of blanks and one order for 10,000 numbers of new cartridge case were placed by factory 'B'. According to the Ministry (November 1981), the factory produced 9,500 blanks in 1979-80 and 18,625 new cartridge cases in 1980-81. Production planned during 1981-82 for new case and blanks was 12,000 numbers and 18,000 numbers respectively.

3.2.1 Other points of interest in factory 'B' were as follows :

(i) 5,000 numbers of silicon brass blank (cost : Rs. 17.73 lakhs) alongwith other items were ordered for import from the foreign country under a supplementary contract concluded in July 1977 (total value of contract : Rs. 185.43 lakhs), of which 4,707 numbers (cost : Rs. 16.69 lakhs) received in February 1979 were lying in stock unused due to technical reasons; the balance quantity (cost : Rs. 1.04 lakhs) had been pilfered in transit.

(ii) Cartridge case was planned to be produced by factory 'B' with 70/30 brass blanks. No extra capacity was created for melting and blanking under this project and for supply of blanks to factory 'A', trade assistance was being obtained. This position would continue till such time as an augmentation project for brass melting and strip making in the factory sanctioned in August 1978 was commissioned (target date is August 1982) and would thus affect the production schedule of cartridge case.

3.3 *Factory 'C'*.—During April 1974 to June 1978 it received 9 orders for 2.33 lakh rounds of the ammunition from the DGOF. The main shell filling plant ordered in May 1975 and received in March 1978 was erected/commissioned in April

1979 by the suppliers as per contract. Although production had been established, regular production was held up for want of primer alongwith propellant, as it took time to have the nomenclature of the items clarified from the foreign country. During 1976-77 and 1977-78, the factory produced 975 rounds of the ammunition (cost : Rs. 1,450 each approximately) assembled and filled with propellant from 1,000 sets of components including shell cartridge case, primer and propellant (except fuze) received in July 1976 from the foreign country under the supplementary contract of October 1974 at a cost of Rs. 12.93 lakhs. In 1979-80, the factory produced and issued 5,000 rounds of the ammunition with imported components @ Rs. 2,000 per round (approximate) and in 1980-81, produced 11,000 rounds with imported and indigenous components @ Rs. 1,591 per round.

As contemplated under the project, 5,000 sets of fuze were received from another foreign country in March 1974 at a cost of Rs. 5.27 lakhs under a contract concluded in January 1973; 3,400 sets (cost : Rs. 3.58 lakhs) were assembled and issued with the ammunition during 1976-77 to 1979-80, 1,600 sets costing Rs. 1.68 lakhs having been expended in proof trials and assembly rejections.

As regards primer, factory 'C' placed demand (April 1979) for 97,500 numbers (revised to 64,900 numbers) for 2 types on another factory for establishment of indigenous production and 8,080 numbers of one type (for reduced charge ammunition) were supplied to factory 'C' in 1980-81 after establishment of production in 1979-80. The production of other type was also established in 1980-81, but supply to factory 'C' was yet to commence (November 1981).

According to the Army authorities (October 1979), no ammunition was imported after 1976 and further import would depend on the capability of the DGOF to produce it. In May 1980, they ordered import of 1.10 lakh rounds of the ammunition at a cost of Rs. 18.01 crores.

3.3.1 Other points of interest noticed in factory 'C' were as follows :

(i) Under the supplementary contract of July 1977, the factory received alongwith other items 3,000 numbers of filled shell in February 1978, 20,000 sets of propellant in 1978, 12,000 numbers of cartridge case blank in 1979 and 8,000 numbers of empty shell in November 1979 at a total cost of Rs. 185.43 lakhs. Although import of these items (except propellant, import of which was contemplated till establishment of production) was not contemplated, this was done due to non-commencement of indigenous production and for using empty shells during commissioning trials of the filling plant.

(ii) Under another supplementary contract concluded in April 1979, 1,04,000 numbers of primer costing Rs. 15.39 lakhs were received in November 1979. The contract also covered supply of 27,500 sets of full and 56,500 sets of reduced charge propellant as well as 95,000 numbers each of 2 types of fuze detonator costing Rs. 365 lakhs, which were received during November 1979 to July 1980. Imports of the items were contemplated to match with propellant till establishment of production which had, however, been delayed.

(iii) The factory earmarked for production and supply of the propellant (phase I—stage I) was due for commissioning in May 1980, but revised date was 1982-83. Commissioning had been delayed due to :

— delay in issue of revised Government sanction for the project (July 1976); and

— delay in issue of Government sanction empowering the DGOF/Chairman, Ordnance Factory Board for direct procurement of plant and machinery (July 1976).

Meanwhile, another factory had been entrusted with production of reduced charge propellant, but bulk production was yet (November 1981) to be taken up pending manufacture and clearance of experimental batches planned to be taken up in the last quarter of 1981-82 as it was heavily booked for other outturn items.

4. *Summing up*.—The following are the main points that emerge :

- The project was conceived in 1965 and after a long period of gestation was sanctioned in October 1972 for commissioning by October 1977. The date of commissioning was revised to August 1978 and finally to June 1984.
- The delay in establishment and commencement of bulk indigenous production of the ammunition and its components resulted in imports of its various components valued at Rs. 601.51 lakhs including Rs. 500 lakhs approximately for primer and propellant which were not included in the scope of the project.
- Although a decision was taken (1969-70) for production of fuze in factory 'A', its production in small quantity could be expected only in the year 1980-81.
- Due to delay in commencement of bulk production of shell body in factory 'A' 2,024 tonnes of steel procured at the cost of Rs. 118.96 lakhs approximately were yet to be used (359 tonnes since March 1977).
- The life of the gun, for which the ammunition is required, was assessed as 20 years or so in 1965; 15 years of the life have passed, but regular production and supply of the indigenous ammunition to achieve self-sufficiency are not yet (November 1981)

in sight. In May 1980, the ammunition was, therefore, ordered for import at a cost of Rs. 18.01 crores.

— The delay in commissioning of the project had also increased its cost from Rs. 16.47 crores (October 1972) to Rs. 23.00 crores (October 1980).

10. **Establishment of a foundry**

In paragraph 10 of the Audit Report (Defence Services) for 1976-77, mention was made about delay in commissioning of a foundry (for production of high grade castings for various components of Shaktiman and Nissan vehicles, armoured vehicles, tractors and earthmoving equipment) as a captive unit of the new vehicle factory sanctioned in November 1965 for the production of Shaktiman and Nissan vehicles. The Public Accounts Committee, while expressing its displeasure over the delay in construction of the foundry meant for production of castings for supply to the new vehicle factory, had observed in para 1.13 of its 29th Report (7th Lok Sabha : 1980-81) that by proper planning and concerted efforts, the delay could have been avoided and that their observations should be specifically referred to the committee appointed (August 1975) by Government to look into the performance of ordnance factories.

After receipt of a detailed project report (DPR) in March 1967 and conclusion of a collaboration agreement with a foreign Government in July 1967, the project was sanctioned in October 1967 at a cost of Rs. 963.52 lakhs (revised to Rs. 994.81 lakhs in June 1969 and subsequently reduced to Rs. 945.01 lakhs in January 1972 by deletion of some items). The project was expected to be completed by March 1971 and to afford an annual saving of Rs. 2.96 crores in foreign exchange in respect of imported castings required for components of the vehicles which were now to be produced in 2 shifts in the new vehicle factory (6,000 Shaktiman and 7,200 Nissan). Against this, the production in the factory during the years from 1976-77 to

1980-81 had been only about 50 *per cent* (average) of its capacity. The annual production capacity of the foundry was fixed in June 1967 at 9,660 tonnes of grey iron castings and 2,300 tonnes of malleable iron castings.

2. *Progress of the Project*

(a) *Civil Works.*—During February 1967 to November 1969, Government accorded 7 administrative approvals aggregating Rs. 270.87 lakhs including the main administrative approval for construction of foundry building and connected services issued in June 1969 for Rs. 249.72 lakhs followed by a supplementary approval in November 1969 for Rs. 9.00 lakhs. The delay in the issue of these 2 administrative approvals was attributed by the Ministry of Defence (May 1972) to delay in preparation of revised design and estimate of the buildings/structures etc. to suit Indian standards and to certain changes which were necessitated at the stage of detailed designs for hot blast cupolas and the melting shop.

While the administrative approval for the foundry buildings, etc. was issued in June 1969, the detailed estimates were finalised in April 1970, *i.e.* after 10 months as the proposed works were of a complicated nature requiring considerable study of the project drawings. The foreign consultants were also not in favour of starting the foundation work before the finalisation of drawings and issue of purchase orders for main machinery items. Civil works were thus actually started in May 1970 as against the schedule of January 1968 mentioned in the DPR. According to the administrative approval, the foundry works were to be completed by December 1972, but were actually completed in December 1974. The delay in completion was attributed by the department mainly to late conclusion of contracts, general shortage of steel in the country and delay in receipt of drawings of special foundations for main building from the foreign experts.

(b) *Plant and machinery.*—The total number of machines initially assessed as 1,350 was revised (for the foundry to function as a separate instead of a captive unit of the new vehicle factory as originally envisaged and also to cater for changes suggested by the foreign experts in the manufacturing techniques of several castings) to 1,438, of which 1,372 machines (value : Rs. 847.83 lakhs) were ordered, received and erected/commissioned till October 1980 ; the remaining 66 machines were not ordered (May 1981), being not required. Critical items were, however, received and erected by March 1976 with their trial runs/commissioning completed in June 1976.

(c) *Project estimate.*—The project envisaged an outlay of Rs. 963.52 lakhs (reduced to Rs. 945.01 lakhs in January 1972) to be completed by March 1971. However, due to delay in implementation, the estimate had to be further revised to Rs. 1516.96 lakhs (December 1975). The revision in the cost of civil works was due to increase in prices of steel and cement, change in scope of works for underground galleries, presence of high sub-soil water requiring special water-proofing and provision of residential accommodation and township, etc. (Rs. 128.37 lakhs), in plant and machinery due to unforeseen increase in prices, more requirement of machines than originally assessed, extra charges on account of agency commission, taxes and other items (aggregating Rs. 443.58 lakhs). The total expenditure booked against the project up to 31st March 1981 was Rs. 1526.49 lakhs.

The cost of the project was expected (September 1981) to increase further by Rs. 358.35 lakhs in view of increase in the cost of land (Rs. 59.01 lakhs), foundry buildings and connected services (Rs. 8.54 lakhs), construction of new buildings/bays (Rs. 46.80 lakhs) for accommodating additional items of plant and machinery (cost : Rs. 244 lakhs).

(d) *Production.*—As against the scheduled date of commencement of production of March 1971, actual production was commenced in July 1976. Against the rated capacity of 11,960 tonnes of castings, the actual production was 817 tonnes in 1976-77 (7 *per cent*), 1,800 tonnes in 1977-78 (15 *per cent*), 1,820 tonnes in 1978-79 (15 *per cent*), 3,000 tonnes in 1979-80 (25 *per cent*) and 3,954 tonnes in 1980-81 (33 *per cent*). The production of major items having been established, 4,200 tonnes were expected to be produced in 1981-82.

The foundry did not produce any castings required for armoured vehicles, tractors, etc. as planned originally with the result that procurement thereof and also of castings required for transport vehicles from abroad and trade had to be made. The total value of such procurement for the years 1972-73 to 1980-81 was Rs. 33.47 crores (Imports : Rs. 26.42 crores ; Trade : Rs. 7.05 crores). The shortfall in production was attributed to power shortage in the State and the loss was assessed by the foundry as Rs. 52.85 lakhs in 1978-79, Rs. 138.64 lakhs in 1979-80 and Rs. 160.49 lakhs in 1980-81. To offset the loss, a diesel generating set of 4 MW capacity had been proposed (May 1979) for procurement at an estimated cost of Rs. 4.20 crores. The proposal was still under consideration (September 1981).

3. In connection with the production in the foundry, the following points were noticed in audit :

(i) According to the DPR, the rated capacity of 11,960 tonnes of castings was to be achieved in 2 shifts (each of 8 hours) with a manpower of 1,043 (staff : 294 and workers : 749), against which the actual manpower sanctioned and deployed, actual production and overtime paid during 1976-77 to 1980-81 are indicated below :

Year	Production (in tonnes)	Staff	Workers	Total	Overtime		Remarks
					Hours (in lakhs)	Amount (Rs. in lakhs)	
1976-77	817	665	1,038	1,703	3.33	11.05	On single shift
1977-78	1,800	698	1,263	1,961	5.09	13.71	
1978-79	1,820	727	1,465	2,192	5.99	26.21	On 2 shifts in phases
1979-80	3,000	821	1,717	2,538	9.82	29.59	
1980-81	3,954	925	1,838	2,763	11.89	40.06	On regular 2 shifts except in one line of one shop.

The Ordnance Factory Board (OFB) stated (September 1981) that the requirement of manpower recommended in the DPR was based on the conditions (efficiency and working procedures) prevailing in that country. The manpower position was, therefore, reviewed by a committee appointed by the Director General, Ordnance Factories (DGOF) in August 1975 and necessary deployment was made as recommended by the Committee. The OFB added that proposals for obtaining Government sanction to the deviation from the DPR of the foreign Government were submitted in August 1978, but after over a year (September 1979) the Ministry advised creation of temporary posts and sanction was issued accordingly in December 1979.

(ii) Even with payment of overtime allowance (total amount paid during 1976-77 to 1980-81 : Rs. 120.62 lakhs) the production per year achieved during the years was less than that expected in a single shift of 8 hours without overtime (5,980 tonnes). The OFB stated (September 1981) that such overtime was necessary to develop the product lines and in doing so to train the workers gradually and that overtime had been a part of ordnance factories working.

(iii) While the foundry had not even developed the castings, the management resorted to the system of piece work from June 1978 due to pressures from the unions. In the absence of a scientific time study, the rates were fixed on an *ad hoc* basis (1977-78) through negotiations with the unions and workmen. The management observed (May 1979) that the rates were loose and, therefore, productivity was low. It was proposed to have the rates examined by the National Productivity Council and to make efforts to fix rates on a scientific basis. According to the OFB (September 1981), however, the foundry being a part of the ordnance factory set-up where piece work system was in vogue, it was not possible to delay introduction of the system and the rates were initially fixed by the foundry with limited expertise available at the time for commencement of bulk production of developed items, on the basis of the present skill of the workers who had no experience or training for working in a sophisticated foundry.

Earlier, a committee appointed by Government in August 1975 for examination of the reasons for slippages and constraints in production in ordnance factories had generally observed (May 1978) that the foundry had accepted a schedule prepared by collaborators, which was unrealistic under Indian conditions and prevalent procedures.

The Ministry stated (September 1980) that Government had decided to appoint a working group to look into the various reasons for low production in the foundry and to suggest measures for its stepping up and also to plan for production of castings for future vehicles. The group was appointed by the OFB in July 1981.

The OFB stated (September 1981) that :

- low production in the new vehicle factory was not attributable to low production in the foundry only, the factory being dependent also on trade supplies and imports ;
- there was saving in foreign exchange which was expected to be over Rs. 40 lakhs during 1981-82 ; and
- recommendations of the working group were expected to be available by end of 1981.

Summing up.—The following points emerge :

- The project sanctioned in October 1967 was expected to be completed in March 1971. Delay in completion of project was due to late completion of civil works (December 1974) and delay in the erection and commissioning of critical items of plant and machinery (June 1976).

- The cost estimate of the project escalated from Rs. 963.52 lakhs (October 1967) to Rs. 1875.31 lakhs (September 1981) ; against this, the expenditure booked up to 31st March 1981 was Rs. 1526.49 lakhs.
- The production of vehicles in the new vehicle factory during the years (1976-77 to 1980-81) had been only about 50 *per cent* (average) of its capacity in 2 shifts of working.
- Against the rated capacity of 11,960 tonnes of castings, the actual production in the foundry was 817 tonnes in 1976-77 (7 *per cent*), 1,800 tonnes in 1977-78 (15 *per cent*), 1,820 tonnes in 1978-79 (15 *per cent*), 3,000 tonnes (25 *per cent*) in 1979-80 and 3,954 tonnes in 1980-81 (33 *per cent*).
- No castings required for armoured vehicles, tractors, etc. as planned originally were produced with the result that procurement of these and transport vehicle castings of the value of Rs. 33.47 crores had to be made from abroad (Rs. 26.42 crores) and trade (Rs. 7.05 crores) during 1972-73 to 1980-81.
- Even with payment of overtime allowance amounting to Rs. 120.62 lakhs, the production achieved during 1976-77 to 1980-81 was less than that expected in a single shift of 8 hours without overtime (5,980 tonnes).

11. **Purchase of tyre sets for vehicles at high cost**

I. Shaktiman, Nissan 1-ton and Nissan Patrol vehicles were being manufactured at factory 'A' since 1959, 1960 and 1962 respectively. After factory 'B' was established (1970), manufacture of these vehicles was discontinued at factory 'A', and factory 'B' commenced assembly of Nissan Patrol, Nissan 1-ton and Shaktiman vehicles in June 1970, November 1970 and

March 1972 respectively. Factory 'B' supplied 23,326 Shaktiman, 29,268 Nissan 1-ton and 8,046 Nissan Patrol vehicles in all to the services (up to March 1981).

Each vehicle required 6 (in case of Shaktiman vehicles) and 4 (in case of the other two) wheels ; in addition a stepney was required to be supplied with each vehicle as per the requirements of the Army. Till 1976-77, the entire requirements of tyre sets (comprising tyre, tube and flap) were procured locally by factory 'B' after invitation of quotations from the tyre manufacturers and the prices to be paid were negotiated with them on the basis of quotations received. During 1977-78, in addition to the procurements made locally (21,080 sets for Shaktiman, 15,318 sets for Nissan 1-ton and 2,400 sets for Nissan Patrol vehicles), factory 'B' received part supply against an indent (3,600 sets for Shaktiman, 3,800 sets for Nissan 1-ton and 800 sets for Nissan Patrol vehicles) placed (December 1976) on the Director General, Supplies and Disposals (DGSD). The prices paid for by factory 'B' for the procurements made locally during 1977-78 were higher than the prices paid for the supplies made during the year by the Director of Ordnance Services (DOS) on the rate contracts concluded by the DGSD for the purpose, as indicated below :

	Procurement rate per set by	
	Factory 'B'	DOS
	Rs.	Rs.
Shaktiman	1,100.08	981.82
Nissan 1-ton	987.40	892.46
Nissan Patrol	407.25	368.30

The lower prices for the supplies to the DOS against DGSD's rate contracts were due to 17½ *per cent* discount over the market rates of tyre sets allowed by the tyre manufacturers. As stated by the Ordnance Factory Board (OFB) (June 1981), the concessional rate was being obtained by the DGSD since 1975-76.

Since the tyre manufacturers did not agree (1976) to supply tyre sets to factory 'B' at the DGSD's rate contract rates and as the services were the ultimate user of the tyre sets, the anomalous position regarding the procurement of the same at different rates by the two agencies was taken up (January 1977) by the Ministry of Defence with the tyre manufacturers. The tyre manufacturers maintained (February 1979) that the rates for original equipment were higher than those for spares and that in the case of the tyre sets supplied to the DOS, no expenses were involved in the transportation, storage, etc. while extra expenses were incurred on such counts for supplies to factory 'B'. The Ministry, therefore, directed (February 1979) that the extra expenditure on these counts could be added by the suppliers and that factory 'B' should analyse the rates when received against tenders. The OFB stated (September 1981) that efforts were made to persuade the tyre manufacturers to supply tyre sets to factory 'B' at the rate contract rates plus 5 *per cent* thereon to cover the expenses on transportation, etc. But excepting firm 'P' which agreed to charge 6½ *per cent* towards the above expenses, none of the firms responded to the offer in positive terms. The OFB stated (November 1981) that a decision had been taken (June 1980) to meet the future requirements of tyres as original equipment through the DGSD.

Computed with reference to the procurement costs of the DOS, plus 6½ *per cent* thereon for the expenses on transportation, etc., the extra expenditure involved on the procurement of tyre sets locally by factory 'B' (21,080 sets for Shaktiman, 15,318 sets for Nissan 1-ton and 2,400 sets for Nissan Patrol vehicles) during 1977-78 was Rs. 17.49 lakhs. Factory 'B' had procured 55,275 sets for Shaktiman, 35,798 sets for Nissan 1-ton and 8,698 sets for Nissan Patrol vehicles during 1978-79 to 1980-81 at rates varying from Rs. 1,285.66 to Rs. 1,719.93 (Shaktiman), Rs. 1,173.66 to Rs. 1,602.00 (Nissan 1-ton) and Rs. 501.64 to Rs. 781.85 (Nissan Patrol) per set. As the prices paid for by the DOS during this period had not been intimated to Audit

(October 1981) though called for in July 1981, the extra expenditure incurred on these procurements by factory 'B' could not be worked out.

II. In March 1979, factory 'B' floated tenders for supply of 33,600, 16,400 and 9,600 tyre sets for Shaktiman, Nissan 1-ton and Nissan Patrol vehicles respectively to meet the production requirements for the period from July 1979 to June 1980. The offers received from various firms (March 1979) varied from Rs. 1,334.00 to Rs. 1,392.94 (Shaktiman), Rs. 1,220.00 to Rs. 1,333.00 (Nissan 1-ton) and Rs. 535.53 to Rs. 580.00 (Nissan Patrol) per set. Though, in pursuance of the decision (February 1979) of the Ministry of Defence, the offers were required to be analysed by factory 'B' to assess their reasonableness, no such analysis was conducted by the factory and after examination of the technical suitability of the offers, the OFB was requested (May 1979) to negotiate with the firms and to settle the rates. The Ministry of Defence stated (October 1981) that the OFB was being asked to intimate the precise reasons why factory 'B' did not analyse the offers.

As factory 'B' forwarded only a summary of quotations along with its proposal, the OFB collected the quotations and other connected documents (August 1979) by deputing an officer to factory 'B'. The OFB stated (May 1981) that prior to the formation of the Board (February 1979), factory 'B' used to send only summary of quotations to the Ministry of Defence for negotiations with the firms.

After the negotiations with firms were held (September 1979) and finalised (December 1979), a sanction was issued (December 1979) for procurement of a part quantity (6,000, 4,000 and 5,000 sets for Shaktiman, Nissan 1-ton and Nissan Patrol vehicles respectively) from firms 'P', 'Q', 'R' and 'S'. Factory 'B' placed 5 orders against this sanction and another 10 orders under its own financial powers for a total quantity of 12,300 tyres sets for Shaktiman, 13,428 tyre sets for Nissan 1-ton and 5,850 tyre sets for Nissan Patrol during November 1979 to April 1980 on these firms as follows :

	Firm 'P'	Firm 'Q'	Firm 'R'	Firm 'S'
Shaktiman Set	7,500	3,200	—	1,600
Rs. per set	1,449.30	1,449.00	—	1,449.00
Nissan 1-ton Set	3,000	5,600	2,628	2,200
Rs. per set	1,376.88	1,400.00	1,400.00	1,400.00
Nissan Patrol Set	3,000	1,000	—	1,850
Rs. per set	606.54	603.37	—	603.37

Against these orders, 12,300, 11,650 and 4,200 sets for Shaktiman, Nissan 1-ton and Nissan Patrol vehicles respectively were received till March 1981 commencing from February 1980 and 1,650 sets for Nissan Patrol vehicles were yet to be received (March 1981) ; the order for the balance (1,778 sets for Nissan 1-ton) was cancelled (March 1981). The procurements involved an extra expenditure of about Rs. 33.47 lakhs with reference to the March 1979 offers of the firms. The Ministry of Defence stated (October 1981) that the tyre manufacturers were charging rates prevailing on the date of actual supplies of tyre sets and, therefore, there was not much control over their rates. The Ministry added that it had been decided (June 1980) that factory 'B' should procure the tyre sets (original equipment requirements) through the DGSD so that all possible benefits of prices, delivery schedules, etc. could be achieved.

Meanwhile, due to delay in finalisation of the negotiations with the firms, factory 'B' placed an order (September 1979), at the instance of the OFB, for 638 tyre sets for Shaktiman vehicles on firm 'P' at the original offer (Rs. 1,344 per set) of March 1979. Besides, another order for 1,600 tyre sets for the same type of vehicle was placed (October 1979) at Rs. 1,449.30 per set on the same firm after inviting telegraphic tenders which involved an extra expenditure of Rs. 1.68 lakhs when compared to the rate of March 1979. The supplies against these orders materialised during September 1979 and January 1980.

The Ministry of Defence stated (October 1981) that the delay in finalisation of the negotiations could have been avoided and that instructions were being issued to avoid such delays.

Against 6 of the 13 orders (out of 15) placed during November 1979 to April 1980, the firms supplied tyre sets partly or wholly after the delivery periods stipulated in the orders were over. However, they were allowed further increased rates ruling at the time of delivery for the delayed supplies involving an extra expenditure of Rs. 7.24 lakhs.

Summing up :

— Local procurement of tyre sets (21,080 for Shaktiman, 15,318 for Nissan 1-ton, 2,400 for Nissan Patrol vehicles) by factory 'B' at a price higher than the one paid by DOS during the same period (*i.e.* 1977-78) resulted in an extra expenditure of Rs. 17.49 lakhs.

— Due to delay in the finalisation of negotiations with firms 'P', 'Q', 'R' and 'S', factory 'B' had to incur an extra expenditure of Rs. 35.15 lakhs on the procurement during September 1979 to March 1981 of tyre sets for Shaktiman (13,900), Nissan 1-ton (11,650), Nissan Patrol (4,200) vehicles due to increased rates charged by the manufacturers.

— Against 6 out of 13 orders placed during November 1979 to April 1980 on firms 'P', 'Q', 'R' and 'S', delayed supplies involved an extra expenditure of Rs. 7.24 lakhs on account of further increases in rates.

12. **Indigenous manufacture of an ammunition**

Mention was made in paragraph 15 of the Audit Report (Defence Services) for 1975-76 about indigenous manufacture of an equipment with connected ammunition and accessory. In

January 1972, a contract had been concluded with a foreign country, in pursuance of a protocol signed in May 1971, for obtaining production licence and technical documentation (contract cost : Rs. 52.06 lakhs) for indigenous manufacture of the equipment and its ammunition. On a study of the technical documentation received in March 1973 and got translated in November 1974 (translation cost being Rs. 5.10 lakhs), indigenous manufacture of the equipment for 500 numbers only as required by the Services was not, however, considered economically viable (May 1974). Another contract was concluded in August 1976 with a firm of another foreign country for the purpose, but till October 1981 no Government sanction was accorded for setting up facilities for indigenous manufacture of the equipment.

The technical documentation for establishment of manufacture of the connected ammunition was also received under the same contract of January 1972 and the Director General, Ordnance Factories (DGOF) was directed by the Ministry of Defence (December 1974) to prepare a preliminary project report for obtaining Government sanction. This was finalised in March 1976, proposing setting up of necessary facilities for manufacture of 4 lakh rounds of the ammunition (HE and AP half and half) as well as 6,000 numbers of a major component (3 numbers for every 200 rounds of each type of ammunition) per annum in 2 shifts each of 8 hours. The production was planned in factory 'A' (empty components as well as assembly and filling), which was to be assisted by factory 'B' (propellant) and factory 'C' (cartridge case blank), at an estimated cost of Rs. 4.48 crores (including foreign exchange of Rs. 1.34 crores) sanctioned in January 1977. This included Rs. 3.58 crores for plant and machinery, Rs 0.55 crore for civil works and Rs. 0.35 crore for deferred revenue expenditure. The scheduled date of completion of the project was January 1981.

In the proposal of the DGOF, the necessity of procurement of proving equipment (pressure barrels) required by a Research and Development Inspectorate (RDI) was also mentioned. This component was, however, sanctioned separately by Government in February 1978 at a cost of Rs. 33.69 lakhs including foreign exchange of Rs. 33.45 lakhs. The equipment was also planned to be procured from the foreign country alongwith the plant and machinery required for the production project.

A review of the project in audit (April 1981) revealed the following points :

(A) *Plant and Machinery*.—The scheduled dates of completion of receipt, erection and commissioning of plant and machinery were December 1979, March 1980 and July 1980 respectively, which were revised (April 1981) to December 1981, March 1982 and July 1982 respectively. As against the total 182 machines assessed as required for factory 'A', only 97 numbers (cost : Rs. 173.34 lakhs) were ordered (April 1977 to July 1981), 80 numbers (cost : Rs. 116.49 lakhs) received (February 1978 to October 1981), 44 numbers erected (October 1978 to July 1981), 17 numbers required no erection but only commissioning and 19 were being erected by factory 'A' itself. Up to October 1981, only 53 numbers were commissioned. Of the balance 85 numbers not ordered, 40 numbers were not required, the existing facilities being planned to be used to effect savings ; 40 numbers were not ordered (October 1981) due to non-receipt of suitable offers and 5 numbers were planned to be fabricated indigenously for which action was in hand. Delay in receipt, erection and commissioning of machines was stated to be due to failure of the suppliers to adhere to the stipulated delivery schedules necessitating grant of extensions. Total expenditure on plant and machinery booked up to 30th September 1981 was Rs. 179.75 lakhs.

(B) *Civil works*.—The works were required for factory 'A' only and were sanctioned by Government in February 1978 for Rs. 47.76 lakhs inclusive of Rs. 10 lakhs sanctioned in December 1977 on 'go-ahead' basis. The planned date of completion was March 1980, whereas it was completed to the extent of 99.5 *per cent* only up to October 1981, commissioning of the air-conditioning plant being left to be done. Delay in completion was stated to be due to slow execution of the air-conditioning work by the contractors. Expenditure on the Civil works booked up to 30th September 1981 was Rs. 124.43 lakhs.

(C) *Production.*—Details of indents received from the services for supply of the two types (HE and AP) ammunition as well as of the major component (MC) are indicated below (October 1981) :

Services indent		DGOF covering orders for production	
Date	Quantity (numbers)	Date	Quantity (numbers)
March 1973 (educational)	10,000 (HE) 10,000 (AP)	June 1973 (development)	10,000 (HE) 10,000 (AP)
May 1977	40,000 (AP)	July 1977	40,000 (AP)
June 1977	900 (MC)	December 1977	900 (MC)
September 1980	4,00,000 (HE) 10,00,000 (AP)	Not covered	
	23,300 (MC)	June 1979	10,000 (practice)

Issue of first two development orders by the DGOF in June 1973 was subsequently regularised by Government in December 1977 at a cost of Rs. 14.61 lakhs.

Factory 'A' did not complete any of the two development orders, nor did it commence bulk production of the two types of the ammunition and also the major component planned under the project till October 1981. As per production programme of the DGOF, the factory was expected to produce 0.50 lakh rounds of HE and AP in 1981-82 in establishing production ; production of 0.50 lakh rounds of HE and 1.5 lakh rounds of AP was also planned in 1982-83 subject to timely receipt of propellant and pressure barrels from the foreign country.

Factory 'B' manufactured three batches of propellant during September 1979 to March 1981 on the basis of certain nominal composition and physical dimensions suggested in December

1978 by a Research and Development Laboratory (RDL) for starting initial production; one batch was found acceptable by the RDL and sent for proof trials, while the other was still under testing and acceptance (October 1981). No quantity was supplied by factory 'B' to factory 'A' against its demand for 969.75 kgs. of propellant placed in December 1979. A supplementary contract was concluded in May 1980 by the Ministry with the foreign country for import of 16 tonnes of propellant alongwith 360 kgs. of hexogen and 2 lakhs numbers of link (total cost : Rs. 17.24 lakhs) and except link shipped in July 1981, these were received by factory 'A' by October 1981.

Factory 'C' produced and supplied 10,000 numbers of cartridge case blank (2,700 numbers in 1978-79, 7,157 numbers in 1979-80 and 143 numbers in 1980-81) to factory 'A' against its demand for 10,000 numbers placed in April 1978. Factory 'C' also supplied 10,000 numbers in 1980-81 against another demand (May 1978) of factory 'A' for 63,507 numbers; there was no further supply from factory 'C' against this demand and another for 2,22,338 numbers (March 1979). Factory 'A', however, received from the foreign country by October 1981, 10,000 numbers of the major component (Rs. 5.78 lakhs) planned for production under this project against a contract concluded by the Ministry in November 1980.

The scheduled date of completion of the project was revised (April 1981) to January 1984 due to unwillingness of the foreign country to supply 10 numbers of complete knock-down (CKD) and 3 numbers of pressure barrel against an indent placed by the DGOF on it through the Ministry in December 1978. The case was revived in May 1979 and the foreign country agreed in March 1980 to supply only 3 numbers of CKD, which were received by October 1981 under the supplementary contract of May 1980 mentioned above; 4 numbers of CKD were further ordered by the Ministry under three supplementary contracts during November 1980 to March 1981 alongwith 5 pressure barrels, 50 main equipment for which the ammunition was planned for production (these two were required by the RDI) and certain miscellaneous items (Rs. 56.02 lakhs) and these were yet to be received (October 1981), 20,000 numbers of filled fuze were also ordered (Rs. 2.28 lakhs) at the same time.

The OFB stated (October 1981) that the project was planned initially in three phases (*viz.* import of CKD to the extent of 30,000 numbers for assembly in the first phase, import of empty components, filling material and certain critical filled components for filling and assembly in the second, and production of all components as well as filling and assembly in the third), but the planning was upset when in January 1979 it came to be known that no CKD, materials, etc. would be forthcoming from the foreign country and this necessitated revised planning for starting production of empty components first, with the consequential delay in establishing production of the ammunition in factory 'A'.

During June 1976 to February 1981, 7 contracts were concluded by the Ministry for import of 16.48 lakh rounds of both types of ammunition at a total cost of Rs. 5.15 crores; of which 8.03 lakh rounds were received during 1976 to 1980; the balance quantity being due for delivery during 1981 to 1983. Imports of 8.45 lakh rounds worth Rs. 2.49 crores due for delivery during 1981 to 1983 could be avoided, had the production project been completed according to schedule by January 1981.

13. Vegetable tannery

In September 1963, a proposal was initiated by the Director General, Ordnance Factories (DGOF) for augmentation and modernisation of a vegetable tannery at a factory at an estimated cost of Rs. 10.34 lakhs raising the existing capacity of 6,000 hides per month to 10,000 hides (6,000 hides under pit method plus 4,000 hides by quick drum tanning method) and also to effect reduction in cost of production by 30 *per cent.* The proposal remained under consideration for several years and in April 1971, sanction was accorded by Government for modernisation of the tannery for Rs. 8.40 lakhs including foreign exchange of Rs. 1.68 lakhs (civil works : Rs. 4.45 lakhs, plant and machinery : Rs. 3.95 lakhs). The actual cost excluding departmental charges, however, came to Rs. 12.45 lakhs including foreign exchange of Rs. 1.85 lakhs ; the excess cost was yet to be regularised (September 1981). According to the Ministry of Defence (December 1979), the sanctioned capacity was 7,500 hides per month (90,000 hides per year) ; the Additional DGOF, however, stated (September 1981) that it was 7,000 hides per month. The sanction letter or the connected records do not make the position clear beyond doubt.

2. *Civil works*.—Sanction for the civil works was issued by the Additional DGOF (OEF Group) in August 1971 for Rs. 4.45 lakhs for completion in 12 months. Contract for the civil works was concluded by the Military Engineer Services (MES) only on 15th June 1973 *i.e.* after about 22 months. The site for the first phase of work was handed over immediately and the work was completed during July 1973 to March 1974. The Additional DGOF stated (September 1981) that as there were certain defects in the execution of work by the MES, the site for the second phase was handed over to the MES on 15th August 1974 after rectification of the defects. Final decision on the monorail and fixing of all sheeting was given by the factory in September 1975 and the entire work was completed in December 1975 at a cost of Rs. 5.60 lakhs; leakages in the tanning pits were, however, noticed by the factory and these were rectified by the MES in May 1976 before handing over the building in July 1976.

3. *Plant and Machinery*.—Seventeen items comprising 5 types of plant and machinery including 6 electric hoists (cost : Rs. 6.83 lakhs) were received from suppliers in the country by the factory during March 1973 to October 1974. The electric hoists were commissioned in March 1977 while the other items were commissioned during September 1973 to August 1974.

4. *Production.*—Prior to sanction of the modernisation scheme, the capacity for production of buffalo hides was 6,000 per mónth (72,000 per year). After modernisation, the total capacity according to the Additional DGOF was 7,000 hides per month (84,000 per year) against which actual production of hides by both the methods (buffalo and other hides, excluding sheep and goat skins) was far below the capacity as given below :

Year	Quantity of hides produced (No. of hides)	Shortfall (No. of hides)	Percentage of shortfall
1973-74	61,452	22,548	26.84
1974-75	51,343	32,657	38.37
1975-76	43,046	40,954	48.75
1976-77	33,588	50,412	60.01
1977-78	61,431	22,569	26.86
1978-79	61,631	22,369	26.62
1979-80	33,802*	50,198	59.75

*(Only buffalo hides)

The Ministry stated (December 1979) that the tanning of buffalo 'D' hides during 1973-74 to 1977-78 was restricted to the extent of buffalo 'D' hides received against yearly programme of 60,000 intimated to the Director General, Supplies and Disposals (DGSD). The yearwise figures of receipts of buffalo 'D' hides were as follows :

Year	Buffalo 'D' hides (numbers)
1973-74	49,732
1974-75	38,048
1975-76	29,747
1976-77	34,831
1977-78	51,789
1978-79	34,429
1979-80	57,785

The above table shows that even after incurring an additional expenditure of Rs. 12.45 lakhs on modernisation, the total production was much less than even the capacity existing prior to modernisation. The Additional DGOF stated (September 1981) that during 1980-81, 6,500—7,000 hides could be processed per month on an average.

As regards the modern method of quick drum tanning, this was started from December 1977 on commissioning of the project after rectification of the defective pits. Against the planned capacity of 48,000 hides per year by this method, only 2,916, 7,170 and 7,570 numbers of hides were tanned under this method during 1977-78, 1978-79 and 1979-80 respectively. The Additional DGOF stated (September 1981) that the shortfall was due to less number of hides received from the DGSD.

5. *Cost of production.*—Cost of production in respect of hides manufactured by the modern tanning method and by the old pit method were not available for the years prior to 1980-81 from the records of the Accounts Office of the factory. The cost of production by both methods taken together varied from Rs. 15.54 to Rs. 16.50 per kg. during 1976-77 and Rs. 12.37 to Rs. 17.80 per kg. during 1977-78 as against the lowest rates of item purchased at Rs. 10.67 per kg. and Rs. 10.76 per kg. during 1976-77 and 1977-78 respectively.

The Ministry stated (December 1979) that the comparison of cost of production by the old pit method and the modernised tanning method during 1978-79 had revealed that the cost of the sole leather was reduced by approximately 20 *per cent* to 25 *per cent*. This fact was not susceptible of verification from the records of the Accounts Office of the factory for 1978-79 and 1979-80, as no separate records giving cost of production by the two different methods were maintained by that office. According to Additional DGOF (September 1981), a special *ad hoc* exercise carried out by the factory and its Accounts Office revealed that the cost under modern method was less by about 6 *per cent* during 1980-81. This could not be verified in audit; the anticipated reduction in cost by 30 *per cent* by modern method has not been achieved.

6. *Summing up.*—The case revealed that :

— the project, proposed in 1963, was sanctioned in 1971 (after 8 years) at a cost of Rs. 8.40 lakhs and was completed in 1976 at a cost of Rs. 12.45 lakhs;

— against 48,000 buffalo hides proposed to be produced every year by modern tanning method, only a small quantity of 2,916 hides, 7,170 hides and 7,570 hides were produced during 1977-78, 1978-79 and 1979-80 respectively ;

— against the total rated capacity of 84,000 hides per year (as indicated by the Additional DGOF), the production during 1973-74 to 1979-80 varied from 33,802 to 61,631 hides : and

— the anticipated reduction in cost by 30 *per cent* by modern method had not been achieved.

14. Development of explosives in an ordnance factory

In paragraph 11 of the Audit Report (Defence Services) for 1976-77, mention was made of delay in commissioning of an imported plant and establishment of production of Trinitrotoluene/Dinitrotoluene (TNT/DNT) in an ordnance factory. The commissioning trials/guarantee runs were initially planned during September 1973 to January 1974. For this purpose and for establishing production of the two items (TNT and DNT), the Director General, Ordnance Factories (DGOF) had proposed (June 1973) issue of development orders for manufacture of 480 tonnes of TNT and 20 tonnes of DNT at a cost of Rs. 26.65 lakhs (at Rs. 5,551.95 per tonne) and Rs. 1.38 lakhs (at Rs. 6,900 per tonne) respectively. In August 1973, the Associated Finance Wing advised the DGOF to reduce the quantities to absolute minimum for effecting maximum economy. The DGOF accordingly reduced the quantities

(October 1973) to 300 tonnes of TNT and 10 tonnes of DNT stating that these "would suffice to cover the production during trial runs of the plant". In February 1974, the Government sanctioned Rs. 17.35 lakhs for establishment of production (Rs. 16.66 lakhs for 300 tonnes of TNT and Rs. 0.69 lakh for 10 tonnes of DNT), followed by a development order in March 1974.

After erection of the plant in May 1974 and taking over the water lines connecting the process buildings from the Military Engineers, the factory issued a development warrant (November 1974) for 300 tonnes of TNT and produced 300.325 tonnes during January 1975 to November 1975; 114.425 tonnes were accepted as grade I and 101.500 tonnes as grade II, the balance 84.400 tonnes being rejected as substandard. The substandard quantity was reprocessed during August to November 1975 on two sub-warrants issued in August and September 1975, obtaining 10.95 tonnes as grade I and 54.91 tonnes as grade II, the balance 18.54 tonnes being lost in reprocessing. The completion cost of the main warrant and the sub-warrants (which was not worked out separately as normally expected) was Rs. 73.82 lakhs, exceeding the sanctioned cost (Rs. 16.66 lakhs) by Rs. 57.16 lakhs. As regards DNT, 10 tonnes were produced during August to December 1976 against a warrant issued in April 1976 at a cost of Rs. 1.85 lakhs, exceeding the sanctioned cost (Rs. 0.69 lakh) by Rs. 1.16 lakhs. In both the cases, there was no specific budget allotment for the excess expenditure, nor was any action taken by the factory to report the position to the DGOF for obtaining revised Government sanction.

In November 1975, however, the factory issued another development warrant for 300 tonnes of TNT on the grounds that full capacity run was not over and acceptable product was not obtained, and completed it during November 1975 to February 1976 at a cost of Rs. 31.20 lakhs at Rs. 10,400 per tonne with 283 tonnes accepted as grade I and 17 tonnes as grade II. The plant was then taken over temporarily for production purposes

(April 1976). Meanwhile, in January 1976, the factory had requested the DGOF to issue another development order for 500 tonnes of TNT at a cost of Rs. 21 lakhs (at Rs. 4,200 per tonne) stating that the trials were still in progress to achieve the required quality of the final product and to bring the plant on production. The factory also stated that in anticipation of issue of further orders of the DGOF, another warrant for 300 tonnes had been issued (November 1975); it did not, however, inform the DGOF of the excess expenditure already involved in production on the first warrant (November 1974). The DGOF did not agree to the proposal stating (January 1976) that pre-commissioning trials having been completed and most of the produced TNT issued to other factories, there was no need for further development order. When the factory insisted (February 1976), the DGOF stated that the normal accepted product had to be booked on regular demands. Thus, the second development warrant for 300 tonnes (November 1975) for TNT had been completed without covering order of the DGOF, Government sanction and budget allotment, as required. The plant was finally taken over by the factory in February 1978 excluding Red Water Destruction Unit.

The original development estimate for production of TNT had been finalised by the factory in February 1973 on the basis of requirements of labour and material provided in the contract for the new plant and priced by the Accounts Branch in March 1973 at Rs. 5,551.95 per tonne with reference to production in the old plant, the production know-how, etc. in the new plant being not known. The estimate did not provide for any rejection, as the extent of likely rejection in the new plant was not precisely known. After actual production in the new plant during 1975-76 and taking into account escalation in cost of labour, material, etc., it was decided to revise the estimated cost to Rs. 13,212.40 per tonne. On completion of the first warrant of November 1974, the actual cost was worked out by the Accounts Branch at Rs. 15,624.28 per tonne. Thus the total cost of 281.785 tonnes of accepted TNT excluding 18.540 tonnes lost in reprocessing, was Rs. 44.02 lakhs as against the total expenditure of Rs. 73.82 lakhs, the difference of Rs. 29.80 lakhs being attributed by the Accounts Branch to over-drawals and non-recoveries of material (Rs. 12.10 lakhs) and excess employment of labour (Rs. 17.70 lakhs). This position was pointed out by local Accounts Branch in August 1977 to the factory. 281.785 tonnes were issued to other factories against their demands during April 1975 to January 1979, but were priced at Rs. 27.36 lakhs pending further adjustment, the balance of Rs. 46.46 lakhs being exhibited as semis as on 31st March 1979/1980 alongwith the quantity of 18.540 tonnes lost in reprocessing. Semis to the extent of Rs. 2.07 lakhs were also exhibited in the Accounts Branch at the same time on the second warrant of November 1975, against which the accepted 300 tonnes of TNT were issued to other factories during November 1975 to January 1979 priced at Rs. 29.13 lakhs pending further adjustment. The total expenditure on production of 600.325 tonnes of TNT was, therefore, Rs. 105.02 lakhs, of which Rs. 48.53 lakhs representing cost of semis remained unadjusted.

In January 1979, the factory informed the DGOF of the excess expenditure (Rs. 61.50 lakhs) incurred on development of TNT on the first warrant. In November 1979, on the basis of a decision taken in a meeting held on 2nd November 1979 between its officers and Accounts Officers, the factory submitted a case to the DGOF for obtaining Government sanction for the total expenditure of Rs. 105.02 lakhs for production of 600.325 tonnes including unavoidable loss of 18.54 tonnes and for write down of the semi value of Rs. 48.53 lakhs as it could not be absorbed in future production due to low target and consequential increase in production cost. Government sanction was awaited (October 1981).

In regard to excess expenditure incurred (Rs. 1.16 lakhs) on production of 10 tonnes of DNT issued in August/December 1976 to other factories which were charged fully, no action was also taken for regularisation under Government sanction (October 1981).

The Ministry stated (October 1981) that :

— the excess expenditure incurred on development of TNT/DNT was due to sharp increase in costs of labour, material, services, etc. since 1973;

— overdrawals/non-recoveries of material and overpayments of labour were unavoidable in commissioning a new sophisticated plant and were also due to reprocessing of the substandard product; and

— a further adjustment of Rs. 16.54 lakhs (out of Rs. 48.53 lakhs) was under consideration of the Controller of Accounts.

Apart from the point that at no stage till January 1979, the DGOF was informed by the factory of the excess expenditure of Rs. 57.16 lakhs (revised in November 1979) incurred on production of TNT on the first warrant (November 1974) for obtaining Government sanction although Accounts Branch had raised the issue earlier in August 1977, the following further points emerge :

— another development warrant (300 tonnes) for TNT, as distinct from a regular production warrant, was issued by the factory (November 1975) and completed (cost : Rs. 31.20 lakhs) without any authority, *i.e.* approval of the DGOF and Government sanction, the DGOF having ultimately decided that such a development order was unnecessary;

— against the estimated cost of Rs. 0.69 lakh at Rs. 6,900 per tonne, 10 tonnes of DNT were produced at a cost of Rs. 1.85 lakhs at Rs. 18,500 per tonne and the excess expenditure (Rs. 1.16 lakhs) was not regularised;

- no specific budget allotments were made for the excess expenditure of Rs. 89.52 lakhs incurred on production of 600.325 tonnes of TNT and 10 tonnes of DNT;
- no investigation was made into the overdrawals/ non-recoveries of material and over-employment of labour (Rs. 29.80 lakhs); and
- there was a loss of Rs. 48.53 lakhs representing cost of semis which could not be absorbed in future production.

15. Manufacture of defective components for vehicles

In paragraph 12 of the Audit Report (Defence Services) for 1978-79, rejections of axle assembly and brake assembly (cost : Rs. 50.81 lakhs) of Shaktiman vehicles manufactured in factories 'A', 'C' and 'D' for fitment to the vehicles in factory 'B' were mentioned. Losses (Rs. 22.30 lakhs) due to rejections of transmission assemblies (consisting of gear boxes and transfer cases) for Shaktiman and Nissan vehicles and road springs for the latter are mentioned below :

A. *Transmission assemblies.*—Shaktiman, Nissan 1-ton and Nissan Patrol vehicles had been in production since 1959, 1960 and 1962 respectively. Factory 'N' established the manufacture of transmission assemblies for Shaktiman and Nissan 1-ton vehicles during 1959—63 and 1970—73 respectively; factory 'B' established their manufacture during 1969 (Shaktiman), 1973 (Nissan 1-ton) and 1975 (Nissan Patrol).

Reports were received from the users (April 1974) that a large number of transfer cases and gear boxes manufactured at factories 'B' and 'N' and fitted to these vehicles were noisy and suffered from other defects, such as, hard shifting, gear slipping, etc. Simultaneously, these defects were noticed in inspection (April 1974) during road tests of the vehicles after assembly at factory 'B' and the assemblies were rejected for rectification; such rejections were stated (April 1974) to be about 30 *per cent*. The Director of Inspection (Vehicles) stated (November 1974) that the main reasons for heavy rejections were inadequate heat treatment of the components and bad manufacturing techniques at factory 'B'. He also said that the lapping of gears envisaged in the drawings was not being done. After a technical appreciation of the problem (in pursuance of a decision taken in November 1974), factory 'B' intimated (January 1975) the Director General, Ordnance Factories (DGOF) that the defects were due to defective equipment in the heat treatment shop, non-availability of lapping machines in the machine shop and inadequate inspection facilities in the factory. The Ordnance Factory Board (OFB), however, stated (October 1980) that the lapping of gears was not being done by the foreign collaborators (firms 'X' and 'Y') in all kinds of transmission assemblies and gear boxes. It was also stated that during the initial years of production of the vehicles in the Ordnance Factories, the Inspectorate was not very critical about the standard of inspection, and that when a sizeable fleet of vehicles grew up with the Army, the inspection was tightened up to have quality products, which resulted in increased rejections of the assemblies.

Following the technical appreciation, factory 'B' proposed (January and February 1975) augmentation of the heat treatment capacity and other facilities in the factory at a cost of Rs. 202.49 lakhs. However, the DGOF considered (July 1975) that the requirement of additional plant and machinery could be decided upon only after a detailed study of the production process and inspection methods of the assemblies at the works of the collaborators. Accordingly, Government sanctioned the deputation of a technical team (June 1976) to the works of the collaborators for the purpose at an estimated cost of Rs. 0.80 lakh. The team visited the works of firms 'X' and 'Y' during June—August 1976 and based on its reports (November 1976), the DGOF put up a proposal (December 1976) for procurement of additional machinery and equipment for improving the quality of the transmission assemblies at factory 'B'. After protracted correspondence, Government sanctioned the procurement of additional machinery and equipment only in February 1980 at a cost of Rs. 292.85 lakhs including Rs. 125.81 lakhs in foreign exchange. The additional machinery and equipment were expected to be in position in the later half of 1982. The OFB stated (March 1981) that factory 'N' had also initiated action to provide additional plant and machinery (estimated cost : Rs. 74.66 lakhs) for the same purpose.

Meanwhile, rejections of the assemblies during road tests at factory 'B' (before the vehicles were issued to the users) varied from 24 to 57, 39 to 47 and 35 to 51 *per cent* for Shaktiman, Nissan 1-ton, and Nissan Patrol vehicles respectively during 1974 to 1979. Factory 'N' had incurred an expenditure of Rs. 10.89 lakhs during 1974-75 to 1979-80 on the repair of such rejected assemblies. Though factory 'B' intimated the Ministry of Defence and the DGOF (January 1976) that an expenditure of about Rs. 0.10 lakh per month as direct labour on the rectification of the defective assemblies was being incurred, the OFB stated (February 1981) that the actual expenditure at factory 'B' during 1975 to 1979 was Rs. 2.90 lakhs. As no separate records of the rectifications were kept at factory 'B', these statements were not susceptible of verification in audit. The expenditure incurred by the users since 1974 on premature replacements and repairs of the assemblies fitted to the vehicles issued to them was not intimated to Audit (September 1981) though called for in July 1980.

While there were rejections of the assemblies produced in the ordnance factories, import of 420 sets of the assemblies for Nissan 1-ton vehicles (September 1974) and 3,110 sets for Nissan Patrol vehicles (1,660 during August 1974—December 1975 and 1,450 during February 1979—February 1980) at a total cost of Rs. 112.66 lakhs (FOB) was arranged, though the production of the vehicles (ranging from 2,550 to 4,170 numbers for Nissan 1-ton and from 550 to 914 numbers for Nissan Patrol per annum) was below the installed capacity (4,200 numbers for Nissan 1-ton and 3,000 numbers for Nissan Patrol vehicles per annum). The OFB stated (August 1981) that the imports were made based on requirements and indigenous availability of the assemblies.

B. *Road springs.*—Factory 'K' supplied about 6,704 sets and 5,578 sets of road springs (one set consisting of 2 numbers each of front and rear springs) for Nissan 1-ton and Nissan Patrol vehicles respectively to factory 'A' during 1961 to 1971 and about 227 sets of the former and 893 sets of the latter to factory 'B' during 1970 to 1974.

No complaint was received till December 1973 from the user factories regarding the quality of road springs supplied by factory 'K'. Factory 'A' had used all the road springs except 596 sets for Nissan Patrol vehicles which were transferred to factory 'B' after production of the vehicles was discontinued (1971-72) in factory 'A'. However, in January 1974, factory 'B' informed factory 'K' of rejections of the springs for Nissan Patrol vehicles in inspection at the stage of final passing of vehicles due to high camber. Later in June 1975, factory 'B' apprised the DGOF that their rectification was not possible. Apprehending that further supplies of road springs would be rejected by factory 'B', no further supplies were made by factory 'K' after 1974 and, therefore, factory 'B' suggested (August and October 1976) short-closure of the pending orders on factory 'K' (506 sets of front springs and 511 sets of rear springs for Nissan 1-ton and about 311 sets of road springs for Nissan Patrol vehicles). A Board of Enquiry, set up by the DGOF (April 1978) to investigate the reasons for factory 'K' being not able to continue with the production, stated (June 1980) that factory 'K' was producing springs without proper facilities and that it had made considerable efforts to satisfy requirements of factory 'B' without success. The OFB stated (October and December 1980) that with the establishment of factory 'B', the inspection standard was tightened up to have quality products and this led to the rejections of some of the supplies of road springs from factory 'K'.

Out of the supplies of factory 'K' (1,489 sets for Nissan Patrol and 227 sets for Nissan 1-ton vehicles including the transferred quantity from factory 'A'), 1,180 numbers of front spring and 1,286 numbers of rear spring (total cost : Rs. 5.91 lakhs) for Nissan Patrol vehicles were lying rejected at factory 'B' (November 1976); of these, 786 numbers of the former and 1,038 numbers of the latter (cost : Rs. 4.37 lakhs) were returned to factory 'K' in November 1976 and February 1977 and a part (628 numbers of front spring and 638 numbers of rear spring) of these returns was melted (March 1978) as scrap. The total loss due to rejections and short-closure of the pending orders at factory 'K' was Rs. 8.51 lakhs. The OFB stated (August 1981) that the overall financial repercussion was under computation.

Summing up.—The following points emerge :

— Due to defective transmission assemblies manufactured at factories 'B' and 'N', Rs. 13.79 lakhs had to be spent on their repairs during 1974-75 to 1979-80.

— Procurement of additional machinery and equipment proposed in December 1976 by the DGOF for factory 'B' to overcome the defects in the assemblies was sanctioned by Government only in February 1980 (after protracted correspondence) at a cost of Rs. 292.85 lakhs; the machinery and equipment were expected to be received by end of 1982.

— Due to rejection of assemblies produced in factories 'B' and 'N', imports valuing Rs. 112.66 lakhs had to be made (August 1974—February 1980).

— The overall loss due to rejections of road springs and short-closure of orders on factory 'K' was Rs. 8.51 lakhs.

16. Heavy rejections in manufacture of a component of an ammunition

For manufacture of shell body forging of an ammunition for supply to factory 'A', factory 'B' made a provisional estimate (May 1947) providing tentatively for 20 *per cent* normal/unavoidable rejections "on engineering and technical grounds". The basic raw material for manufacture of the forging was shell bar/billet of a particular specification received by the factory regularly from Bhilai Steel Plant (BSP) after due inspection and acceptance by a Defence Inspectorate in terms of purchase orders. Till the end of 1968, the factory encountered no difficulties in manufacture of the forging using the material supplied by BSP, the rejections being within the authorised limit, *viz.* 18.94 *per cent* during January to June 1968 and 19.67 *per cent* during June 1968 to March 1969 on two warrants for 25,000 numbers and 30,000 numbers respectively. From the beginning of 1969, however, heavy rejections started occurring due to "material imperfections on the cavity of forging", *viz.* 32.28 *per cent* during November 1968 to April 1969, 48.33 *per cent* during April to August 1969, 45.48 *per cent* during October 1969 to August 1972 and 39.25 *per cent* during August 1972 to August 1974 on four warrants for 20,000 numbers, 20,000 numbers, 30,000 numbers and 25,000 numbers respectively. The last warrant was short-closed at 20,908 numbers due to suspension of production in the factory (August 1974) ordered by the Director General, Ordnance Factories (DGOF).

Noticing the upward trend in rejections primarily due to defective material, the matter was taken up by factory 'B' with BSP followed by discussions in March 1970 based on investigations conducted earlier (March 1970) jointly by the Defence

Inspector and factory 'B' bringing out the unsoundness of the material supplied by BSP. BSP was not convinced and asked for further trials in factory 'B' in the presence of all parties concerned. Certain defective samples were also handed over to BSP for detailed examination. The matter was not, however, pursued further by factory 'B' after December 1970 on the ground of suspension of production of the forging.

No records were available in factory 'B' to show whether the rejection loss (32.28 *per cent*) on the first warrant was covered in a loss statement and regularised under proper sanction. The loss (48.33 *per cent*) on the second warrant was covered in a loss statement finalised in March 1977 for Rs. 8.58 lakhs about 8 years after completion of the warrant and even after a further period of 4 years Government sanction was awaited (October 1981). A Board held in April 1971 merely opined (June 1974) that heavy rejections "occurred due to inherent material defects only". The loss (45.48 *per cent*) on the third warrant was covered in a loss statement for Rs. 5.01 lakhs in July 1974 and regularised under Government sanction in November 1978. Sanction was conveyed in the same letter to the waiving of convening of a Board of Enquiry to investigate into the loss. For the loss (39.25 *per cent*) on the fourth and last warrant, no loss statement was prepared for its regularisation as the rejection limit had been raised to 45 *per cent* in February 1973 and made effective from 1st April 1973.

In obtaining Government sanction for two loss statements (Rs. 13.59 lakhs), the DGOF and factory 'B' stated that :

- the material always conformed to physical and chemical properties ;
- the defects were inherent in the material and could only be detected after forging ;
- there was no marked improvement in quality of the material in spite of BSP being made aware of the requirement;

— the material having been supplied by BSP after due inspection and acceptance by the Defence Inspector, the former could not be held responsible for levy of any compensation; and

— the defects were not due to the forging practice (*i.e.* bad workmanship) in factory 'B'.

It was also noticed that due to short-closure of the fourth warrant order for the shell in August 1974, net financial repercussions were worked out by factory 'B' in November 1979 at Rs. 15.64 lakhs. The loss in factory 'B' was, however, yet to be regularised.

The case revealed the following points :

— the normal/unavoidable rejection percentage remained fixed at 20 *per cent* all along since May 1947 in spite of improved method of forging and the same was increased to 45 *per cent* in February 1973 just to avoid further regularisation action;

— in spite of inspection and acceptance of the basic material by a Defence Inspectorate, defects continued to be noticed after forging in factory 'B' although physical and chemical properties of the material never varied and no compensation could be claimed from BSP for bad material;

— the question of improvement of the quality of the material was discussed thoroughly with BSP in March 1970, but it was not pursued by factory 'B' after December 1970 on the ground of suspension of production, although suspension was actually ordered much later in August 1974 during which period two warrants were under execution with heavy rejections of 45.48 *per cent* and 39.25 *per cent;*

- no specific efforts were made by factory 'B' and the DGOF to ascertain whether the material was really bad or inspection was faulty or whether production in factory 'B' was not upto the mark;
- loss (Rs. 5.01 lakhs) for the third warrant only was regularised under Government sanction ; and
- losses (32.28 *per cent* : value not assessed; 48.33 *per cent* : value Rs. 8.58 lakhs, and 39.25 *per cent* : value not assessed) on first, second and fourth warrants were not regularised; loss of Rs. 15.64 lakhs due to short-closure of the fourth warrant was also not regularised.

17. **Purchase of chilled rolls**

In an ordnance factory imported cast iron alloy rolls of minimum 19 mm chilled depth were being used in the rolling mill to roll brass and other copper alloys into intermediate and final shapes. The normal life of a pair of such rolls was for rolling 2,500 tonnes (minimum) of metal.

For the first time in December 1971, the Director General, Supplies and Disposals (DGSD) placed an order on firm 'X' (producing the rolls in collaboration with a foreign firm) for supply of 10 numbers of indigenous rolls (cost : Rs. 1.42 lakhs). This was followed by another order in July 1972 for 16 rolls (cost : Rs. 2.67 lakhs). The rolls received (1972) against the first order were used in 1973, but the chilled depth of the rolls actually supplied and their performance were not available from the factory records. However, against the order of July 1972, the chilled depth was revised (February 1973) from minimum 19 mm to 12 + 4 mm as firm 'X' held (December 1972) that rolls with the specified depth (19 mm minimum) were susceptible of breakage and that rolls of reduced chilled depth were suitable for use by the factory. The rolls (16 numbers) received against the order of July 1972 were used during

October 1973 to August 1974; 4 of them (cost : Rs. 0.67 lakh) broke or cracked prematurely during use and the other 12 (cost : Rs. 2.00 lakhs) produced about 2,051 tonnes per pair on average (ranging from 1,220 tonnes to 2,479 tonnes).

For supply of another 64 rolls with chilled depth of 19 mm minimum and 25 mm maximum, the factory placed an indent on the DGSD in December 1972 against which a trial order was placed in January 1974 on firm 'Y' for 32 rolls at Rs. 16,830 each, to be supplied at the rate of 4 rolls per month after 4 to 5 months of placing the order. An amendment issued to the order (April 1974) provided that each pair of roll was expected to give an average life of hot rolling of 2,500 tonnes (minimum) and that if the rolls failed prematurely or gave a substandard performance due to manufacturing defects, the supplier was to rectify the defects wherever possible or to make prorata adjustment based on actual life obtained in relation to the average life of that particular type of roll by supplying another roll of the same type. After acceptance of 10 rolls by the Director of Inspection (Metallurgy) in July and December 1974, the DGSD increased (February 1975), under an option clause in the order, the contracted quantity from 32 to 64 numbers at the same rate, notwithstanding the fact that the order was on a trial basis and without ascertaining from the factory the actual performance of the 10 rolls supplied by the firm. The Ministry of Defence stated (November 1981) that the increase in quantity was in terms of the firm's tender that the offer was for full quantity (64 rolls) of which 50 *per cent* could be covered immediately and the balance after 10 rolls were inspected and despatched.

Though, meanwhile, the factory had experience of the indigenous rolls of firm 'X' against the order of July 1972, which showed 19 mm as unsuitable and 12 $\pm$ 4 mm better (average rolling 2,051 tonnes), the specified chilled depth of the rolls ordered on firm 'Y' was not reduced when the ordered quantity was increased to 64 in February 1975; the factory did not also consider a suggestion made subsequently in June 1975 by a representative of firm 'Y' after he visited the rolling mill in the factory that the reduction in specified chilled depth from 19—25 mm to 15—20 mm would give better life to the rolls. The Ministry of Defence stated (November 1981) that the modification of the chilled depth in the order of July 1972 was done at the specific suggestion of firm 'X' and that the chilled depth in case of the order of January 1974 could have been considered for revision, had a suggestion come from firm 'Y' in a concrete form.

Although as per the order (January 1974), supplies of 64 rolls were to be completed by October 1975, the factory received 31 rolls during September 1974 to November 1975 and another 4 rolls in March 1976 (total cost : Rs. 5.89 lakhs). The factory reported (December 1975) to the DGSD that the performance of the rolls was "extremely unsatisfactory", that some of them (2—cost : Rs. 0.34 lakh) had prematurely broken and that the output of others used till then was far below the expected output of 2,500 tonnes. The factory suggested (December 1975) that further supplies of the rolls from firm 'Y' be discontinued and that alternative sources to meet the requirement be explored. However, as firm 'Y' contended (February 1976) that it had supplied rolls with chilled depth of 18 to 25 mm as per order and that these rolls had performed unsatisfactorily because rolls with reduced chilled depth of 15 mm only were suitable for use by the factory, the firm was asked (February 1976) to supply one pair of rolls with reduced chilled depth (15 mm) at the same contract rate (Rs. 16,830 each) for trial purpose. These 2 rolls (cost : Rs. 0.34 lakh) were received in June 1976 and gave an output of 2,115 tonnes. With reference to the DGSD's amendment of February 1978 to the order stipulating supply by 15th October 1978 of the balance 27 rolls with 15 mm maximum chilled depth (rate : Rs. 18,381 each), firm 'Y' supplied 6 rolls of revised specification (cost : Rs. 1.10 lakhs) in August 1978.

But as the firm failed to supply any further quantity, the order was cancelled later (February 1979) at its risk and cost. The deficiency, if any, in the performance of the 6 rolls of reduced chilled depth was not reported. The Ministry of Defence stated (November 1981) that though the Ministry of Law had advised (July 1979) that the DGSD could claim general damages from firm 'Y' for non-supply of the outstanding quantity (21 rolls) after ascertaining the market rate on the date of breach, it was difficult to establish the market rate at this stage and that the case was still being pursued.

Of the 35 rolls of a chilled depth of 19 mm minimum (cost : Rs. 5.89 lakhs) specified originally and supplied by firm 'Y', one (cost : Rs. 0.17 lakh) was rejected (December 1975) as it cracked during rectification, 6 rolls (cost : Rs. 1.10 lakhs) got damaged during transit but the factory's claim (March 1976) on the railways on this account (Rs. 1.11 lakhs) was rejected (August 1978). Against the expected output of 2,500 tonnes per pair, the output obtained from the remaining 28 rolls varied from 76 tonnes to 1,623 tonnes. The Ministry of Defence stated (November 1981) that the details of life of the rolls had been furnished to the DGSD (March 1977 and July 1980) and that the amount to be recovered from the firm on prorata basis for the shortfall in output with reference to the expected output of 2,500 tonnes per pair would be worked out by the DGSD.

Due to the failure of firm 'Y' to supply satisfactory rolls and in order to meet its production requirements, the factory procured 34 rolls during July 1974 to September 1977 at higher rates varying from Rs. 23,760 to Rs. 34,106 each involving an extra expenditure of about Rs. 3.89 lakhs as compared to the price of firm 'Y'. The Ministry of Law opined (December 1977) that levy of liquidated damages on firm 'Y' for delay in supplies was not justified as the delay was due to faulty specification of the rolls.

The case reveals the following :

- Although the order of January 1974 on firm 'Y' was on trial basis, the DGSD increased (February 1975) the quantity from 32 to 64 numbers without obtaining reports from the factory regarding actual performance of 10 rolls already supplied.
- Based on the experience gained (1973) on the performance of indigenous rolls of reduced chilled depth, no action was taken to reduce the chilled depth provided in the order of January 1974 on firm 'Y'; as a result outputs ranging from 76 tonnes to 1,623 tonnes per pair were achieved from the rolls (35) supplied by firm 'Y' against the expected output of 2,500 tonnes per pair. The amount to be recovered from firm 'Y' on prorata basis for the shortfall in production was yet to be assessed by the DGSD (November 1981).
- The extra expenditure of Rs. 3.89 lakhs in the procurement of rolls from other sources due to non-supply of satisfactory rolls by firm 'Y' could not be recovered from firm 'Y' as the Law Ministry opined that the specification was faulty.

18. Extra expenditure in procurement of electrodes

Electrodes 'A', 'B' and 'C' required by factory 'A' were imported till 1967 and thereafter these were procured indigenously mainly from firm 'X'. In September 1977, factory 'A' placed an indent on the Director General, Supplies and Disposals (DGSD) for supply (during June—December 1978) of 2,24,732 numbers of electrode 'A', 3,86,800 numbers of electrode 'B' and 2,59,380 numbers of electrode 'C' to meet its requirements till March 1979. The quantities indented were later increased to 2,34,624, 4,13,440 and 2,59,600 numbers of electrodes 'A', 'B' and 'C' respectively. The following offers from firm 'X' were received by the DGSD (April 1978) against his tender enquiry :

	Imported core wires		Indigenous core wires	
	Rate per 1000	Total cost	Rate per 1000	Total cost
	Rs.	Rs.	Rs.	Rs.
Electrodes:				
'A'	7,824	37.18 lakhs	8,881	41.89 lakhs
'B'	3,102		3,481	
'C'	2,310		2,565	

The DGSD informed (July 1978) the Ministry of Defence that if electrodes out of imported core wires were required, firm 'X' would need an import licence for Rs. 21.20 lakhs and that the supplies would be made in 3 monthly instalments commencing from February 1979, provided the import licence was received by the firm by 14th July 1978. After getting acceptance of the Ministry and the factory to these stipulations, an order was placed on firm 'X' (September 1978) for supply of electrodes 'A' (2,34,624 numbers), 'B' (4,13,440 numbers) and 'C' (2,59,600 numbers) out of imported core wires for a total cost of Rs. 37.18 lakhs including Rs. 21.20 lakhs in foreign exchange. The Ordnance Factory Board (OFB) stated (September 1981) that since the electrodes out of indigenous core wires were costlier, the order was placed for electrodes out of imported core wires.

The required foreign exchange (Rs. 21.20 lakhs) for import of core wires against the order was released in September 1978. As there was no ban on import of core wires for actual users, the DGSD also issued (September 1978) the 'Import Recommendation Certificate' (IRC) in favour of firm 'X'. However, the Ministry of Steel and Mines did not agree (December 1978) to the import of core wires since a public sector undertaking was manufacturing the core wires indigenously from imported wire rods. As the electrodes out of imported core wires were cheaper, the import licence was finally issued to firm 'X' in

June 1980. But in the meantime, due to non-receipt of import licence, the firm had withdrawn (February 1979) its offer to supply the electrodes. The firm also did not make any supply and the order was eventually cancelled (April 1981), at the risk and expense of the firm.

Meanwhile, against an indent placed by the factory (January 1979) for creating a stock of electrodes for emergent requirements, the India Supply Mission, London placed 2 orders on firm 'Y' (March 1979) for supply of 55,000 numbers of electrode 'A' (Rs. 8,443 per 1000), 1,55,000 numbers of electrode 'B' (Rs. 3,484 per 1000) and 65,000 numbers of electrode 'C' (Rs. 2,474 per 1000) valuing Rs. 11.65 lakhs. To meet the requirements till March 1981, another order was placed on firm 'X' (June 1979) for supply of the electrodes out of indigenous core wires. Since the supplies from firm 'X' against the DGSD's order of September 1978 were not forthcoming and with a view to keeping the production running during 1979-80, a fourth order was placed on firm 'Y' (July 1979) for import of the electrodes at higher costs as follows :

	Indigenous			Import		
	Numbers ordered	Rate per 1000	Total cost	Numbers ordered	Rate per 1000	Total cost
		Rs.	Rs.		Rs.	Rs.
Electrodes :						
'A'	3,04,268	10,570	72.30 lakhs	1,65,000	9,468	22.87 lakhs
'B'	6,35,710	4,110		—	—	
'C'	4,61,800	3,035		2,60,000	2,790	

(The quantities ordered on firm 'X' for indigenous electrodes were increased in June 1980 to 3,85,108 numbers, 6,67,390 numbers and 5,93,190 numbers of electrodes 'A', 'B' and 'C' respectively valuing Rs. 86.14 lakhs.)

Against the import orders on firm 'Y' (March and July 1979), the supplies were completed by June 1980, of which 65,000 numbers of electrode 'C' against the order of March 1979 were airlifted (August 1979) at a cost of Rs. 1 lakh to meet urgent requirements. Against the order on firm 'X' (June 1979), 3,85,960 numbers of electrode 'A', 6,59,554 numbers of electrode 'B' and 5,32,840 numbers of electrode 'C' were received till March 1981.

The OFB stated (September 1981) that against the order of September 1978 the required foreign exchange was released and the IRC was issued in favour of firm 'X' within a reasonable time, but the issue of the import licence was delayed as the Ministry of Steel and Mines did not initially agree to the import of the core wires since these were available indigenously.

The inordinate delay in the issue of the import licence (June 1980 instead of July 1978) to firm 'X' thus caused procurement of the ordered quantities (2,34,624, 4,13,440 and 2,59,600 numbers of electrodes 'A', 'B' and 'C' respectively) subsequently at higher rates partly by import and partly indigenously at a total cost of Rs. 47.21 lakhs (including Rs. 22.87 lakhs in foreign exchange) involving extra expenditure of Rs. 10.03 lakhs (including Rs. 1.67 lakhs in foreign exchange) as compared with the order of September 1978.

19. Rehabilitation of plant and machinery in an ordnance factory

In paragraph 11 of the Audit Report (Defence Services) for 1974-75, mention was made about unsatisfactory performance of an ordnance factory in production of a new ammunition (type 'A') due to use of old and worn-out plant and machinery, which not only gave reduced outturn but also led to heavy rejections and failures. Mention was also made therein about Government sanction (April 1971) for Rs. 6.05 crores for replacement of essential plant and machinery in the factory to raise the production capacity of type 'A' ammunition (from 48 units per annum) to 120 units per annum (in 2 shifts each of 10 hours). It also provided for rehabilitation of plant and machinery for sustaining the existing capacity of 48 units per annum of another ammunition (type 'B') and enhancing it to 54 units per annum in 2 shifts each of 10 hours. Rehabilitation of plant and machinery was considered necessary to ensure quality production of the two types of ammunition and to match the inspection requirements specified, apart from enhancement of capacity. Machines (159) required for the project for both types of ammunition, were ordered (cost : Rs. 6.10 crores) in September 1972 and received during January 1974 to September 1975; out of these, 154 numbers were commissioned during January 1975 to April 1976 and the balance 5 numbers in April 1978.

During examination of the paragraph 11 of the Audit Report (Defence Services) for 1975-76, as would be seen from paragraph 1.32 of its 3rd Report (6th Lok Sabha : 1977-78), the Public Accounts Committee (PAC) were informed (1977-78) by the Ministry of Defence that by 1969 the old plant had lost its capability resulting in heavy rejection and unreliable production and that the Inspectorate had procured new gauging and inspection machines which could assist in weeding out the defective ammunition. The plant and machinery remained old and unserviceable thus resulting in production of substandard ammunition. The PAC considered that it was undesirable to continue production of substandard ammunition as it was wasteful consumption of labour and scarce material and components, some of which had been imported. The Ministry, however, stated (August 1978) that non-stoppage of production and encountering the problems due to higher rejections, on economic grounds, sounded to be a better proposition than complete stoppage and encountering the new troubles later on and that bulk of the substandard ammunition had already been disposed of to certain foreign parties earning valuable foreign exchange.

During a review in audit (April 1981) of the production performance of the factory in regard to two types of ammunition. the following further points were noticed :

(A) *Under-utilisation of new capacity*

The total quantities on order for types 'A' and 'B' ammunition as outstanding on 1st April 1976 to 1981 as well as the quantities actually produced during 1976-77 to 1980-81 as against the established capacities (120 units per annum for type 'A' and 54 units per annum for type 'B' in 2 shifts each of 10 hours) were as under :

Outstanding orders as on 1st April (units)			Actual production during (units)			Percentage of utilisation of new capacity	
Year	'A'	'B'	Year	'A'	'B'	'A'	'B'
1976	100.99	72.34	1976-77	29.36	20.80	24.46	38.52
1977	70.68	68.26	1977-78	29.30	19.60	24.42	36.30
1978	142.71	98.27	1978-79	37.38	19.20	31.15	35.55
1979	152.65	114.22	1979-80	30.50	17.00	25.42	31.48
1980	185.81	95.07	1980-81	37.06	21.80	30.88	40.37
1981	211.61	105.41	—	—	—	—	—

The under-utilisation of capacity varying from 75.58 to 68.85 *per cent* for type 'A' and 68.52 to 59.63 *per cent* for type 'B' was attributed by the department to the following reasons :

— The factory worked only 102 hours a week in 2 shifts during 1976-77 to 1978-79 and 108 hours a week during 1979-80 to 1980-81 against 120 hours a week envisaged.

— As against the labour requirements of 2,370 numbers for type 'A' and 520 numbers for type 'B' ammunition (inclusive of 12 *per cent* absenteeism) to achieve maximum production, labour actually employed was 769 numbers and 266 numbers respectively.

— There was no requirement of production at full work-load.

Thus, the object with which the project had been sanctioned in April 1971 at a capital cost of Rs. 6.05 crores was not fulfilled till March 1981 as 59.63 to 75.58 *per cent* of the installed capacity had remained un-utilised.

(B) *Non-revision of normal rejection percentages*

Provisions made for normal rejections in the relevant estimates for various operations involved in production of types 'A' and 'B' ammunition, prior to modernisation of plant and machinery and thereafter, were as under :

Operation	Percentages of normal rejections provided					
	Prior to June 1969		In June 1969		After modernisation	
	'A'	'B'	'A'	'B'	'A'	'B'
Cartridge filling and finishing	6	5	30	10	25 (September 1977) 15 (August 1978) 12 (June 1979)	No revision
Case making	18	16	18 25 (February 1972)	22	22 (June 1979)	20 (June 1979)
Caps percussion filling	Not known	Not involved	34	Not involved	30 (March 1974)	Not involved
Bullet making	13	5	40	10	20 (June 1979)	5 (June 1979)

Except in regard to bullet making operation for type 'B' ammunition the normal rejection percentages for other operations for types 'A' and 'B' ammunition still remained to be revised downward to pre-1969 level, if not further. This was due to continued utilisation of the old and unserviceable plant and machinery alongwith the new ones.

No rejection was recorded over and above that provided in the estimates for both types of ammunition. During the years 1976-77 to 1979-80, however, 15.51 units of type 'A' ammunition valued at Rs. 1.99 crores (4.68 units in 1976-77, 2.23 units in 1977-78, 3.06 units in 1978-79 and 5.54 units in 1979-80) were sentenced as not up to the standard for issue to the Army. Of this, 6.64 units only were issued to foreign Governments during 1976-77 to 1978-79, leaving 8.87 units (value : Rs. 1.15 crores) yet to be disposed of (October 1981). Thus, production of substandard type 'A' ammunition continued as prior to rehabilitation of plant and machinery.

The Ordnance Factory Board stated (October 1981) that :

— production was based on targets set with reference to services' actual requirements for particular periods;

— rejection percentages were brought down wherever possible and these did not cover rejection/failure at proof, which led to certain quantities of ammunition being declared substandard by the Inspectorate;

— balance quantity of substandard ammunition (8.87 units : cost Rs. 1.15 crores) was being considered for export, failing which it would be broken down and disposed of as scrap.

Summing up :

— The project for the augmentation of production capacity of ammunition types 'A' and 'B' sanctioned (April 1971) at an estimated cost of Rs. 6.05 crores was expected to be completed by August 1974. The project was, however, completed in April 1978.

— The under-utilisation of the capacity in the factory varied from 75.58 to 68.85 *per cent* for type 'A' and 68.52 to 59.63 *per cent* for type 'B'.

— 8.87 units (value : Rs. 1.15 crores) of substandard type 'A' ammunition were lying undisposed of (October 1981).

20. **Purchase of substandard material**

In paragraph 8 of the Audit Report (Defence Services) for 1973-74, it was mentioned that out of 123.72 tonnes of a particular ore shipped by a foreign firm 'Y' against a contract concluded (December 1970) by the Director General, Supplies and Disposals (DGSD) with an Indian firm 'X', 79.90 tonnes (cost : Rs. 29 lakhs) were rejected on receipt at factory 'A', but the rejection was intimated after the stipulated period of 60 days after arrival of the ore at Indian port and the rejected quantity was not replaced by the supplier.

The DGSD had concluded two other contracts with firm 'X', one in April 1970 for 50.5 tonnes (increased to 59.5 tonnes in June 1970) at the rate of US $ 3,402 (Rs. 25,515) per tonne and the other in September 1970 for 38.25 tonnes (increased to 46.75 tonnes in November 1970) at the rate of US $ 3,417.3 (Rs. 25,630) per tonne, for import of ferromolybdenum (produced by foreign firm 'R') from firm 'Y'. According to these contracts, the material was required in lumps between 10 mm and 25 mm but 10 *per cent* of the quantity was acceptable up to 10 mm and the molybdenum content in the material was required to be minimum 70 *per cent*. There was no provision in the contract for prior inspection/analysis by the buyer or his representative before shipment of the material. However, the foreign supplier was required to furnish the manufacturer's test certificate, on the basis of which visual inspection of the material was to be made on arrival at Calcutta port by the Director of Inspection (Metallurgical), Burnpur. If the buyer found after receipt that the material did not conform to the specification, he had the right to reject the material and the seller was to replace the rejected quantity free of cost, within 12 months, provided intimation regarding rejection was given to him within 60 days after arrival of the vessel carrying the material at Indian port.

Contract of April 1970.—Against this contract, the first consignment of the material in 56 drums arrived at Calcutta port on 8th September 1970. However, the manufacturer's test certificate was not received alongwith the shipping documents and hence visual inspection of the material as per the contract was not done, and the inspection note was not released by the Director of Inspection. Of the 56 drums, factory 'B' received 46 drums on 8th October 1970 and 10 drums on 28th October 1970. These contained 46.42 tonnes of the material. As the railway documents were received at factory 'B' on 21st October and 8th November 1970 and the checking of the receipts and documentation thereof was done thereafter, the analysis of the material was taken up on 12th November 1970 and completed on 28th November 1970 *i.e.* 21 days after the stipulated date (7th November 1970) for intimating rejection. On analysis, the material was found to be only fines against the specified lump size of 10 mm to 25 mm and the molybdenum content was only about 61 *per cent* against 70 *per cent* minimum specified in the contract. The matter was reported to the DGSD on 4th December 1970 for taking it up with the supplier.

Another consignment of 7.85 tonnes of the material in 9 drums, which also arrived without the manufacturer's test certificate at Calcutta port on 23rd December 1970, was received by factory 'B' on 5th January 1971 (8 drums) and 2nd February 1971 (1 drum). The material in 8 drums was analysed during 28th January to 4th February 1971 and that in the remaining 1 drum on 19th February 1971. In this consignment also, the average molybdenum content ranged from 59.67 to 61.4 *per cent* against minimum specified percentage of 70. Although factory 'B' had completed the analysis within the stipulated period (21st February 1971) for intimating rejection, the rejection was intimated to the DGSD only on 19th March 1971. The Ministry of Defence stated (November 1981) that the entire operation of recording, checking chemical analysis and physical inspection took much time and intimation of the result of inspection was, therefore, delayed.

Contract of September 1970.—The DGSD increased (January 1971) the quantity (46.75 tonnes) on order against this contract to 69.5 tonnes. The material (69.31 tonnes) arrived at Calcutta port in 3 consignments on 17th February, 15th March and 19th June 1971 respectively. Out of the first 2 consignments, 11.35 tonnes of material received by factory 'D' was found on analysis (19th May 1971) to be as per specification. While factory 'B' conducted the analysis of 33.67 tonnes received by it out of the first and second consignments on 8th April 1971 and 3rd May 1971 respectively *i.e.* within 50 days of arrival of the material at the port, the analysis of 22.32 tonnes received against the third consignment was done only after 253 days (27th February 1972). Factory 'C' also conducted (30th April 1971) the analysis of 1.97 tonnes received by it from the second consignment within 46 days of receipt at port. The Ministry stated (November 1981) that the analysis of the third consignment by factory 'B' was delayed as (i) the railway documents were received only in July 1971, (ii) quantitative discrepancies were noticed which were taken up with the Embarkation Commandant, and (iii) the inspection certificate for the material was received from the Director of Inspection in February 1972 after protracted correspondence.

The analysis of the material done by factories 'B' and 'C' disclosed that the molybdenum content in the material supplied to factory 'B' varied from 63.27 to 67.53 *per cent* and that it was 64.75 *per cent* in the material supplied to factory 'C' against 70 *per cent* minimum specified. Although 57.96 tonnes of the material received against the contract by factories 'B' and 'C' did not conform to the specification, they did not report the rejection to the DGSD soon after the analysis results were known in April, May 1971 and February 1972; the result of analysis was communicated by the Director General, Ordnance Factories (DGOF) to the DGSD in January 1974 (about 2-3 years after the analysis).

According to the contract, 100 *per cent* f.o.b. cost of the material less agency commission at ¼ *per cent* was to be paid by the Chief Accounts Officer (CAO), India Supply Mission, Washington to firm 'Y' against shipping documents and manufacturer's test certificates showing the composition of the material and final inspection note to be issued by the Director of Inspection on receipt of the material in India after visual inspection and on the authority of manufacturer's test certificates. The Ministry of Defence stated (May 1981) that manufacturer's test certificate was not received from the supplier alongwith the shipping documents, nor was the visual inspection carried out by the Director of Inspection after arrival of the material at Calcutta port except on one occasion for 22.32 tonnes. The Ministry added that the CAO had made the payments for the supplies based on certificates furnished by the supplier (firm 'Y') and that these certificates were considered by the CAO to have been issued by the manufacturer (firm 'R') because the same person who signed the certificates of firm 'Y' did the job for firm 'R' also.

Of 112.23 tonnes of the material found to be of substandard quality, 1.97 tonnes were used by factory 'C' and the balance of about 110.26 tonnes (cost : Rs. 38.24 lakhs including customs duty and freight charges) was lying at factory 'B' since its receipt (1970 and 1971) pending a settlement with the supplier. As the material was considered (1976) to be usable with extra quantity to make it of required strength, the DGOF requested the DGSD (November 1976) to recover Rs. 3.12 lakhs (computed with reference to the molybdenum content) as compensation for the substandard material. The amount on this count was assessed by the DGSD (September 1979) to be Rs. 5.62 lakhs. But as the Ministry of Law considered (October 1978) the claim to be very weak due to late intimation of rejection, the DGSD informed the DGOF (October 1979) that the proposal for recovery of the compensation from the supplier had been dropped. Out of the substandard 110.26 tonnes of the material, 63.68 tonnes were used and 46.58 tonnes were in stock (July 1981). The Ministry of Defence stated (May 1981) that although the DGSD intimated (May 1977) that the supplier would take back the entire substandard material after refunding the original cost with freight expenses and some reasonable amount for processing charges incurred by the factory, it was decided to retain the substandard material for utilisation in the factories considering the 4-5 times increase in the cost of the material and its acute scarcity in the country.

The case reveals the following :

— No provision was made in the contracts for prior inspection by the buyer or its representative.

— Though the material was supplied without manufacturer's test certificates, in absence of which visual inspection could not be made after its receipt by the Director of Inspection (Metallurgical), Burnpur as per contract except for 22.32 tonnes, the material was not rejected.

— There was delay in conducting analysis of the material on receipt in the factories and in intimating the results to the DGSD ; as the analysis results were intimated after the stipulated period of 60 days was over, the price difference of Rs. 5.62 lakhs on account of 110.26 tonnes of the substandard material could not be recovered from the supplier.

21. Procurement of nylon fabrics

For manufacture of parachutes at factory 'A', the Director of Supplies (Textiles), Bombay placed an order on firm 'M' (November 1976) for supply of 48,131 metres of nylon fabrics (olive green) at 0.90 dollar (Rs. 7.92) per metre from its principals in country 'X'. The order stipulated supply of the store on test reports to be issued by an authorised agency of the foreign Government and replacement free of cost, if it was found defective within 6 months after receipt at factory 'A'.

Factory 'A' received the store (48,131 metres) in May 1977 and took it in stock account in August 1977 after it was accepted on inspection (July 1977) by the Aeronautical Inspection Staff (AIS). In October 1977, the factory confirmed to the Director of Supplies (Textiles) that the material was received in full and good condition. In January 1978, 2,679.50 metres of the fabrics were drawn for use and cut into panels. The cut panels were, however, rejected by the AIS (January 1978) due to weaving flaws in the material. The defects were intimated to the Director of Supplies (Textiles) in March 1978. As the Aerial Delivery Research and Development Establishment (ADRDE) disapproved (May 1978) the use of the store in the manufacture of parachutes, and following a request made by the Additional Director General, Ordnance Factories (November 1978), the Director of Supplies (Textiles) asked firm 'M' (March 1979) to replace the store. Although the warranty period was over, the firm agreed (October 1979) to replace the defective store provided yard-by-yard joint inspection was made to determine the quantity to be replaced.

Meanwhile, the Director of Supplies (Textiles) placed another order (December 1978) on firm 'M' for import of 1,16,900 metres of nylon fabrics of two specifications (olive green and undyed) at 0.875 dollar (Rs. 7.70) per metre from country 'X' for factory 'A'. In pursuance of a suggestion of the ADRDE (May 1978) consequent on the rejections against the order of November 1976, the stores against this order were to be inspected in country 'X' by an Indian inspection team to be nominated by the Chief Inspector of Textiles and Clothing (CITC). During its visit in September 1979, the inspection team accepted 1,16,900 metres of nylon fabrics against this order and 10,138 metres tendered in part replacement of the defective store supplied against the order of November 1976. Of these quantities, 1,12,533 metres out of 1,16,900 metres and 9,094 metres out of 10,138 metres were accepted (January 1980) by factory 'A' on receipt, 2,387 metres

(1,343 metres against the order of December 1978 and 1,044 metres against the replaced quantity) valuing Rs. 0.19 lakh were rejected as these were damaged during customs check at Calcutta port, and 3,024 metres (against the order of December 1978) valuing Rs. 0.23 lakh were found short. The accepted stores were under use in the factory and no defects in them were reported (March 1981).

Although firm 'M' agreed in October 1979 to replace the defective nylon fabrics supplied against the order of November 1976, it later intimated (April 1980) the Director of Supplies (Textiles) that it had no contractual obligation to replace the defective store, that as a matter of goodwill it had supplied earlier 10,138 metres of the store (September 1979) free of cost in part replacement, and that in view of the increase in prices of raw materials, difference in cost of further replacements of the store, which would be found defective in the joint inspection, should be paid for. In October 1980 in a joint inspection by the CITC, the Inspector of General Stores and firm 'M', 44,197.50 metres of nylon fabrics out of 48,131 metres supplied initially against the order were reinspected (out of the balance, 2,679.50 metres were cut into panels before reinspection and 1,254.00 metres were transferred to another factory for alternate use) and were found unacceptable due to excessive weaving flaws. Although this was intimated to the Director of Supplies (Textiles) in November 1980, further replacement in addition to what was made earlier (10,138 metres) was not received from the firm (July 1981). The Ministry of Defence stated (November 1981) that the Director General, Supplies and Disposals was making efforts for replacement of the rejected store.

The case reveals the following :

— The nylon fabrics (48,131 metres) were not inspected properly on receipt (May 1977); 2,679.50 metres of the store (cost : Rs. 0.21 lakh) were cut into panels (January 1978) before reinspection and rejected due to weaving flaws in the store, 1,254 metres (cost : Rs. 0.10 lakh) were transferred to another factory for alternate use and 44,197.50 metres (cost : Rs. 3.50 lakhs) were finally rejected in a joint inspection (October 1980) for replacement by the firm.

— Although the firm had supplied (September 1979) 10,138 metres of the store in part replacement of 44,197.50 metres rejected, 34,059.50 metres of the rejected quantity (value : Rs. 2.70 lakhs in foreign exchange) had not been replaced and were lying in the factory since May 1977.

22. **Losses during transit**

In the following cases Government incurred losses (about Rs. 11.23 lakhs) in the procurement of stores for the ordnance factories due to inadequate packing or bad handling during transit :

(i) *Testing equipment*.—Against an order of November 1973 on an Indian firm 'X', an imported testing equipment (cost : Rs. 2.30 lakhs) was received (January 1975) at factory 'A' with packing intact. As per the order, when firm 'X' undertook commissioning of the equipment (May 1975), some of its parts were found badly damaged. Though according to the order, the equipment was to be securely packed to avoid damage during transit and the supplier was responsible for all losses and damages caused or occasioned by any defect in packing, firm 'X' stated (July 1975) that since the equipment was supplied on f.o.b. basis, neither the firm nor its principals had any responsibility for the damage. The Ordnance Factory Board (OFB) stated (September 1981) that the responsibility of the firm had ceased after the equipment was inspected by the Supply Mission, London and boarded at the port of shipment.

Although firm 'X' had disowned liability for the damage, the firm's principals later replaced (February 1976) one of the damaged parts free of cost as a gesture of goodwill. But the freight charges (Rs. 0.04 lakh) were met by factory 'A'. Factory 'A' could not undertake the manufacture of other parts for want of specifications and drawings of components. When firm 'X' again took up the commissioning of the equipment (April 1976), some more internal damages were noticed. These could not be rectified locally, and hence, at the instance of firm 'X' and its principals, the equipment was returned (January 1978) to the supplier for repair at the factory's cost, after obtaining clearance from the Director General Technical Development and the Chief Controller of Imports and Exports (January and June 1977). The equipment duly repaired was received back in July 1979 and commissioned in August 1979. The total cost of repair of the equipment (including the cost of transportation) was Rs. 1.07 lakhs. The OFB stated (September 1981) that it was not possible to assess the actual cause of damage since the equipment was received in good packing condition.

(ii) *Presses*.—Two presses (cost : Rs. 9.04 lakhs) supplied by a foreign firm 'Y' against a contract concluded by a Supply Mission abroad (May 1971) were received at Calcutta port (March 1974) and were despatched (March 1974) by the Embarkation Headquarters to factory 'B' in two separate railway wagons. Factory 'B' received one of the presses in May 1974, but the other only in April 1975 (without its original packing) in a burnt condition in a transhipped wagon as the original wagon was involved in a fire accident on the way. An open delivery of the press taken from the railways revealed (July 1975) that various parts were damaged. The Ministry of Railways finally rejected the claim (July 1979) stating that the press was not properly packed and loaded, and that because of no-end packing provided to the feet of the press, one of its feet came in contact with the wheel flange (after penetrating the floor of the wagon) and this caused a fire to the wagon and ultimate damage to the press. However, responsibility for the improper loading was not fixed, nor was any claim made against the supplier for faulty packing. The OFB stated (July 1981) that both presses were received at Calcutta port in their original packed condition and that since one of them reached destination in safe condition in a different wagon, the contention of the Ministry of

Railways was not tenable. The OFB added that since the press was supplied on f.o.b. basis, the supplier would not have accepted any claim for non-compliance of packing conditions.

The total cost of the defective press was Rs. 7.36 lakhs (including duties and freight charges). As it was very badly damaged, it could not be put to any use at factory 'B'. While the Ministry of Defence had advised the OFB to regularise the loss involved (July 1979), the loss statement was yet to be finalised (July 1981).

(iii) *Measuring equipment.*—Factory 'A' received (July 1975) an imported measuring equipment and its accessories (cost : Rs. 0.92 lakh) against an order of September 1974 on an Indian firm 'Z'. Although the packing list indicating the particulars of the order and the stores was to be sent alongwith the packages containing the equipment, the factory received the packing list from the supplier only in October 1975 through the Director General, Ordnance Factories. When the packages were opened (December 1975), it was found during inspection that the equipment and some of its accessories were completely rusted. After a joint inspection by firm 'K' (the Indian agent of the manufacturer) and factory 'A' (April 1976), firm 'K' stated (April 1976) that the equipment being very rusty required major repair at the manufacturer's works. Firm 'K' added (April 1976) that since the equipment left the manufacturer's works in good condition in sea-worthy export packing, it was exposed to humidity only during transportation, which caused the damage and that, therefore, the cost of its repair and transportation to manufacturer's works would have to be borne by the factory. Firm 'Z' also reiterated the same (May 1976). As the Ministry of Law opined (October 1976) that there was no evidence to prove that the packing was inadequate when the equipment was put on board, it was decided (November 1976) to get the equipment repaired at the factory's cost and to regularise the loss after proper investigation of the circumstances leading to the damages. Accordingly, the equipment was airlifted (November 1977) at a cost of Rs. 2,437 for its repair at manufacturer's works. However, the manufacturer intimated (January 1978) after inspection that the equipment and its accessories were damaged beyond repairs and that it should be replaced by a new one. New equipment (cost : Rs. 1.09 lakhs) was, therefore, procured from firm 'K' (October 1980) and commissioned (March 1981). The loss (Rs. 1.11 lakhs) involved in the airlift of the old equipment and in the purchase of the new one in lieu was yet to be regularised (July 1981).

(iv) *Inspection equipment.*—Against an order of June 1972 on a foreign firm 'M' for the supply of 3 different types of perthograph (an inspection equipment manufactured by firm 'N') at a total cost of DM 9,590 (Rs. 21,673), only one perthograph was received at factory 'A' in June 1973. Although non-receipt of the other two perthographs was noticed in November 1973, this was taken up with firm 'M' only in May 1974. The firm, however, replied (June 1974) that in its offer it had wrongly shown the price of the three equipment as DM 9,590 while actually the price of each equipment was DM 9,590 and that if the factory required the other two, it could submit a fresh offer as the earlier offer was no longer valid. No further order was, however, placed.

The equipment received in June 1973 was stored in an air-conditioned room before commissioning. Factory 'A' took up its commissioning only in July 1974. In August 1974, the factory intimated firm 'M' that some of the internal parts of the equipment were not functioning properly as these were rusty. Firm 'M', however, stated (September 1974) that the rust might have been caused due to condensation as a result of fluctuating temperature during the period of transit and storage in the factory since its delivery (February/March 1973) and that firm 'K' (the Indian agent of the manufacturer—firm 'N') had been asked to inspect the equipment. After inspection, firm 'K', however, stated (February 1975) that the damage to the equipment was caused by its exposure to humidity ; firm 'K' also later added (February 1976) that normally inspection equipment sold to tropical countries was being supplied by firm 'N' in special tropicalised construction, that in this case the equipment was sold to firm 'M' and that firm 'N' was not aware that this equipment would be consigned to India. The OFB stated (September 1981) that as the equipment was meant for use in the air-conditioned tool room, the same without tropicalisation was ordered to avoid extra foreign exchange expenditure at 15 *per cent* of the cost (Rs. 0.03 lakh).

As it was not possible to repair the equipment locally, it was sent (October 1977) by air to firm 'N' and an order for the repair was placed on firm 'K' (February 1979). The equipment duly repaired was received back by factory 'A' in March 1980 and commissioned in May 1980. The total cost of repairs, freight charges and other incidental expenses were yet to be assessed (July 1981). However, while the original cost of the equipment was only Rs. 0.22 lakh, the cost of its repair as per the order of February 1979 on firm 'K' was Rs. 0.88 lakh. Besides, an amount of Rs. 0.81 lakh was paid as customs duty for the repaired equipment.

In the above 4 cases of losses, no responsibility was fixed. The Ministry of Defence stated (October 1981) that there was no clear-cut system of holding investigation and fixing responsibility when any material or equipment is received either discrepant or in damaged condition and that suitable instructions in this regard were being issued to the Ordnance Factories.

23. Unsatisfactory execution of a contract

For sale of 1,800 tonnes of steel briquettes on a running contract for six months, factory 'A' invited tenders in March 1977 and concluded a contract (9th August 1977) valid till 8th February 1978 with firm 'X' at the highest bid at Rs. 576.76 per tonne plus sales tax at 4 *per cent*. As per contract, firm 'X' was to lift the steel briquettes in instalments at a monthly rate of 300 tonnes commencing from August 1977 and to pay the sale value for 150 tonnes at a time one week in advance of removal of the goods as per the time schedule. As firm 'X' was unable to furnish security deposit (Rs. 1.04 lakhs) against the contract and instead agreed to render bank guarantee, factory 'A' intimated to the firm (9th August 1977) that the acceptance of bank guarantee was under consideration, that the earnest money (Rs. 0.52 lakh) would be converted into security deposit and held as such until the question of acceptance of bank guarantee was settled and that in the meantime, the firm could lift the goods of 2 months' quota (600 tonnes) after making advance payments. On 7th October 1977, factory 'A' asked firm 'X' to furnish bank guarantee for the balance amount (Rs. 0.52 lakh) of security deposit within 10 days; in spite of several reminders the firm did not furnish the bank guarantee.

Firm 'X' paid advance for 150 tonnes in August 1977, but lifted the goods during September 1977 (53.19 tonnes), October 1977 (88.55 tonnes) and December 1977 (8.26 tonnes). Against the advance paid for the second instalment of 150 tonnes only in November 1977, 146.39 tonnes were removed during December 1977. Thus, while 1,500 tonnes of the goods were to be paid for and lifted till December 1977, only 300 tonnes were paid for out of which 296.39 tonnes were actually lifted during the period. The firm stated (November 1977 and January 1978) that the goods could not be lifted due to "unprecedented slump in the steel market" and closure of a firm to which these goods were being supplied.

In spite of the failure of firm 'X' to furnish the required bank guarantee for the balance amount (Rs. 0.52 lakh) of security deposit and to pay for and lift the steel briquettes in accordance with the terms and conditions of the contract, factory 'A' did not reduce the contracted quantity, nor did it cancel the contract after serving performance notice as per the contract. The Ordnance Factory Board (OFB) stated (August 1981) that due to huge accumulation of goods in the shop and the delay in finalisation and execution of a new contract for its disposal, factory 'A' considered it more prudent to pursue the contract with firm 'X' especially since the firm had attributed the delay in execution of the contract to unexpected closure of the firm to which the goods would have to be sold again.

Arisings being at the rate of 150 tonnes per month and contracted quantity not having been lifted by firm 'X', the goods started accumulating on the shop floor. Factory 'A' invited fresh tenders (November 1977) for sale of 1,000 tonnes and concluded additional contracts (December 1977) with firms 'Y' and 'Z' (500 tonnes to each) at lower rates of Rs. 565 and Rs. 560 per tonne respectively involving a loss of about Rs. 0.14 lakh. Thereafter, factory 'A' intimated to firm 'X' (4th January 1978) that the bank guarantee for the security deposit against the contract of August 1977 should be furnished immediately and that the balance 1,500 tonnes should be paid for and lifted before the expiry of the contract on 8th February 1978, failing which action would be taken as per the contract to sell the goods at the risk and cost of the firm. However, in reply the firm sought an extension of six months to lift the goods. The firm also lifted 150 tonnes of the goods during January and February 1978 for which advance payment was made in January 1978. The factory accepted an advance for another 150 tonnes from the firm on 6th February 1978 and allowed it to lift the goods till 13th March 1978 without any reservations. No reply was sent to firm 'X' in regard to its request for extension beyond 8th February 1978. The contract was, thus, kept alive even after the contract period was over. The OFB stated (August 1981) that out of 150 tonnes paid for in February 1978 firm 'X' had actually lifted 130.06 tonnes by 8th February 1978, that the firm was allowed to lift the balance (19.94 tonnes) after the contract period due to failure of the weighbridge and labour unrest in the factory and that such permission could not be taken as automatic extension to the contract.

As due to the sales (December 1977) of 1,000 tonnes of steel briquettes to firms 'Y' and 'Z' (lifted in March and April 1978), the stock of the goods became inadequate for issue to firm 'X', factory 'A' suggested to the Director General, Ordnance Factories (DGOF) on 20th March 1978 that the contract with firm 'X' could be short-closed at the quantity lifted (600 tonnes) and sought his advice regarding recovery from the firm of the loss sustained (Rs. 0.14 lakh). The Ministry of Law, to which the case was referred by the DGOF (1st April 1978), however, stated (4th April 1978) that since the contract had been kept alive by conduct of the parties, a performance notice was necessary before its cancellation. Accordingly, the DGOF instructed (April 1978) factory 'A' to serve performance notice on firm 'X'. But the case remained under correspondence between factory 'A' and the DGOF till February 1979. Finally on the advice (February 1979) of the DGOF, firm 'X' was offered (April 1979) the balance 1,200 tonnes of steel briquettes against the contract at an enhanced price of Rs. 1,782 per tonne prevailing at the time. On 2nd May 1979, firm 'X' refused to accept the enhanced rate as it considered that the contract was still alive and intimated that it was willing to take delivery of the goods immediately at the contracted rate. Nevertheless, factory 'A' cancelled (December 1979) the contract at the firm's risk and cost after a short-closure notice was served on it (May 1979). Later on being approached by firm 'X' (February 1980), the Ministry of Defence examined the case *de novo* and since in the opinion of the Ministry of Law, the contract was kept alive by conduct of the parties and hence the firm could not be legally prevented from taking delivery of the balance quantity at the contract rate, it approved (December 1980) release of 1,200 tonnes of steel briquettes to firm 'X' at Rs. 725 per tonne, the rate agreed to by the firm (May 1980) on persuasion. The contract was accordingly modified (December 1980) and firm 'X' lifted the entire quantity during December 1980. The OFB stated (August 1981) that since the sale had to be made at the negotiated rate in unavoidable circumstances, the loss involved was only notional and that the loss should be computed on the basis of market rate prevailing in 1978 when the breach of contract had actually occurred. This contention is not tenable since by not cancelling the contract with firm 'X' at the time of breach in February 1978, 1,200 tonnes of steel briquettes had to be delivered (December 1980) to firm 'X' at a lower rate of Rs. 725 per tonne when the prevailing market rate was Rs. 1,971.25 per tonne, entailing a loss of Rs. 15.55 lakhs (including sales tax).

The case reveals the following :

— Though as per the contract, firm 'X' was to pay for and remove 1,800 tonnes of steel briquettes by 8th February 1978 at 300 tonnes per month from August 1977, it actually paid for only 600 tonnes during the period and lifted the said quantity till 13th March 1978. It also did not pay a part (Rs. 0.52 lakh) of the security deposit during the pendency of the contract.

— Although firm 'X' did not comply with the terms and conditions of the contract, the contracted quantity was not reduced, nor was the contract cancelled at the time of breach of contract (February 1978) after serving performance notice.

— As the contract with firm 'X' was kept alive by "conduct of the parties" even after the contract period had expired (8th February 1978), factory 'A' had to supply to firm 'X' in December 1980, 1,200 tonnes of the unlifted steel briquettes against the contract at Rs. 725 per tonne against the prevailing market rate (Rs. 1,971.25 per tonne) involving a loss of Rs. 15.55 lakhs.

24. Non-recovery of advance paid to indigenous firms

A. The Department of Defence Supplies (DDS) placed an order on firm 'X' in December 1971 for supply to factory 'A' of 15,000 numbers of a forging at Rs. 1,510 each (total cost : Rs. 226.50 lakhs) subject to escalation of cost of material and wages. The forgings were to be supplied at the rate of 1,500 numbers during 1972-73, 3,600 numbers during each of 3 years 1973-74 to 1975-76 and the balance (2,700 numbers) during 1976-77. The order provided that tooling charges (Rs. 10.18 lakhs) would be paid to firm 'X', that no separate tooling charges would be payable if any further orders for the forgings were placed and that if the firm failed to supply the first lot of 1,500 forgings against the order as per schedule or to the required specification, the amount should be refunded without any delay.

After advance samples were submitted by firm 'X' (February 1973) and approved (May 1973), the delivery schedule of the forgings was revised (June 1973) according to which 5,100, 3,600, 3,600 and 2,700 numbers were to be supplied during 1973-74, 1974-75, 1975-76 and 1976-77 respectively. It was also stipulated (June 1973) that in case bulk supplies were not effected according to the schedule, Government could recover liquidated damages from the firm and that if required by Government, the firm should make further supplies of any quantity up to 21,000 numbers at the same rate of Rs. 1,510 each and thereafter, up to 36,000 numbers (cost not specified).

As per the order, tooling charges of Rs. 10.18 lakhs were paid to firm 'X' during November 1973 to April 1974 and against bank guarantee, 'on account' payments aggregating Rs. 67.95 lakhs (30 *per cent* of the value of the order) were made (November 1973 to July 1975) for purchase of raw materials. However, the firm completed supply of first 1,500 numbers of the forging only in March 1974 as against August 1973 as per revised delivery schedule. The firm supplied in all 9,757 numbers till September 1978 and 66 numbers thereafter in July 1979 though supplies of the ordered quantity (15,000 numbers) were to be completed by 1976-77. Of the supplies made, 645 numbers were rejected. The firm had attributed (April 1974, July 1978 and March 1979) the short supply of the balance 5,177 forgings to fuel shortage, power cut, labour unrest, paucity of raw material, shortage of working capital, break-down of equipment, etc. Meanwhile, the contracted rate of the forgings was increased from Rs. 1,510.00 to Rs. 1,763.35 each (February 1976) for the quantity supplied beyond 7,511 numbers. The firm did not make any further supply of the forgings after July 1979 and the DDS stated (September 1981) that the firm had assured supply from October 1981. However, 2,400 forgings were approved for import during February 1980 to March 1981 at DM 5.76 lakhs (Rs. 24.46 lakhs).

Although the firm failed to complete supply of first 1,500 numbers of the forging as per revised delivery schedule and also failed to complete supplies of the ordered quantity within the specified period, the amounts paid for tooling charges (Rs. 10.18 lakhs) and for procurement of raw materials (Rs. 67.95 lakhs) were not recovered as per terms of the order. From the bills submitted by the firm for the supplies made, Rs. 43.17 lakhs only could be adjusted out of the advance of Rs. 67.95 lakhs, leaving a balance of Rs. 24.78 lakhs to be recovered. No interest on the unrecovered advance for procurement of raw material had also been realised from the firm. The Ministry of Defence stated (October 1981) that so far only one firm had successfully developed the said forging in the country and that concessions to firm 'X' were necessary for its development in order to establish a second indigenous source of supply. It was also stated that the DDS was being requested to consider the desirability of recovering the balance amount of advance (Rs. 24.78 lakhs) from the firm and to give interest bearing advance in lieu, if the firm still needed financial help.

B. Similarly, in November and December 1974, factory 'A' placed development orders on firm 'Y' for supply of three components for Shaktiman and Nissan vehicles as follows :

Date of placing of the order	Component	Quantity ordered in sets	Rate per set	Delivery schedule
			Rs.	
23rd November 1974	Hydraulic brake assembly for Shaktiman vehicles.	3,000	475.00	By November 1978
23rd November 1974	Air brake system for Shaktiman vehicles.	3,000	4,365.00	By March 1977
4th December 1974	Hydraulic brake equipment for Nissan vehicles.	3,000	1,680.00 (with brake drum) 1,280.00 (without brake drum)	By March 1977

A sum of Rs. 18.91 lakhs was paid to firm 'Y' (February 1977) as advance against the three orders, which was to be recovered proportionately, with interest at 12 *per cent* per annum, against supply of the components. Although supplies of the components were to be completed by November 1978, the firm supplied only 844 sets of hydraulic brake equipment for Nissan vehicles and 1,346 sets of hydraulic brake assembly for Shaktiman vehicles during April 1976 to August 1978; thereafter, only 110 sets of the former and 275 sets of the latter were supplied till July 1981. Against the other order for air brake system of Shaktiman vehicles, fresh samples were submitted in September 1980 after the samples of August 1978 were initially rejected and these were awaiting performance trials (January 1981). The Ordnance Factory Board (OFB) stated (September 1981) that due to certain technical problems, the supply rates of hydraulic brake assemblies for Shaktiman and Nissan vehicles were not picking up and that since the firm had failed to develop the air brake system for Shaktiman vehicles, cancellation of the order was under consideration.

Meanwhile, though firm 'Y' failed to adhere to the delivery schedule, price increases of Rs. 20, Rs. 525 and Rs. 150 per set respectively of hydraulic brake assembly (1,479 sets) and air brake system (3,000 sets) for Shaktiman vehicles and hydraulic brake equipment (2,156 sets) for Nissan vehicles were allowed in October 1980 though prices were firm and fixed for 1,500 sets out of 3,000 ordered for each of them and only the balance 1,500 sets were subject to price escalation. The price increases allowed on additional sets beyond 1,500 sets (1,500 sets of air brake system for Shaktiman and 656 sets of hydraulic brake equipment for Nissan) would involve an extra expenditure of Rs. 8.86 lakhs. Factory 'A' stated (March 1981) that the price increases were allowed as the cost of raw material had gone up. Out of Rs. 18.91 lakhs paid (February 1977) as advance to firm 'Y', only Rs. 1.93 lakhs were recovered against the bills for the supplies of the components. The Ministry of Defence stated (October 1981) that the OFB was being instructed to recover immediately from the firm the amount of advance and interest thereon in respect of the order for air brake system for Shaktiman (Rs. 12.80 lakhs) since the firm had failed to develop the item.

Summing up.—The following main points emerge :

— Out of an advance of Rs. 67.95 lakhs paid to firm 'X' for supply of 15,000 numbers of forging, only Rs. 43.17 lakhs could be recovered from the firm, though the firm failed to complete the supplies against the ordered quantity (October 1981).

— Out of an advance of Rs. 18.91 lakhs paid to firm 'Y' for supply of 3 components for Shaktiman and Nissan vehicles, only Rs. 1.93 lakhs could be recovered, though the firm failed to complete the supplies (October 1981).

— As per the order placed on firm 'Y', only 1,500 sets of each of the three components were subject to price escalation clause. However, price increases were allowed on additional sets beyond 1,500 sets (1,500 sets of air brake system for Shaktiman and 656 sets of hydraulic brake equipment for Nissan) involving an extra expenditure of Rs. 8.86 lakhs.

25. **Heavy accumulation of steel items in a factory**

In a factory, the stock of steel ingots produced by the factory itself or procured from outside sources for its outturn products was 7,374 tonnes (cost : Rs. 123.14 lakhs) at the end of March 1979. Of this, about 5,475 tonnes (cost : Rs. 90.26 lakhs) accumulated gradually since 1943/1944 were surplus to requirements. These surplus ingots comprised about 100 different specifications and were stacked in "inaccessible" places all over the factory. The General Manager of the factory stated (July 1979) that these could not be used against service orders because these were "off cast" or sufficient orders were not available for them.

During 1976-77, a Task Force was set up to analyse the surplus steel ingots for exploring the possibility of their utilisation. The Task Force took drillings from 1,469 ingots (2,225 tonnes) during 9 months and got them analysed. However, the factory suggested to the Ordnance Factory Board (OFB) in July 1979 that all such ingots could be rolled into blooms and billets and then those having specifications as per existing orders could be utilised and the others sold out through the Director General, Supplies and Disposals (DGSD). Later, the factory stated to the OFB (September 1979) that the possibility of utilisation of the ingots for service orders was remote and that it might not be possible to dispose of the blooms and billets (to be rolled from the ingots) as it was not known what price the lots would fetch. The factory, therefore, suggested (September 1979) utilisation of the ingots as heavy steel melting scrap, after rolling them into blooms, in the 15-ton electric arc furnace under commissioning and added that the cost of rolling would be about

Rs. 406 per tonne as against the cost of Rs. 1,500 per tonne at which heavy steel melting scrap was procured from the railways during 1978-79. While no decision was communicated in regard to the use of the ingots as scrap, the OFB asked the factory (February 1980) to immediately issue tenders for the sale of 200 tonnes of accumulated ingots and to consider rolling (in the factory) of 500 tonnes of such ingots to 4 inch square billets for sale by open tenders. It would be relevant to mention in this connection that the OFB was aware that 79.79 tonnes of 1 inch dia steel rods rolled out of 100 tonnes of steel ingots in 1973 at a cost of Rs. 1.17 lakhs could not be sold due to poor response from trade and out of them, 30.19 tonnes were lying in stock at the end of June 1981 after 49.60 tonnes were transferred to other factories. Action to sell the ingots as directed by the OFB was yet to be taken (February 1981). Meanwhile, the 15-ton electric arc furnace (cost : Rs. 253.89 lakhs) was commissioned in December 1980, but pending a decision from the OFB the surplus ingots were yet to be used as scrap (July 1981). The Ministry of Defence stated (August 1981) that out of 5,475 tonnes of surplus ingots, 630 tonnes had been utilised leaving a balance of 4,845 tonnes (cost : Rs. 79.87 lakhs) and that action to sell 200 tonnes as per OFB's directive of February 1980 was nearing finalisation.

Besides the steel ingots, the factory had at the end of March 1977 a surplus stock of 1,777.495 tonnes (cost : Rs. 26.50 lakhs) of steel blooms, billets, etc. which were declared surplus for disposal during May 1975 and January 1977. These were manufactured during 1944 to 1966 against various outturn orders, but became surplus either due to excess manufacture, change in specification or due to short-closure and cancellation of orders. Of these surplus stores, 774.463 tonnes (cost : Rs. 15.73 lakhs) were disposed of in July 1977 through the DGSD at Rs. 8.51 lakhs involving a loss of Rs. 7.22 lakhs with reference to the book value of the stores. The remaining surplus quantity (1,003.032 tonnes valuing Rs. 10.77 lakhs) was yet to be disposed of (May 1981).

As the factory could neither use the surpluses nor dispose them of, the stock of 5,848 tonnes of surplus ingots, blooms and billets had been held in the factory (May 1981) locking up Rs. 90.64 lakhs for years together.

26. Manufacture of a gun and a rifle in a factory for civil trade

An ordnance factory took up production of a gun for civil trade in 1956. Out of 95 guns produced by it, only 84 guns were sold and 1 was presented by the Ministry of Defence to an educational institute till the end of 1961-62. On proclamation of emergency in 1962, the manufacture of the gun was suspended. Of the balance 10 guns produced by the factory, 9 could be sold till 1975-76 and the balance 1 was in stock of the factory (August 1981) after being exhibited in an international fair (1961).

Although the sale of the gun in the civil market was not very encouraging, the Director General, Ordnance Factories (DGOF) issued orders in February 1973 for re-commencement of production in order to meet anticipated civil requirements and to use tools, gauges, semis, etc. left over after suspension of manufacture in 1962. Accordingly, the factory took up production of another 400 guns in May 1973 and produced 78 guns during 1974-75 (6) and 1975-76 (72). However, in October 1976 further production was suspended due to poor off-take in the civil market, the sale price of the gun (Rs. 1,000 each at wholesale rate) being much more than the market price (Rs. 700 to Rs. 800 per gun). The factory intimated the DGOF (October 1976) that because of limited quantity being produced, a lot of general engineering work was being done on the gun which was pushing up its cost and that unless mass production techniques were adopted, the cost of the gun could not be reduced. In April 1977, it was decided with the approval of the DGOF to liquidate the semis in the pipeline and to suspend production thereafter till adequate demand for the gun developed. Accordingly, 10 guns were produced (by using a part of the semis) during 1977-78.

The total cost of production of the 88 guns produced by the factory during 1974-75 to 1977-78 was Rs. 0.76 lakh. Out of these, only 40 guns could be sold by the factory till October 1979 to different dealers leaving a balance of 48 guns. During this period the factory, however, incurred an expenditure of Rs. 5.87 lakhs towards manufacture of tools and gauges, which was not commensurate with the outturn achieved. The Ministry stated (August 1981) that to overcome the poor ejection of the cartridges from the gun, designs of some of the components were changed necessitating fresh manufacture of tools and gauges to establish regular manufacture of the components.

The Ministry had also stated (November 1979) that the guns produced by the factory were not released in the market, as it would not have been possible to meet the likely demands from the dealers with a small quantity of the guns produced, and that almost all the semis, etc. lying at the factory would be consumed in building up a stock of 450 guns for sale. This does not, however, conform to the facts on record which show that the DGOF was aware (1976 and 1977) of the poor off-take of the gun in the civil trade due to higher costs and the consequent lack of demand. The factory had not re-commenced production of the guns (March 1981) and was holding at the end of 1980-81 a stock of 39 guns (Rs. 0.34 lakh) out of those produced till 1977-78 as also tools and gauges, semis, etc. valued at Rs. 9.41 lakhs. The Ministry stated (August 1981) that further 12 guns were under issue and that efforts were being made for disposal of the remaining 27 guns by issue to Government Departments and ordnance factory personnel. The Ministry added that assembly of another 12 guns was proceeding, that the guns would be sold to the arms and ammunition dealers when sizeable stock was built up from the semis available and that efforts would be made to utilise the semis and the tools and gauges which would remain in serviceable condition after assembly of 450 guns in the production.

In the same factory, after 635 numbers of a particular rifle were produced (November 1971 to April 1976) for civil trade, further manufacture was discontinued in May 1976 due to poor demand for the same from the arms dealers. However, even after suspension of manufacture the factory incurred an expenditure of Rs. 1.24 lakhs towards manufacture of tools and gauges for these rifles during 1977-78 and was holding 17 numbers of rifles (cost : Rs. 0.19 lakh), tools and gauges (Rs. 3.79 lakhs), semis and surplus stores (Rs. 1.60 lakhs) totalling Rs. 5.58 lakhs at the end of March 1981.

The above cases show that the initial introduction of manufacture of the items and subsequent re-introduction of manufacture after suspension was not taken up after a proper study of market demands, which resulted, among other things, in locking up of funds in semis and in tools and gauges (total amount : Rs. 15.33 lakhs).

27. Procurement of stores

In paragraph 17 of the Audit Report (Defence Services) for 1978-79, the delay in processing the demands of a factory for procurement of magnesium alloy billets for production of a component for an ammunition (types 'X' and 'Y') and consequent airlifting of the billets during July to November 1978 at an extra cost of Rs. 15.85 lakhs (as compared to the sea freight) were mentioned. Two more cases are mentioned below :

(A) Magnesium alloy rods of imported origin were required by the same factory in the production of shots for proof test of the same ammunition 'X' and 'Y' and for proofing the ordnance and other components, *viz.* propellants, cartridge cases, etc. Although a review of the requirement of the rods was made by the factory in January 1975, based on which an indent was placed (July 1976) by the Director General, Ordnance Factories (DGOF) on a supply mission abroad for 16 tonnes of the store, the subsequent review of the requirement for the period from July 1977 to November 1980 was made after more than a year in July 1977 when the actual stock of the rods was only 11.124 tonnes (sufficient for about 6 months' requirements) and the dues against the DGOF's indent of July 1976 were 16 tonnes (sufficient for about 9 months' requirements). The provisioning procedure provides that such review shall be made every 6 months and the indents placed on the purchasing authorities 36 months in advance of the period of utilisation and that an actual stock of 12 months' requirements can be held at any time in the factory. The Ministry of Defence stated (September 1981) that although firm orders were existing on the factory, the requirement of magnesium alloy rods was being restricted on the basis of annual production programme given by the Chief Inspector of Armament (CIA) each year.

Based on the review of July 1977, the factory placed a demand on the DGOF (July 1977) for import of 44.5 tonnes of magnesium alloy rods as early as possible. Two months after the Accounts Officer of the factory had vetted the demand (August 1977) subject to the availability of funds, the DGOF forwarded (October 1977) the proposal for the import to the associated finance wing in his office for concurrence. The financial concurrence for the procurement was accorded on 4th November 1977; thereafter, the proposal was sent to the Ministry of Defence (24th November 1977) for sanction of foreign exchange which was released on 7th February 1978 and the DGOF placed an operational indent (9th March 1978) on a supply mission abroad for supply by June 1978 of 44.5 tonnes of the rods. Thus, over 7 months were taken to cover the demand by an indent.

Although the stock and dues of the rods were expected (July 1977) to suffice till September 1978, the utilisation was in fact more than anticipated when the indent was placed on the supply mission (March 1978) and the stock was expected to last only up to June 1978. The DGOF, therefore, requested the supply mission (April 1978) to conclude the contract against the indent on top priority basis and added that the rods be made available to the factory by June 1978 positively and that a proposal for airliftng of at least 6 tonnes (out of 44.5 tonnes indented) was being processed. The supply mission concluded a contract

(August 1978) with firm 'M' for supply within 6—8 weeks of 44.5 tonnes of the store at DM 8.94 (Rs. 37.19) per kg. However, no supply was made within the stipulated delivery period as the firm refused to guarantee that the tensile strength of all the rods to be supplied would be in accordance with the specification as per the contract/indent. This matter was resolved (December 1978) in consultation with the DGOF, the factory and the Authority Holding Sealed Particulars (AHSP) by accepting rods having lower tensile strength. The Ministry of Defence stated (September 1981) that the firm did not indicate in its offer that the tensile strength as stipulated in the indent could not be guaranteed.

Meanwhile, the stock of magnesium alloy rods in the factory was completely exhausted in July 1978 and no reserve of the store was also created in the factory, though the provisioning procedure authorised creation of such a reserve. The production of the component was suspended from September 1978. Against a sanction issued (September 1978), 4.51 tonnes out of 44.50 tonnes of the store ordered on firm 'M' were airlifted in March 1979 at an estimated cost of Rs. 1.98 lakhs ; but as firm 'M' had not despatched any further quantity (though supplies were to be completed within 6—8 weeks) in order to maintain the production programme of the ammunition for 1979-80, two lots were airlifted during June 1979 (9.94 tonnes) and December 1979 (9.05 tonnes) at an estimated cost of Rs. 7.97 lakhs. Firm 'M' despatched 20.70 tonnes by sea in April 1980 and September 1980. The Ministry of Defence stated (September 1981) that the supply mission was requested (August 1981) to expedite recovery of liquidated damages from the firm for the delayed supplies of the store.

Thus, out of 44.5 tonnes of the magnesium alloy rods, 23.50 tonnes (cost : Rs. 8.74 lakhs) were airlifted at a total cost of Rs. 9.95 lakhs (estimated) involving an extra expenditure of about Rs. 9.08 lakhs as compared to the estimated sea freight (assessed as 10 *per cent* of the cost of the store). The Ministry of Defence could not, however, indicate the actual extra expenditure incurred on account of airlifting of the store. The airlifting was caused as the factory did not follow the provisioning procedure and placed (July 1977) the demand only 15 months in advance of the utilisation of the store as against 36 months prescribed and no reserve of the material was held in the factory for emergent necessity. The Ministry of Defence stated (September 1981) that a reserve had been sanctioned (February 1981), but that due to clearance given by the AHSP for use of a substitute indigenous material, its creation had been withheld.

(B) Similarly based on the production programmes fixed in May 1977, the same factory raised another demand in December 1977 on the DGOF for import of 1,04,673 numbers of vulcanised grey fibre moulding required for production of a component for ammunition 'Y' against orders placed on it during March 1972 to September 1976 (1,09,513 numbers of the component) and June 1977 (69,600 numbers of the component). This demand was raised (December 1977) after more than a year of the previous demand of October 1976 and the actual stock of the store available in the factory then sufficed one month's requirement only. Against the demand, the DGOF placed an indent on the supply mission only in July 1978 after financial concurrence was obtained (April 1978) and requisite foreign exchange was released (June 1978). The supply mission concluded a contract (October 1978) with firm 'N' for supply of the store (1,04,673 numbers) at £ 2.40 (Rs. 38.40) each. The extra expenditure involved due to escalation in price of the store owing to delayed placement of the demand was about Rs. 5.86 lakhs as compared to the rate of £ 2.05 (Rs. 32.80) each prevailing in 1977.

As per the contract of October 1978, firm 'N' was to supply 10,000 numbers in November 1978, 5,000 numbers in December 1978 and thereafter at the rate of 10,000 numbers per month during January 1979 to June 1979 and 12,000 numbers per month from July 1979 onwards. However, as the firm could not make supply as per delivery schedule, to meet the production requirement, sanctions were accorded during December 1978 to April

1980 for airlifting of 92,000 numbers out of the contracted quantity of 1,04,673 numbers at an estimated cost of Rs. 6.90 lakhs. However, against these sanctions 69,748 numbers were actually airlifted during January 1979 to March 1980 and the balance (34,925 numbers) against the contract was shipped during July 1979 to March 1980. Due to non-receipt of the store in time, the production of the component showed substantial shortfall, the factory producing only 47,490 numbers against the target of 60,000 numbers during 1979-80. The extra expenditure due to airlifting of 69,748 numbers of the store as compared to the estimated sea freight was about Rs. 2.55 lakhs (the actual extra expenditure incurred due to the airlifting could not be indicated by the Ministry). As firm 'N' was the sole supplier of the store, no liquidated damages for the delayed supplies were proposed by the Ordnance Factory Board for recovery from the firm.

The above cases indicate that adequate care was not taken by the factory to project its demands for import of stores in time as per the authorised procedure. This resulted not only in an extra expenditure (Rs. 11.63 lakhs) on account of airlifting of the two items of stores to meet production requirements, but also affected the execution of service orders due to non-receipt of supplies in time and involved loss of Rs. 5.86 lakhs due to escalation in prices of the second item of store.

28. Purchase of tools and gauges

For production of an ammunition in a factory, the Ministry of Defence placed (December 1971) a letter of intent on a foreign firm 'X' for supply of 16,724 (15 types) tools and gauges at a total FOB cost of DM 8.52 lakhs (Rs. 19.24 lakhs). A regular supply order was placed on the firm by the Director General Ordnance Factories (DGOF) in January 1972. After the order was placed, the factory intimated the DGOF (February 1972) that the production of the tools and gauges in the factory had doubled since December 1971 and that the quantities for

8 out of 15 types of tools and gauges ordered on the firm could, therefore, be reduced by 5,554 numbers with a foreign exchange saving of DM 3.12 lakhs (Rs. 7.05 lakhs). No efforts were, however, made by the DGOF to reduce the quantity. The factory was also informed (March 1972) that from the point of view of administrative propriety it was not correct to amend the supply orders once they were placed and that with reference to discussions with the firm on 24th February 1972, there was no possibility of the firm accepting any reduction in the quantity ordered as it had already procured the material and gone ahead with the production. As per the order, the supplies of tools and gauges were to be completed by September 1972. The firm supplied the tools and gauges in 6 consignments during May 1972 to September 1974 and these were received by the factory during August 1972 to January 1975.

Of the supplies (16,724 numbers) received from firm 'X' 14,230 numbers of tools and gauges were accepted, 1,723 numbers were rejected due to dimensional discrepancies and the balance 771 numbers were found broken or lost during railway transit from the port to the factory. A claim preferred on the railways for Rs. 0.88 lakh (March 1977) for the transit loss was yet to be accepted (July 1981).

As per the order, the firm was liable to replace, free of charge, any tools and gauges found, within 24 months of their delivery (FOB), defective or not in accordance with the drawings and specifications. The factory intimated the rejection of 1,723 numbers, between November 1972 and July 1975. But the firm considered (January 1977) that the rejected tools and gauges could be effectively used though their life might be marginally lower and it offered (January 1977) a discount of 25 *per cent* (Rs. 0.14 lakh) on the total cost of only 599 numbers out of those rejected against three consignments. The factory intimated the DGOF (March 1977) that as the rejected tools and gauges were in fairly good condition, the offer could be accepted provided the same was extended to the tools and gauges rejected against other consignments. The factory also requested firm 'X' (March

1977) to accept 25 *per cent* discount on all the rejected tools and gauges. Later, the DGOF, too, took up the the matter with the firm (September 1977), but it was not pursued further either by him or by the factory. On this being pointed out in audit (April 1979), the DGOF reminded firm 'X' (September 1979) for reply. However, though no reply was received and earlier the rejected tools and gauges had been proposed (March 1977) for acceptance at the discount of 25 *per cent*, the factory intimated the Ordnance Factory Board (OFB) (October 1980) after reviewing, *inter alia*, the existing stock holdings, the production potentiality of the tools and gauges in the factory, and the conditions of the rejected items supplied by firm 'X', that none of the rejected tools and gauges was acceptable and that the firm should accept liability for the full rejected quantity (1,723 numbers). Though this was taken up by the OFB (November 1980) with the Indian agent of the firm, no reply was received (March 1981) and the rejected tools and gauges (cost : Rs. 2.56 lakhs) were lying in the factory for the last 6 to 8 years. The Ministry of Defence stated (September 1981) that the OFB was still progressing the case with firm 'X' and its agent.

The case reveals the following points :

— The Ministry of Defence placed the order on firm 'X' (December 1971) for import of 16,724 numbers of tools and gauges though the factory had increased production of these items from December 1971 and a request made (February 1972) by the factory to reduce the import by 5,554 numbers, was not heeded by the DGOF ; this involved unnecessary foreign exchange expenditure of Rs. 7.05 lakhs.

— Although rejection of 1,723 numbers of tools and gauges (cost : Rs. 2.56 lakhs) was intimated by the factory to the DGOF during November 1972 to July 1975, firm 'X' was asked only in March and September 1977 to accept 25 *per cent* discount on all the rejections. The matter was not pursued by the DGOF thereafter till September 1979 for their replacement; the rejected items had been, thus, lying in the factory unused for 6—8 years.

— The claim preferred (March 1977) on the railways for the loss of 771 numbers of tools and gauges (cost : Rs. 0.88 lakh) during transit was yet to be accepted (July 1981).

29. **Special repairs to permanent buildings**

In April 1965, construction of 144 type I and 90 type II (total 234) quarters for the employees of an ordnance factory was sanctioned by Government and completed at a cost of Rs. 32.00 lakhs. After construction, the quarters had been taken over from the Military Engineer Services (MES) in October-November 1968 by another factory, which originally was a part of the first factory, but became independent on completion of a project sanctioned by Government in May 1963. The quarters had been constructed according to permanent specifications with the expected life of 60 years subject to normal periodical services and maintenance.

Within 10 years, the condition of all the quarters was, however, found to have deteriorated so much that they became unfit for human habitation; the condition of 72 type I and 42 type II (total 114) quarters was particularly bad. A Recce-cum-Costing-cum-Siting Board assembled in August 1978, under orders of the Director General, Ordnance Factories (DGOF), examined the condition of the 114 quarters and recommended special repairs thereto. The Board proceedings were approved by the DGOF in November 1978 and in October 1979, a proposal for special repairs at an estimated cost of Rs. 9.34 lakhs (as furnished by the MES) was submitted to the Finance Wing by the Ordnance Factory Board (OFB) for concurrence. In November 1979, the Finance Wing advised investigation by a Board to find out the reasons for such premature deterioration of the quarters and reassessment of their life after the proposed repairs. In January 1980, the OFB blamed the MES for substandard construction of the quarters as well as for their reluctance to take any responsibility for such construction after the guarantee period of one year was over. The OFB, however, agreed to refer the case to the Zonal Chief Engineer (Zonal CE) at appropriate time for investigation. Finally, sanction for repairs was accorded by the OFB in February 1980 for Rs. 9.34 lakhs. The work was expected to be completed in December 1981.

In January 1981, the OFB submitted another proposal for special repairs to the remaining 72 type I and 48 type II (total 120) quarters to the Finance Wing at an estimated cost of Rs. 12.96 lakhs. Sanction to the proposal was yet to be issued (August 1981).

Premature deterioration of the quarters on expiry of only one-sixth of their life was never investigated by the DGOF as to the reasons and responsibility therefor, nor was it reported to the Zonal CE for investigation till April 1981 even on receipt of Finance advice in November 1979.

The Ministry stated (August 1981) that the OFB was being requested to see whether there were any procedural lapses in not initiating action for departmental investigation or reporting the matter to the Zonal CE and if so, why responsibility should not be fixed. The result of investigation by the Zonal CE was awaited.

Thus, substandard construction and premature deterioration of 234 quarters resulted in an avoidable expenditure of Rs. 22.30 lakhs on special repairs.

30. **Procurement of an equipment**

In paragraph 18 of the Audit Report (Defence Services) for 1979-80, comments were made on the delay in procurement of railway shunters in factory 'A' and the resultant loss of Rs. 33.64 lakhs.

In another factory 'B', the shunting of railway wagons was being done manually resulting in delayed clearance. The demurrage charges paid to the railways during 1974 and 1975 for detention of railway wagons beyond the prescribed period amounted to Rs. 4.03 lakhs (Rs. 2.59 lakhs in 1974 and Rs. 1.44 lakhs in 1975). In order to avoid demurrage charges and to utilise the labour on productive works, factory 'B' forwarded a demand (March 1976) to the Director General, Ordnance Factories (DGOF) for procurement of a railway shunter at an estimated cost of Rs. 0.72 lakh. To enable the DGOF to consider the proposal, factory 'B' invited a quotation at his instance from firm 'M' in May 1976 and forwarded the same to the DGOF in June 1976. Although the procurement was considered (March 1976) inescapable by factory 'B', the DGOF did not communicate his decision on the factory's proposal for two years, nor did the factory pursue the matter during this period. The Ministry of Defence stated (August 1981) that the quotation forwarded by factory 'B' in June 1976 did not actually reach the DGOF and the DGOF was, therefore, under the impression that the factory was still making enquiries from trade. Only in May 1978, a fresh review was made and another demand, in cancellation of the earlier one, was placed in June 1978 on the DGOF for procurement of a wagon pusher. Against this demand, the DGOF placed (February 1979) an indent on the Director General, Supplies and Disposals who, in turn, placed an order on the same firm 'M' in June 1979 and the equipment (Cost : Rs. 0.87 lakh) was received by factory 'B' in December 1979. This was commissioned in February 1980.

Thus, although the cost of the railway shunter was only about Rs. 0.72 lakh and payment of demurrage charges to the railways amounted to Rs. 4.03 lakhs during 1974 and 1975, no action was taken by factory 'B' prior to March 1976 for its procurement. The Ministry added (August 1981) that prior to 1976, factory 'B' did not face much difficulty in unloading wagons as it was getting help from factory 'A'. Even when a proposal was made in this regard in March 1976, the same was not processed expeditiously and as a result the equipment could be procured only in December 1979. Meanwhile, during 1976 to 1979 alone, factory 'B' paid further demurrage charges to the railways amounting to about Rs. 3.41 lakhs. Besides, the labour charges incurred in manual shunting of the railway wagons were about Rs. 3.84 lakhs during this period.

31. **Deficiency of stores in a factory**

In March 1973, in factory 'A', the stock verifiers reported a shortage of 2,593 shell forgings (cost : Rs. 4.61 lakhs) produced by the shell forge shop for the production of two types of ammunition. A Board of Inquiry set up (September 1973) by the General Manager (GM) of the factory to investigate the shortages stated in its report (November 1973) that the forgings, after production, were issued to and used by the shell machining shops, but that the covering demand notes were not submitted to regularise the transactions. The Board did not, however, investigate what happened to the deficient forgings after further processing in the machine shops.

In March 1974, the report of the Board was forwarded to the Director General, Ordnance Factories (DGOF). After more than a year, the DGOF convened (May 1975) another Board with the Deputy GM of factory 'B' as Chairman to investigate the shortages. This Board submitted its report in January 1976 and concluded that :

— the shell forgings were inspected and passed by the Service Inspector, who was independent of the factory authorities and as such there was no reason to doubt or disbelieve that these were not actually manufactured;

— as the shell forgings were quite heavy and bulky and being made of steel had apparently no direct application to use elsewhere, there was no possibility of loss of these forgings through pilferage; and

— the shell forgings were issued to the machine shops where these were rejected during processing, but were not accounted for in the relevant warrants; nor were the rejected forgings preserved due to negligence or carelessness for subsequent disposal.

Though the second Board also could not locate the deficient forgings, it did not reconcile the actual number of forgings produced by the shell forge shop with the number issued to the indentors after further processing in the machine shops and the number returned to stock as scraps on account of rejections. The Ordnance Factory Board (OFB) stated (September 1981) that locating the deficient forgings was not possible because as per procedure, the rejections were remelted after being returned to stock and that since there were many operations after machining and before despatch to the indentor, the reconciliation was not possible.

The second Board fixed the responsibility for the discrepancy (January 1976) on the foremen of the shell machining shops and to a minor degree on the stock holder. The OFB, however, opined (July 1979) that the responsibility could not be fixed on any particular individual, and instructed factory 'A' to regularise the shortage of 2,593 numbers of shell forgings (cost : Rs. 4.61 lakhs) through a loss statement. The loss was yet (August 1981) to be regularised.

CHAPTER 4

WORKS AND MILITARY ENGINEER SERVICES

32. Extra expenditure on electricity charges

Under arrangements made by the Military Engineer Services (MES), two Research and Development Establishments at a station had been obtaining bulk supply of electricity from a State Electricity Board (hereafter called 'Board') since January 1967. The Regulations for the MES require that an agreement should be concluded for such supply. Pending conclusion of a regular agreement, sanction of the Ministry of Defence was accorded from time to time for obtaining electric supply from the Board. The last sanction was accorded (March 1979) for the period up to 31st March 1980. The agreement was actually concluded on 31st December 1979.

According to the tariff laid down by the Board from time to time, different rates were chargeable for power supplied for industrial power load of a contracted demand (being the lowest) and non-industrial power load and predominantly lighting load (being the highest). In the absence of a regular agreement, the supply made to the two etstablishments was being billed for and paid at the rates applicable to predominantly lighting load even though the connected load was actually for industrial purpose. Though in December 1972, Garrison Engineer (GE) 'A' pointed out to the Board that the load being mainly for industrial purpose, the supply should be charged at the applicable tariff, the matter was not effectively pursued either by GE 'A' or GE 'B' under whose jurisdiction the establishments fell with effect from

August 1977. The incorrect application of tariff rates was, however, taken up by GE 'B' with the Board in November 1978, but it was not pursued to finality and meanwhile the bills for the electricity consumed continued to be paid as billed for by the Board at higher rates.

In March 1979, to process the case for obtaining approval of the draft agreement, GE 'B' requested the Board to intimate the appropriate chargeable tariff for the supply as also details of power load connected to the supply point. The Board informed (August 1979) GE 'B' that the tariff hitherto being charged would be changed from April 1979 to the tariff applicable to non-industrial power load and that the tariff for industrial power load could, however, be made applicable only from the date of agreement in case a certificate from the concerned authorities to the effect that the establishments had been registered under the Factories Act was produced. The requisite certificate was furnished by GE 'B' to the Board in August 1979. The agreement ultimately concluded on 31st December 1979 provided for the supply to be charged at the tariff for industrial power load.

The Ministry of Defence stated (May 1981) that :

— the delay involved in the finalisation of the agreement between the MES and the Board was mainly due to a dispute as to whether a single and common agreement was to be concluded for the above two establishments alongwith two other establishments at the station or separate agreements were required to be concluded;

— the MES had been pressing for charging the tariff as for industrial load, but that the Board authorities contended that it was a non-industrial one and it was only in 1979 that the latter agreed to apply the industrial tariff.

Thus, due to delay of over 12 years in the conclusion of the agreement, payments were made for the electric supply as billed for at higher rates, without ensuring the application of the appropriate tariff. This resulted in an extra expenditure of about Rs. 15.56 lakhs.

33. Avoidable extra expenditure

A Commander Works Engineer (CWE) invited tenders on 5th October 1978 for the construction of residential accommodation for Army personnel at a station at an estimated cost of Rs. 6.36 lakhs. Five tenders received were opened on 6th December 1978 and the tender of firm 'A' for Rs. 5.35 lakhs was the lowest. The offer was valid for 30 days from the date of its opening *i.e.* up to 4th January 1979, but at the request of the CWE, firm 'A' agreed to keep the offer open up to 5th February 1979. The tender of firm 'A' was accepted on 3rd February 1979, but the letter of acceptance was actually despatched by registered post on 6th February 1979, a day after the expiry of the extended period of validity of the tender. On 7th February 1979, firm 'A', however, intimiated telegraphically that its offer had expired on 5th February 1979. The letter of acceptance was returned by firm 'A' on the ground that this was despatched after the expiry of validity of the offer and that the letter of acceptance had become void in terms of section 4 of the Indian Contract Act, 1872. The CWE cancelled the letter of acceptance on 5th April 1979.

Tenders for the same work were invited again by the CWE on 12th October 1979. Of the 6 tenders received, the tender of firm 'B' for Rs. 6.44 lakhs, being the lowest, was accepted on 30th November 1979 and the contract concluded. This tender was Rs. 1.09 lakhs more than the earlier lowest tender.

The CWE stated (November 1980) that due to shortage of clerks, a Group 'D' employee was entrusted with the job of receipt and despatch of letters and he was not aware of the urgency in despatching the letter.

The Ministry of Defence stated (May 1981) that an inquiry had been ordered (February 1981) in the matter by the Command Chief Engineer to fix responsibility for the delay in the despatch of the letter of acceptance to firm 'A'.

Owing to delay in despatch of the letter of acceptance within the validity period of the offer, the acceptance of tender by the department could not be enforced and retendering resulted in an extra expenditure of Rs. 1.09 lakhs. Besides, there was delay of nearly a year in providing accommodation to the Army personnel, the work having been completed in June 1981.

CHAPTER 5

PROCUREMENT OF STORES AND EQUIPMENT

34. Non-utilisation/unnecessary procurement of tyres

Two types of heavy duty vehicles ('A' and 'B') of imported origin had been in service with the Army since 1966-67. These vehicles had tyres and tubes also of imported origin of size 1500×20.

Based on clearance (December 1966) of the inspection authorities for issue of indigenous tyre and tube of size 1400×20 in lieu of tyre and tube of imported origin for type 'A' vehicles, the Army Headquarters (HQ) decided (November 1969) to fit type 'A' vehicles with the indigenous tyres when the imported tyres in use became unserviceable. The change-over was to be effected in complete sets, and the mixed use of tyres, *viz*. imported and indigenous was not to be permitted. The tyres so removed from type 'A' vehicles and in good condition were to be used in type 'B' vehicles after retreading, wherever necessary.

Tyres of size 1400×20 procured indigenously during 1962-63 for certain other types of vehicles became surplus as a result of phasing out of these vehicles during 1966-67 and 1967-68. It was only in December 1977 that the Chief Inspector of Vehicles cleared these tyres for alternative use for issue to type 'A' vehicles. A review carried out by a Central Ordnance Depot (COD) on 1st April 1979 indicated a surplus of 461 tyres of this type (after excluding a special reserve of 110 tyres).

The question of disposal/in lieu issue of these tyres was initiated but the Central Technical Team advised (January 1980) re-utilisation of these tyres being applicable to current vehicles/ trailers.

However, these tyres (value : Rs. 5.80 lakhs) procured in 1962-63 and held surplus had not been put to any alternative use nor disposed of till October 1981.

Regarding type 'B' vehicles which were fitted with the same size (1500×20) of imported tyres as those fitted to type 'A' vehicles, no change-over to indigenous tyres was authorised. In December 1971, the Army HQ decided to import 1,800 tyres to effect complete replacement of the tyres in use due to their being in service since 1967. But, only 1,323 tyres (value : Rs. 19.77 lakhs) were actually contracted during August 1972 and March 1973 and they were received in the COD during March 1973—June 1974.

In October 1975, the COD reviewed the requirements of tubes of size 1500×20 for type 'B' vehicles and projected (January 1976) to the Army HQ a demand for the import of 890 tubes (estimated cost : Rs. 1.34 lakhs). Government concluded (March 1977) a contract with a foreign Government for import of 888 complete sets of tyres, tubes and flaps (instead of only tubes as demanded) at a cost of Rs. 24.71 lakhs.

The first four consignments covering 305 complete sets of tyres, tubes and flaps were supplied during March—September 1977 and these were received in the COD during September 1977—February 1978. Although the error in the demand (covered by the contract) came to notice of the Army HQ in April 1977, the matter regarding incorrect procurement/supply of stores was taken up with the foreign Government in August 1977. Further supply of tyres and flaps was cancelled and the balance quantity of 583 tubes only was supplied in December 1977 and received by the COD in March 1978. The cost of 305 numbers of tyres and flaps procured erroneously worked out to Rs. 8.10 lakhs.

As per the Army HQ's directive (April 1979), 153 type 'B' vehicles were to be maintained up to 1984-85. A provision review of imported stock of tyres of type 'B' vehicles carried out by the COD as on 1st June 1980 revealed a surplus stock of 353 tyres after taking into account 50 *per cent* of the repairable stock of 1,073 tyres as assets and after providing for the requirements of 60 months (*i.e.* up to May 1985).

The Ministry of Defence stated (October 1981) that :

— the demand for 888 tubes only was placed correctly but the offer received from the foreign Government was for complete sets which was accepted by mistake and contract signed; as there was no error in projecting the demand, no investigation was carried out or considered necessary; and

— the anticipated repairables, taken as assets, would not be converted, till required, into real assets by retreading and actual surpluses would not, therefore, exist.

The following points emerge :

— 461 tyres of size 1400×20 (value : Rs. 5.80 lakhs) procured in 1962-63 for vehicles phased out during 1966—68 and held surplus had neither been put to alternative use nor disposed of (October 1981).

— The quantity of 305 tyres with flaps of type 'B' vehicles (value : Rs. 8.10 lakhs), having been imported erroneously, was proposed to be liquidated by not going in for retreading of repairable tyres (and converting them as assets) which would have otherwise been done in the normal course.

CHAPTER 6

UTILISATION OF EQUIPMENT AND FACILITIES

35. Non-utilization of imported fuzes

Against indents placed by the Director of Ordnance Services (DOS) during 1957—1962, 2.56 lakh numbers of fuzes (shelf life : 30 years) for use in the artillery ammunition shells were procured from a foreign Government through the Military Adviser attached to the Indian Mission concerned at a cost of Rs. 2.29 crores. They were received during 1958—1965. As per terms of the supply orders, they were to be of the latest date of manufacture and latest current mark and inspected in accordance with the standard of the Government supplying the fuzes.

At the time of supply of 0.74 lakh fuzes against the 2 indents of 1962 (covered by a supply order of September 1962/ January 1963), the Military Adviser informed (March 1963) the DOS that since the fuzes had undergone initial production proof test of 1959-60, the foreign Government was not willing to carry out special proof test as according to them reproofing was required to be done only after 5 years from the date of manufacture. The DOS replied (April 1963) that fuzes offered were acceptable subject to the foreign Government confirming their serviceability and furnishing initial production proof reports.

All the fuzes (manufactured during 1957—1964) on their receipt in an ammunition depot were declared as 'serviceable' by the Directorate of Inspection (Armaments) under the Director General of Inspection (DGI), based on initial proof test reports received from the foreign Government and after carrying out check proofing in India. These fuzes were required to be proved on reaching the age of 2 years from the date of manufacture and

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thereafter every 3 years to see that the same fulfilled the required performance parameters and in case of more than one failure, the lot concerned was to be declared as 'unserviceable'.

Based on the proof results of 1970 and part of 1973 proof cycle, the Controllerate of Inspection (Ammunition) considered (August 1974) that about 0.90 lakh fuzes would not satisfy the acceptance criteria due to blinds, ground bursts, etc. and would require repairs.

In February 1975, the DGI suggested to the DOS that the retrieval/repair of these fuzes was possible by changing the detonator/power pellets and by servicing the time mechanism and that the Director General, Ordnance Factories (DGOF) should be approached for the purpose. The DGI also suggested that 100 numbers of these fuzes could be broken down by the Controllerate of Inspection (Ammunition) on a trial basis and reassembled by the DGOF. Accordingly, an indent for trial repairs of 100 fuzes was placed (August 1975) by the DOS on the DGOF. The trial repairs were, however, not successful. The stock-holding depots were, therefore, asked (September 1976) to keep these fuzes segregated for factory repairs.

Another indent for trial repairs (involving change of detonator and filling) of 255 fuzes by an ammunition factory was placed (August 1977) on the DGOF after the feasibility of repairing these fuzes on experimental basis was established at the Controllerate of Inspection (Ammunition). When the question of repair of bulk quantity of these fuzes was taken up by the DOS with the DGOF, the latter replied (October 1979) that it was not possible to accommodate filling of repaired fuzes. In March 1980, the DGI suggested that the repairs and modification of fuzes be done to a different version. This modification was not found possible with facilities available at the Controllerate of Inspection (Ammunition). The feasibility of modification was, therefore, discussed with the trade. In March 1981, the DGI concluded that conversion of these fuzes, besides being safety hazard, was not an economically viable proposition. However, with a view to using these fuzes in their present state, the DGI suggested (April 1981) to the General Staff that a re-assessment of the quality level of these fuzes might be carried out. Since the General Staff pointed out that unserviceable fuzes were not acceptable under any further relaxed criteria, both for training and operational use, the DGI advised (June 1981) the DOS to dispose of these fuzes in the normal manner.

The Ministry of Defence stated (October 1981) that premature deterioration of the fuzes took place in storage. The Ministry added that it was a perennial problem with time fuzes that they were susceptible to malfunctioning after they had aged because of the unavoidable corrosion.

Thus, 89,516 (imported) fuzes (value : Rs. 0.80 crore) of 1957—1964 manufacture and received during 1958—1965 remained unutilised and were awaiting (October 1981) disposal in the normal course, as these were declared unserviceable and beyond economic repairs.

36. Non-utilisation of imported equipment

An equipment (type 'A') for testing light fastness of textiles was procured (October 1971) by the Director General of Inspection (DGI) from a foreign firm 'X' through a Supply Mission abroad at a cost of Rs. 1.25 lakhs. This equipment, on receipt by the Chief Inspectorate of Textiles and Clothing (CITC), was found to have been damaged during transit and some of its parts were rusted. The defects were intimated to the Indian agent of the foreign firm who promised in August 1973 to rectify the defects free of cost, but had not completely repaired them so far (November 1981).

In October 1974, the DGI suggested to the CITC that with a view to standardising the use of test equipment for testing light fastness of textiles in the various regional Inspectorates and in order to achieve and maintain uniformity in regard to the method of testing as well as to help in the comparison and correlation of test results, the feasibility of providing all these Inspectorates with the same test equipment be examined. The CITC recommended (December 1974) to the DGI that the regional Inspectorates should be provided with equipment of type 'A'. In February 1975, the CITC sought approval of the DGI for the procurement of an improved version of type 'A' equipment (hereafter called type 'B') capable of testing three times the number of samples taken by type 'A' for its own establishment (as it was also the Authority Holding Sealed Particulars) and for the transfer of type 'A' equipment (lying in damaged/defective condition) to one of the regional Inspectorates where the load was not very large. The proposal was accepted (March 1975) by the DGI who placed (July 1975) an indent on the Supply Mission for the procurement of type 'B' equipment from a foreign firm 'X' from which the CITC had made inquiries earlier.

The Supply Mission entered (July 1975) into a contract with foreign firm 'X' for the supply of the equipment at a cost of DM 129,502 (Rs. 2.93 lakhs) including DM 28,707 for two years' spares and Indian agent's commission @ 10 *per cent*. The equipment was despatched (April 1976) by foreign firm 'X' in five packages. Three packages were received (July 1976) by the CITC through an Embarkation Headquarters (HQ) in good condition; one package containing the power supply units was found completely damaged on all sides with many dents. The fifth package, which was not traceable earlier, was later received by the CITC from the Embarkation HQ in February 1978 only. The Indian agent of foreign firm 'X', who was asked to install the equipment, intimated (March 1978) that amongst other items, a suitable transformer was necessary as the equipment worked on a particular voltage.

Meanwhile, the type 'A' equipment which was lying in a damaged/defective condition, had been transferred (July 1976) by the CITC to one of the regional Inspectorates, where it could be installed in February 1980 only. The equipment worked for about a week and then stopped working due to defects in the ignition system. The Ministry of Defence stated (November 1981) that the defective parts were still under repair by the Indian agent.

The CITC intimated (September 1980) Audit that :

— in the absence of the equipment of type 'B', testing for light fastness of textiles was being done per force with an old equipment even though it was 'not as per the laid down specifications' and only curtailed testing could be done; and

— the old equipment could not fully cope with the increased work-load.

The Ministry of Defence added (November 1981) that :

— action to procure the transformer (for type 'B' equipment) was initiated in March 1978/March 1980 and the same was received in March 1981;

— it was expected that the equipment (type 'B') would be commissioned by 31st December 1981, but that it would entirely depend upon the Indian agent who was being reminded periodically;

— although the equipment (type 'B') was yet to be installed/utilised, the quality of tests and inspection work had not suffered on account of its non-installation as the increased work-load was being attended to by running the existing equipment for increased number of hours;

— there was no alternative but to continue testing of light fastness for textiles and other allied stores as per earlier specifications by using the old equipment; and

— the question of taking up the matter with the Indian agent/foreign supplier for immediate rectification and installation of the equipment was being considered at Ministry level to avoid further delay.

Thus, the test equipment of types 'A' (cost : Rs. 1.25 lakhs) and 'B' (cost : Rs. 2.93 lakhs) received in October 1971 and July 1976/February 1978 respectively had not yet (November 1981) been installed/put to use with the result that testing for light fastness of textiles continued to be done with an old equipment and the objective of having uniformity in testing could not be achieved.

37. **Injudicious purchase of an equipment**

For execution of urgent works pertaining to two airfields, the Engineer-in-Chief (E-in-C)'s Branch sent an operational priority indent (September 1974) for procurement of 4 tar boilers for use with hot-mix plants to the Inspectorate of Engineering Equipment located at station 'A', for onward transmission to the Director General, Supplies and Disposals (DGSD), after its technical scrutiny. The indent was passed on to the DGSD in October 1974.

The DGSD concluded (October 1975) a contract with a firm located at station 'B' for supply of 4 tar boilers at a total cost of Rs. 1.87 lakhs. According to the contract, the E-in-C's Branch was to provide within one month necessary drawings of the plant to the firm to enable it to manufacture suitable end connections. A unit of the Inspectorate located at station 'B' was nominated as the local inspecting officer. Final inspection was, however, to be carried out at the consignee's end in the presence of the firm's representative.

The tar boilers after local inspection (March 1976) were received (May 1976) in an Engineer Park at station 'C' involving freight charges of Rs. 0.14 lakh. Final inspection of the tar boilers could not, however, be carried out as hot-mix plants were not available with the Engineer Park, nor were the end connections made by the firm, because the drawings of end connections sent (December 1975/October 1976) by the E-in-C's Branch were only a sketch and not the manufacturing drawings.

Efforts made by the E-in-C's Branch to get a serviceable hot-mix plant for testing the tar boilers did not succeed as 4 hot-mix plants availabile with a Zonal Chief Engineer (Zonal CE) 'X' had become off-road for want of spares and were disposed of in December 1978. Ultimately the end connections of a plant located at station 'D' were got retrieved (April 1979) and sent to the inspecting officer who, in turn, asked (June 1979) the firm to check the suitability of the sample. The needful was, however, not done by the firm as its factory had already been closed. Thereafter, the E-in-C's Branch asked (September 1979) Zonal CE 'X' to get the end connections manufactured ex-trade at the cost of the firm. Zonal CE 'X', however, suggested (October 1979) to the E-in-C's Branch that since all the plants held in the Zone had become unserviceable by October 1975, the tar boilers might be transferred to another Station 'E' (where a serviceable hot-mix plant was available) and the task of fabrication of the end connections entrusted to Zonal CE 'Y' (exercising jurisdiction over station 'E'). This proposal was, however, not accepted by the E-in-C's Branch which pointed out (April and August 1980) that the contract concluded by the DGSD was totally silent on the technical aspects of the testing of tar boilers. The E-in-C's Branch added that the testing of tar boilers was essential.

The Department of Supply stated (June 1981) that the contracts concluded by the DGSD did not enlist various tests to be conducted by the inspection authority at the time of initial/final inspection until and unless specified by the indenting officer.

Further, it was for the inspecting authority to decide the tests to be carried out at the time of initial/final inspection.

The Ministry of Defence stated (April 1981) that :

— the tar boilers could not be tested by connecting to the hot-mix plants which though serviceable at the time of placing of the indent in 1974, had been rendered repairable through usage in the intervening period ;

— the sketch furnished by the E-in-C's Branch was quite sufficient to enable the firm to manufacture end connections, though, the firm which was probably heading for a closure claimed that the sketch was not a detailed manufacturing drawing ; and

— final testing was delayed due to non-availability of the hot-mix plants elsewhere and non-fabrication of the end connections which was a component required for use of the tar boilers with these hot-mix plants only.

The fact remains that the tar boilers procured at a cost of Rs. 2.01 lakhs and required to be used in conjunction with the hot-mix plants, which had become non-functional even before the tar boilers were contracted, had not been put to use so far (September 1981) even after a period of more than 5 years.

CHAPTER 7

ARMY

38. Delay in disposal of fired cartridge cases (of high calibre)

An examination of the position regarding disposal of fired cartridge cases of high calibre revealed that three types 'A', 'B' and 'C' (of foreign manufacture) had been accumulating in various ammunition depots prior to September 1973. Efforts made by the Director General, Ordnance Factories (DGOF) to utilise the brass scrap of these fired cartridge cases in the manufacture of cartridge cases of indigenous ammunition did not succeed on account of their having silicon as reported by ordnance factory 'P' in October 1973. A Command Headquarters (HQ), therefore, requested (November 1973) the Director of Ordnance Services (DOS) at the Army HQ for an early decision regarding clearance of the huge stock of these cases.

The DOS decided (August 1976) that high calibre cartridge cases would be stored centrally in covered accommodation at ammunition depot 'X'. For this purpose the Command HQ were advised (September 1976) to make out an intake plan of ammunition depot 'X'. Accordingly, 6.96 lakh fired cartridge cases (5,102 tonnes) consisting of 2.31 lakh type 'A' (2,612 tonnes), 2.58 lakh type 'B' (2,117 tonnes) and 2.07 lakh type 'C' (373 tonnes) were backloaded and received in ammunition depot 'X' during October 1976—March 1978 and an expenditure of Rs. 4.13 lakhs was incurred on freight, handling, etc.

Although it was known that the fired cartridge cases contained silicon, instructions were issued (May 1977) by the DOS to issue fired cartridge cases of types 'B' and 'C' to ordnance factories

'P', 'Q' and 'R'. Factories 'P' and 'Q' intimated (June 1977) ammunition depot 'X' that the subject cartridge cases were not required for their use or were not suitable due to high silicon content. Factory 'R' also declined (June 1977) to accept these cartridge cases as it was in the initial stages of re-utilisation trials.

In July 1977, the DOS instructed ammunition depot 'X' to issue 17,000 cases (about 200 tonnes) of type 'A' to factory 'R' for 'reforming trials' but it could accept only 2,060 numbers (about 23.4 tonnes) as its requirements were for freshly fired cases without dents or damage so that reforming could be economical and effective with less effort. Based on these requirements, the Command HQ estimated (March 1978) that only 30 *per cent* of the holding of fired cartridge cases of type 'A' in ammunition depot 'X' was likely to be selected by factory 'R' for re-utilisation purposes.

Consequent on refusal by factories 'P' and 'Q' to accept fired cartridge cases of types 'B' and 'C' and factory 'R' being interested only in reformable type 'A' cases, it was decided (August 1980) by the DOS that :

— non-reformable cases of type 'A' and cases of types 'B' and 'C' be disposed of locally by the depots in the normal manner instead of being despatched to ammunition depot 'X' ; and

— reformable cases of type 'A' be sent direct to factory 'R' by various ammunition depots.

A further quantity of 1,719 tonnes (type 'A' : 771 tonnes ; type 'B' : 800 tonnes and type 'C' : 148 tonnes) of fired cartridge cases accumulated at ammunition depot 'X' during April 1978—September 1980 and an expenditure of Rs. 1.39 lakhs was incurred on their backloading from various ammunition depots.

As on 31st December 1980, ammunition depot 'X' was holding centrally 8.58 lakh fired cartridge cases of 3 types (5,976 tonnes) valued at Rs. 14 to 15 crores.

The Ministry of Defence stated (September 1981) that the fired cartridge cases were stocked centrally in ammunition depot 'X' :

- to attract purchasers having capability to pay higher prices for the bulk purchases in the auction ;
- to relieve congestion in the various ammunition depots and to make available storage space for service ammunition ; and
- to feed factory 'R' being closer to ammunition depot 'X' with these cartridge cases.

The Ministry added (November 1981) that 0.54 lakh fired cartridge cases (527 tonnes) were auctioned in March and July 1981 at the sale rates of Rs. 24,940 (type 'A'), Rs. 24,830 (type 'B') and Rs. 24,560 (type 'C') per tonne realising a sum of Rs. 1.24 crores and that the entire holding (5,449 tonnes) valued at Rs. 13 to 14 crores presently held with the depot was being auctioned through the Director General, Supplies and Disposals as no local bidder would be capable of taking such huge tonnage.

The case thus revealed that :

- without first exploring the utilisation of fired cartridge cases of three types either from the DGOF or any outside agency, instructions were issued to store them centrally at ammunition depot 'X', thereby resulting in an infructuous expenditure of Rs. 5.52 lakhs in respect of types 'A', 'B' and 'C' (6,821 tonnes) towards freight, handling, etc. ; and
- a huge stock of about 5,449 tonnes of fired cartridge cases (valued at Rs. 13 to 14 crores) had accumulated for over 7 years, disposal of which was yet (September 1981) to be made.

39. **Introduction of a new system of weapon training**

In order to modernise the method of training in field firing and to make it more realistic, the Army Headquarters (Army HQ) proposed (June 1970) a new system of electrically-controlled target mechanism (ETM) which was expected to result in an annual saving of Rs. 109 lakhs on ammunition, besides saving in training time.

In July 1970, the Ministry of Defence accorded sanction to the modification of 253 classification ranges and production of ETM equipment for introduction of the new method of weapon training under a phased programme (during 1970-71—1974-75) at a total cost of Rs. 185.24 lakhs (revised to Rs. 202.50 lakhs in January 1972) catering for ETM equipment (9,345 numbers : Rs. 79.44 lakhs), control panels (446 numbers : Rs. 6.24 lakhs) and modification of ranges (253 numbers : Rs. 116.82 lakhs). This included 271 sets of ETM equipment (8,130 numbers at 30 numbers each) and control panels plus reserve of 1,215 ETM equipment and 175 control panels. Besides, a recurring expenditure of Rs. 16 lakhs per annum on account of power consumption and maintenance staff for the ranges was also sanctioned.

The manufacture of ETM equipment and control panels was entrusted to an Army Base Workshop in November 1970 by a Central Ordnance Depot (COD) ; the manufacture was to be completed by the end of March 1975. Civil works for modification of the ranges were to be executed through the Military Engineer Services (MES).

A review of the progress of the project carried out by the Army HQ in January 1975 disclosed the following :

— 2,030 numbers of ETM equipment and 200 control panels had only been manufactured due to non-availability of requisite components/materials from suppliers ; and

— civil works for 117 ranges had been completed, those tor 10 ranges were expected to be completed by 31st March 1975 and Rs. 109 lakhs had already been spent on these 127 ranges ; and work had not commenced in the remaining 126 ranges.

The Army HQ observed (February 1975) that :

— in view of the paucity of funds, work on the modification of the existing ranges had not progressed as scheduled ; and

— there had been considerable delay in the provisioning of aluminium targets and maintenance spares for ETM equipment due to procedural bottlenecks and high cost of manufacture/procurement of stores.

Consequently, the Army HQ issued (February 1975) instructions that the project be stopped at the 127 ranges where civil works had been completed or were in progress and the manufacture of ETM equipment and control panels be restricted to 50 *per cent* of the sanctioned quantities.

ETM equipment and control panels : On receipt of instructions (of February 1975) from the Army HQ, the COD reduced the work order for the manufacture of ETM equipment and control panels. 3,540 ETM equipment (actual cost of Rs. 79.65 lakhs against the estimate of Rs. 26.18 lakhs showing an increase of 204 *per cent*) and 258 control panels (actual cost of Rs. 3.61 lakhs against the estimate of Rs. 2.19 lakhs showing an increase of 65 *per cent*) were manufactured by the Base Workshop during the period 1971-72 to 1977-78 and these were received in the COD during December 1971—November 1977. Out of these, 1,817 ETM equipment (cost : Rs. 40.88 lakhs) and 95 control panels (cost : Rs. 1.33 lakhs) were still lying in stock (March 1981).

As a result of curtailment of the scope of the project, orders for certain components placed on 5 firms by the Department of Defence Supplies during January 1972—March 1974 were short-closed (July—September 1975). One of the firms claimed compensation (Rs. 11.77 lakhs) on account of short-closure of the order. The matter was referred to arbitration in August 1976 and the arbitrator awarded (September 1977) a sum of Rs. 0.55 lakh in favour of the firm, which was paid on 7th July 1978.

The completion cost of modifications (civil works) actually carried out to 128 ranges (although the project was to be stopped at 127 ranges) amounted to Rs. 162.29 lakhs against the estimated cost of Rs. 59.10 lakhs (increase of 176 *per cent*). The increase in cost was attributed, besides price escalation, to modification in design ordered in June 1971 as the original design did not meet the required standard, cost of additional works not originally contemplated and non-availability of electric supply or low voltage. Thus, the total extra expenditure on 3,540 ETM equipment and 258 control panels and modification of 128 ranges over the estimated cost amounted to Rs. 158.08 lakhs.

Against work orders for manufacture of 1,52,695 aluminium targets placed by the COD on the Army Base Workshop during January 1974—April 1976, 1,49,265 targets were manufactured (up to November 1978) at a cost of Rs. 17.91 lakhs met out of the COD's normal grant. Out of these, 69,771 targets (value : Rs. 8.37 lakhs) were still held in stock (March 1981).

The COD was responsible for the procurement/stocking of maintenance spares of ETM equipment for issue to the workshops/user units. Consequent on reduction in the original scope of the project by 50 *per cent* (in February 1975), spares to the extent of Rs. 4.98 lakhs were rendered surplus (31st March 1981).

The Ministry of Defence stated (December 1979, August 1981 and November 1981) that :

- escalation in cost of ETM equipment, control panels and modification of ranges was a natural phenomenon ;
- the balance stock of ETM equipment and control panels held in the COD was due to reduced demands from the user units ; and

— ETM equipment and control panels were issued for all the 128 ranges (where a total of 131 sets of ETM equipment were installed) which were functional and the purpose of training was being fully served.

The following are the main points that emerge :

— The excess expenditure (over the sanctioned estimates) due to escalation in cost on manufacture of ETM equipment, control panels and modification of ranges amounted to Rs. 158.08 lakhs, which had not been regularised (March 1981) by Government.

— 1,817 ETM equipment (value : Rs. 40.88 lakhs) and 95 control panels (value : Rs. 1.33 lakhs) manufactured were lying in stock (March 1981) with the COD.

— 69,771 aluminium targets manufactured (value : Rs. 8.37 lakhs) were still held in stock (March 1981).

— Against the minimum requirement of 3,930 ETM equipment for 131 sets (at 30 numbers each) installed at 128 ranges actually commissioned (at 30 numbers each), only 1,723 numbers (out of 3,540 numbers manufactured) were issued up to March 1981. Thus, the modified ranges have been equipped with ETM equipment to the extent of about 44 *per cent* of that envisaged in the scheme and are yet stated to be functional. This is indicative of the fact that requirements were over-estimated at the time of framing the scheme and were not reviewed even when the scope of the scheme was curtailed in February 1975, thereby resulting in an avoidable expenditure of Rs. 50.59 lakhs on the excessive manufacture of various items of equipment.

CHAPTER 8

AIR FORCE

40. Spares of aero-engines rendered surplus

In October 1975, an Air Force Equipment Depot carried out a provisioning review for determining the quantum of spares required by a Base Repair Depot for the overhaul of aero-engines of a particular type of helicopter. This review was based on the repair task of 148 overhauls for 5 years (1976-77 to 1980-81), which was notified (October 1975) by the Air Headquarters (Air HQ) with the approval of the Ministries of Defence and Finance (Defence).

On the basis of the above review, the Air HQ placed (January 1976) an indent on a foreign supplier for the supply of 196 items of spares at a total estimated cost of Rs. 30.05 lakhs. The supplier, however, agreed (11th October 1976) to supply only 180 items (including 162 items at enhanced cost) at a total cost of Rs. 96.91 lakhs. The escalation in cost was attributed to (i) items in question being out of production and have to be produced specially against the order and (ii) considerable increase in prices in the international market. At the instance of the Air HQ, the Equipment Depot carried out a special review of 67 (out of 162) items offered by the supplier at enhanced cost and suggested (December 1976) cancellation of 9 items and reduction in the quantities of 2 items. However, on a further review (February 1977) of the requirements of spares in the light of the current task of 123 overhauls for the period 1977-78 to 1981-82 (which had meanwhile been approved and notified on 5th October 1976), the Air HQ cancelled 7 items and effected reduction in quantities of 13 items. The estimated value of the reduced indent (taking into account escalation in cost) worked out to Rs. 78.09 lakhs.

Contract for only 158 items was concluded (April 1977) at a cost of Rs. 79.44 lakhs. All the items contracted had been supplied by May 1978 except one item (partly) valuing Rs. 0.34 lakh, the cancellation of which was taken up with the supplier in June 1980.

Out of the spares valued at Rs. 79.10 lakhs supplied, spares valued at Rs. 33.13 lakhs only could be utilised on the overhaul of 24 aero-engines during 1977-78 to 1980-81 (October 1980) as against the approved task of 108 (out of 123) overhauls, thereby rendering spares valuing Rs. 45.97 lakhs surplus. The shortfall was attributed by the Air HQ to the non-availability of certain other critical/essential spares.

Meanwhile, the Air HQ had decided (January 1980) to phase out the helicopter from 31st August 1981 and the phasing out plan was issued (June 1980) accordingly.

Thus, an over-assessment of the task of overhauling aero-engines resulted in spares, valued at about Rs. 46 lakhs, being rendered surplus to requirements with little possibility of their being utilised in future in view of the phasing out of the helicopter from 31st August 1981.

41. **Inordinate delay in sanction of a project**

In September 1965, the Ministry of Defence sanctioned the formation of an Air Force Unit (unit 'X') at station 'A' in an Air Command on temporary basis. Pending finalisation of its permanent location, the unit was accommodated in buildings allotted by the Central Public Works Department (CPWD). The need for the location of the unit on a permanent basis in this Command was accepted by the Ministry in October 1965. In December 1967 *i.e.* after 2 years, it was decided to locate the unit (on a permanent basis) at station 'B' in the same Air Command.

In July 1968, the Ministry accorded *ex-post facto* sanction to the hiring of 196 CPWD quarters (including 4 garages) on rental basis from October 1965 to December 1968 or till unit 'X' remained at station 'A', whichever was earlier, for accommodating the officers and airmen of the unit. In April 1970, sanction was accorded by the Ministry to the acquisition of 605 acres of requisitioned/hired land at a cost of Rs. 58 lakhs for meeting the permanent requirements of unit 'X' as well as another unit 'Y' at station 'B' (where unit 'Y' was already located). Against this, 552.5 acres of land was processed for acquisition; of which 469 acres were acquired at a cost of Rs. 65.02 lakhs in March and June 1971, another 72.5 acres were acquired in December 1980 and the balance 11 acres were in the process of acquisition (January 1982).

In October 1970, a Board of Officers assessed the works services for units 'X' and 'Y' at station 'B'. However, pending approval of permanent Key Location Plan (KLP) for unit 'X', the recommendations of the Board were not progressed.

In the meantime, the Air Headquarters explored the possibilities of locating unit 'X' at another station 'C' (instead of station 'B'), but it was finally decided (August 1973) to locate this unit permanently at station 'B' as it was found that adequate/suitable land was not available at station 'C'. Thereafter, the Ministry accorded (January 1974) sanction to the location of unit 'X' at station 'B' on a permanent basis and for its continuance at station 'A' till it moved to its permanent location.

A second Board of Officers was held (February 1975) to plan works services for locating units 'X' and 'Y' at station 'B'. No action on the recommendations of this Board was, however, taken as the feasibility of locating unit 'Y' at another station 'D' was being explored. It was ultimately decided in August 1976 that both the units 'X' and 'Y' would be located permanently at station 'B'.

A third Board of Officers was held in January 1978 to decide the phasing of the project. Thereafter, pending finalisation of the project estimates, a 'go-ahead' sanction for Rs. 10 lakhs was accorded (November 1978) by the Ministry for provisioning, advance planning, collection of stores, site clearance, etc. of works services for the provision of administrative, technical, storage and domestic accommodation. The overall cost of the project was estimated at Rs. 350.95 lakhs in March 1980 and the work was expected to be completed in phases. Phase I of the project costing Rs. 131.32 lakhs was approved by the Ministry in February 1981 and was expected to be completed in about 4½ years.

During the intervening period continued hiring of the CPWD quarters at station 'A' was sanctioned from time to time; the last sanction covering the period up to 31st December 1981 was issued in May 1981. Hiring of furniture for unit 'X' from November 1965 to July 1972 involving expenditure of Rs. 1.29 lakhs was also sanctioned from time to time.

Moreover, the delay of nearly 11 years in finalisation of the permanent location of unit 'X' resulted in 469 acres of land acquired at station 'B' during March-June 1971 at a cost of Rs. 65.02 lakhs remaining unutilised for about 9 years.

Pathak

NEW DELHI (G. N. PATHAK)

Dated the 27 FEB 1982 *Director of Audit, Defence Services.*

Countersigned

Prakash

NEW DELHI (GIAN PRAKASH)

Dated the 27 FEB 1982 *Comptroller and Auditor General of India.*

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