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REPORT OF THE

COMPTROLLER AND AUDITOR GENERAL OF INDIA

FOR

THE YEAR 1977-78

UNION GOVERNMENT (DEFENCE SERVICES)

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PREFATORY REMARKS

This Report has been prepared for submission to the President under Article 151 of the Constitution. It relates mainly to matters arising from the Appropriation Accounts of the Defence Services for 1977-78 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 1977-78 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 1977-78 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 1978 with the amount of original and supplementary appropriations and grants for the year :

(Rs. in crores)

(i) Charged Appropriations	
Original	*0.43*
Supplementary	*0.10*
Total	*0.53*
Actual Expenditure	*0.49*
Saving	*0.04*
	(per cent)
Saving as percentage of the total provision	7.5

(Rs. in crores)

(ii) Voted Grants	
Original	2923.06
Supplementary	34.54
Total	2957.60
Actual Expenditure	2812.72
Saving	144.88
	(per cent)
Saving as percentage of the total provision	4.9

2. Supplementary Grants/Appropriations

(a) Supplementary grants aggregating Rs. 34.54 crores were obtained in March 1978 as under :

(Rs. in crores)

Grant	
23—Army	9.54
26—Pensions	25.00
TOTAL	34.54

Grant No. 23—*Army* : The original grant of Rs. 1782.93 crores was increased—through a supplementary grant of Rs. 9.54 crores—to Rs. 1792.47 crores. The actual expenditure was, however, Rs. 1741.45 crores, resulting in a saving of Rs. 51.02 crores (2.8 *per cent* of the total grant). The entire supplementary grant of Rs. 9.54 crores thus proved unnecessary. A sum of Rs. 31.54 crores was, however, surrendered on 31st March 1978.

Grant No. 26.—*Pensions* : The original grant of Rs. 111.45 crores was increased—through a supplementary grant of Rs. 25.00 crores—to Rs. 136.45 crores. The actual expenditure during the year was, however, Rs. 138.07 crores, resulting in an excess of Rs. 1.62 crores (1.2 *per cent* of the total grant).

(b) Supplementary appropriations aggregating Rs. 9.65 lakhs—'Army' (Rs. 4.20 lakhs), 'Pensions' (Rs. 0.45 lakh) and 'Capital Outlay on Defence Services' (Rs. 5 lakhs)—were obtained in March 1978 to meet the anticipated increase in payments in satisfaction of Court decrees.

Against the total appropriation of Rs. 35.00 lakhs under 'Capital Outlay on Defence Services', the expenditure came to Rs. 29.76 lakhs, resulting in a saving of Rs. 5.24 lakhs; thus the entire amount of supplementary appropriation of Rs. 5.00 lakhs proved unnecessary.

3. Excess over Charged Appropriation and Voted Grant requiring regularisation

The following excess over *Charged Appropriation*/Voted Grant requires regularisation under Article 115 of the Constitution :

	Total Appropriation/Grant	Actual Expenditure	Excess
	Rs.	Rs.	Rs.
Charged Appropriation			
23—Army	*14,00,000*	*15,86,990*	*1,86,990*

The excess was due to larger payments than anticipated in satisfaction of Court decrees.

	Rs.	Rs.	Rs.
Voted Grant			
26—Pensions	136,44,52,000	138,06,98,413	1,62,46,413

The excess was due to more payments than anticipated, mainly on account of additional relief sanctioned to pensioners with effect from 1st Septemder 1977.

4. Savings in Voted Grants

The actual savings in four Voted Grants amounted to Rs. 146.50 crores as under, whereas surrenders aggregating Rs. 87.15 crores only were made on 31st March 1978 :

(Rs. in crores)

Grant	Total Grant	Actual Expenditure	Saving		Surrenders	
			Amount	*per cent*	Amount	*per cent*
23—Army	1792.47	1741.45	51.02	2.8	31.54	1.8
24—Navy	187.55	158.61	28.94	15.4	14.35	7.7
25—Air Force	566.05	527.00	39.05	6.9	24.36	4.3
27—Capital Outlay on Defence Services	275.08	247.59	27.49	10.0	16.90	6.1
TOTAL	2821.15	2674.65	146.50		87.15	

5. Control over expenditure

The following are some instances of defective budgeting :

(a) Instances in which supplementary grants were utilised only partially :

(Rs. in crores)

Grant / Sub-Head	Original Grant	Supplementary Grant	Total Grant	Actual Expenditure	Saving Amount	Extent to which not utilised (*per cent*)	Amount reappropriated
26—Pensions							
A. 2—Navy							
(*i*) Pensions and other Retirement Benefits	3.15	1.61	4.76	3.88	0.88	55	(—)0.33
A.3—Air Force							
(*i*) Pensions and other Retirement Benefits	5.21	3.54	8.75	6.24	2.51	71	(—)0.81

(b) Instances in which reappropriations made were wholly or partially unnecessary :

(Rs. in crores)

Grant / Sub-Head	Sanctioned Grant	Amount reappropriated	Final Grant	Actual Expenditure	Excess(+) Saving(—)
23—*Army*					
A.4—Transportation	48.57	(+)13.16	61.73	54.65	(—)7.08
A.11—Other Expenditure	37.43	(+)3.02	40.45	38.13	(—)2.32
25—*Air Force*					
A. 6—Works	28.54	(+)4.36	32.90	29.73	(—)3.17
27—*Capital Outlay on Defence Services*					
A.1—Army					
(*i*) Land	10.25	(—)1.12	9.13	10.57	(+)1.44

(c) Instances in which there was an appreciable shortfall in expenditure compared to the Sanctioned/Final Grant :

(Rs. in crores)

Grant / Sub-Head	Sanctioned Grant	Amount reappropriated/ surrendered	Final Grant	Actual Expenditure	Saving compared to Sanctioned Grant	Saving compared to Final Grant
23—*Army*						
A.9—Stores	403.50	(—)26.22	377.28	369.68	33.82	7.60
24—*Navy*						
A.5—Stores	102.78	(—)13.50	89.28	74.00	28.78	15.28
25—*Air Force*						
A.5—Stores	383.76	(—)30.21	353.55	342.20	41.56	11.35
27—*Capital Outlay on Defence Services*						
A.4—Ordnance Factories						
(1) Works	17.35	(—)4.95	12.40	11.19	6.16	1.21
(2) Machinery and Equipment	48.71	(—)7.08	41.63	37.53	11.18	4.10

CHAPTER 2

ORDNANCE AND CLOTHING FACTORIES

6. Manufacture of an ammunition

Mention was made in paragraph 4 of the Audit Report, Defence Services, 1969 about setting up of facilities in ordnance factories for indigenous manufacture in collaboration with a foreign firm of a weapon and related ammunition—types 'A' and 'B'. It was stated therein that while the production of type 'A' ammunition had commenced in August 1963, bulk manufacture of type 'B' ammunition commenced only in June 1967 and that since imported type 'B' ammunition was found to be defective, it was decided in March 1968 to suspend further production of type 'B' ammunition after manufacture of quantities, for which components had been imported. The defect was attributed to basic design characteristics.

Further progress made in the manufacture of the weapon and the ammunition was as follows :

Weapon

Production of the weapon commenced by the end of 1962. Although an annual production of 240 numbers of the weapon in two ten-hour shifts was envisaged, orders totalling 439 numbers only were placed on the Director General, Ordnance Factories (DGOF) till April 1970. Thereafter, no further order was placed and reasons therefor were awaited from the Ministry of Defence (January 1979). The supplies against the orders were completed during 1974-75. The maximum production achieved was 91 numbers in the year 1964-65.

Ammunition : Type 'A'

The factories concerned for production of empty shell, fin assembly and fuze for the ammunition, capacity created in each factory and production actually achieved by them were as follows :

Component	Factory	Capacity created (in lakhs per annum in 2x10 hour shifts)	Period of manufacture	Quantity manufactured (in lakhs)	Average manufacture per annum (in lakhs)
Empty shell .	'Q'	1.80	1964-65 to 1977-78	3.93	0.28
	'M'	9.60	1964-65 to 1977-78	4.22	0.30
Fin assembly	'M'	7.20	1969-70 to 1977-78	2.77	0.31
Fuze	'R'	1.80	..	..	..

(Capacity for production of 1.80 lakh empty shell bodies per annum in two ten-hour shifts was created at factory 'Q' in 1962 with existing facilities and by procuring a few balancing plants. After 1962, the capacity was partly diverted for production of other items.)

Empty shell

The production of empty shell was seriously affected in factory 'M' due to procurement of a defective shell forge plant (cost : Rs. 88.31 lakhs) from a foreign supplier, as mentioned in paragraph 16 of the Report of the Comptroller and Auditor General of India for the year 1975-76, Union Government (Defence Services), and bottlenecks in machining empty shells as the performance of imported induction heating plants (cost : Rs. 48.81 lakhs) was not satisfactory. The induction heating plants comprising four units—two for partial heating for bottling and the other two for heat treatment—were received in the factory in 1966-67. The former two were commissioned in 1968, but the others got badly damaged during ocean transit and the supplier was not held responsible. Although one of them was commissioned in 1973, the other was commissioned only in August 1978 after replacement of certain parts. The capacity for production of empty shell at factory 'Q' was created out of its surplus capacity by providing certain balancing plant, but after 1962, this capacity was only partly available.

The Ministry of Defence stated (February 1979) that a suit was filed against the supplier of the defective shell forge plant, but it had been dismissed. The Ministry added that proposals for rectifying the plant were under consideration. Thus, the plant (cost : Rs. 88.31 lakhs) procured in 1963 had not been functioning satisfactorily.

Fin assembly

The low production of fin assembly was attributed by factory 'M' to non-availability of imported steel sheets, rigidity of inspection, etc. Besides, an automatic spraying machine (cost : Rs. 7.23 lakhs) procured in 1972 on an operational indent and erected in December 1973 had not been taken over so far (January 1979) by the factory pending rectification of defects by the supplier firm. Meanwhile, operations, for which the plant was procured had to be performed by hand labour which affected the rate of production.

Fuze

The production of fuze 'X', which was authorised for both types 'A' and 'B' ammunition, could not be established due to frequent changes in planning its production, as mentioned in paragraph 5 of Annexure III to para 14 of the Appropriation Accounts of the Defence Services for 1973-74. Government had sanctioned from time to time creation of facilities for manufacture of fuze 'X' at factory 'Q' (capacity : 1.80 lakhs per annum), at factory 'R' (capacity : 9.60 lakhs per annum), and at factory 'T' (capacity : 9.60 lakhs per annum) in May 1962, May 1964 and October 1966 respectively but the facilities were not created in any of these factories as :

— load at factory 'Q' increased after 1962,

— Army preferred a less expensive fuze 'Y', production facilities for which were already available in the ordnance factories, for type 'A' ammunition, and

— production of type 'B' ammunition was suspended in 1968.

Later on, the Army changed its decision on use of fuze 'Y' for type 'A' ammunition and it was decided in 1972 to establish manufacture of fuze 'X' at factory 'R' as the latter was considered superior in its performance to the former. The production of fuze 'X' was, however, yet to be established (January 1979). The Ministry of Defence stated (February 1979) that the capacity for manufacture of fuze 'X' could not be established due to technical problems which had since been sorted out and that the capacity would be set up shortly.

Meanwhile, the requirement for type 'A' ammunition was being met by fuze 'Y' from factory 'P'. In February 1976, the Army placed an embargo on the use of this fuze and consequently the production of type 'A' ammunition was adversely affected during 1976-77 and 1977-78. Besides, filled and empty fuze 'Y' worth Rs. 23.30 lakhs became surplus to requirement. To avoid financial repercussions, the Army had agreed (September 1978) to accept these surplus fuzes with type 'A' ammunition.

To meet the requirement of fuze 'X', an order was placed on trade in August 1973 for 50,000 numbers empty fuze (cost : Rs. 26.25 lakhs). Three other orders were placed on indigenous firms during August 1977 to December 1977 for 45,000 numbers (prices were yet (November 1978) to be fixed). Besides, a contract had been concluded by a Supply Mission abroad in November 1977 for import of 50,000 filled fuzes (cost : Rs. 125.68 lakhs). The supplies against all the orders were yet to materialise (November 1978).

Propellant

A project was sanctioned in May 1969 for creation of facilities at factory 'Z' for manufacture of authorised propellant for the ammunition. The project was originally expected to be completed by May 1974 and production established by May 1975. However, supply of the authorised propellant could be made by factory 'Z' only from 1976-77 after the trial lots were accepted by the Inspectorate in August 1976. Meanwhile, the requirement of propellant till 1975-76 was met by an alternative propellant which was developed by the Research and Development Organisation and production of which was entrusted to factory 'N'.

Filling and assembly

A capacity for filling and assembly of 10.20 lakhs of ammunition per annum in two ten-hour shifts (1.80 lakhs at factory 'P' and 8.40 lakhs at factory 'S') was sanctioned (May 1962 and November 1964). The Ministry of Defence stated (February 1979) that the capacity at factory 'S' had been reassessed at 0.60 lakh per annum.

As against the annual requirement of about 11 lakhs of type 'A' ammunition indicated in 1964, the Army had placed orders only for 8.45 lakhs on the DGOF till April 1972 (to be supplied by 1975-76) and another order for 0.14 lakh in February 1978. Though the quantity ordered constituted a small portion of the capacity created, factory 'P' had supplied 6.27 lakhs during 1963-64 to 1977-78 and factory 'S' 0.24 lakh during 1971-72 to 1975-76. There was no order on factory 'S' since 1976-77.

Ammunition numbering 75,000 produced by factory 'P' during 1969 to 1971 using fins imported from a foreign firm and alternative propellant manufactured by factory 'N', which was found to be unfit for operational use, was reserved for training purposes. After subsequent review, 53,006 numbers were cleared for operational purpose, the remaining 21,994 numbers to be used as practice ammunition. These (75,000 numbers) were issued to the Services by 1971-72.

In 1973, there were premature bursts of the ammunition resulting in serious accidents. After investigation, the premature bursts were attributed to defective fin bursting on firing due to high pressure developed by the indigenous propellant. It was, therefore, decided to modify the fins by drilling additional holes to allow dissipation of the pressure created by the propellant. In September 1976, Government had sanctioned Rs. 0.50 lakh for procurement of necessary accessories to enable the stock holding depots to undertake modification of 2,52,400 numbers of the ammunition (66,000 numbers fitted with imported fins and 1,86,400 numbers fitted with indigenous fins manufactured by factory 'M' valued at Rs. 692 lakhs), out of 4,77,191 numbers supplied by factory 'P' till March 1972. The modification would cost about Rs. 11.74 lakhs.

Ammunition : Type 'B'

In accordance with the decision taken in 1968, it was planned to manufacture only 24,210 numbers of this ammunition with the matching sets of imported components. Production of the ammunition commenced in 1969-70 and 3,210 numbers were issued during the year. There was no further production of this ammunition since performance of one of the imported components was found to be unsatisfactory. It was decided in February 1976 to supply the remaining 21,000 numbers as type 'A' ammunition. The financial repercussion due to short closure of the orders for this ammunition was Rs. 14.14 lakhs. In addition, 1,794 shell bodies of this ammunition valued at Rs. 2.60 lakhs were rejected in November 1977 as these were found to have been defective. The Ministry of

Defence stated (February 1979) that certain plant and machinery purchased for type 'B' ammunition would be utilised for alternate purpose by procuring balancing plant.

In paragraph 1.110 of its 119th Report (Fourth Lok Sabha—1969-70) the Public Accounts Committee, after considering paragraph 4 of the Audit Report, Defence Services, 1969, recommended speedy finalisation of the arrangements for rectification of the defective type 'B' ammunition. For rectification of the defective ammunition, an agreement was concluded with the foreign firm in July 1970. In accordance with the agreement, the firm had modified 55,000 numbers of ammunition at its own cost, but did not supply the components and render technical assistance for modification of further 1.03 lakhs of ammunition which were to be supplied free of cost. As the shelf-life of the unmodified ammunition was going to expire, these were put to use as type 'A' ammunition in accordance with a decision taken in 1974 and this had involved a loss of Rs. 483.32 lakhs on account of difference in price between the two types of ammunition. In December 1977, the Ministry of Defence had requested the High Commission of India, United Kingdom to negotiate with the firm for recovery of this amount as well as Rs. 86.41 lakhs which were due to Government on account of liquidated damages (Rs. 85.35 lakhs) for delayed supplies of ammunition and components and cost of facilities provided during modification of 55,000 numbers of ammunition (Rs. 1.06 lakhs). The Ministry had added that the firm should also be asked to compensate for non-supply of components which it had agreed to supply free of cost. The recovery was yet to be effected (November 1978).

Summing up

The following are the main points that emerge :

— unmatched capacities were created for production of the ammunition and its components;

— the capacities created for components as well as filling and assembly of the ammunition remained largely unutilised since commencement of production;

— the performance of costly plants—shell forging plant (cost : Rs. 88.31 lakhs), induction heating plants (cost : Rs. 48.81 lakhs) and automatic spraying machine (cost : Rs. 7.23 lakhs) was unsatisfactory since their commissioning and this had affected the production of empty shell and fin assembly adversely;

— due to frequent changes in planning, the production of fuze 'X' could not be established even after 15 years of commencement of production of the ammunition and consequently import of the fuze had to be arranged in 1977 at Rs. 125.68 lakhs, the authorised propellant could be made available only from 1976-77 and till that time, the requirement of propellant was met by an indigenous substitute;

— out of 4.77 lakhs type 'A' ammunition supplied by factory 'P' till March 1972, 2.52 lakhs were found defective and required rectification at an estimated cost of Rs. 11.74 lakhs; and

— Government had been put to a loss of Rs. 483.32 lakhs due to use of type 'B' ammunition as type 'A' ammunition as the foreign firm had not supplied necessary components and rendered technical assistance to rectify their defects.

7. Delay in implementation of a project

In 1964, it was decided to develop a new equipment for replacement of the existing one which had almost outlived its utility and suffered from certain limitations with reference to the changed requirements of the Services. A development team was constituted in September 1965 for a period of three years to develop part 'X' of the equipment and Rs. 0.80 crore was sanctioned for the purpose. Parts 'Y' and 'Z' of the equipment were planned to be manufactured by the Director General, Ordnance Factories (DGOF) under licence from a foreign Government. After Indo-Pak conflict in September 1965, it was decided to take up indigenous development of parts 'Y' and 'Z' also; their design and development were planned to be done for part 'Y' by an ordnance factory in consultation with the development team and for part 'Z' by the Research and Development Organisation (RDO) and the development team simultaneously.

Development

Qualitative requirement for the equipment laid down by the Services in December 1966, *inter alia,* stipulated the desired weight and range of unit 'K' (consisting of parts 'X' and 'Y') of the equipment. The weight of the prototypes of unit 'K' developed by 1968 exceeded the desired weight by about 42 *per cent.* The design developed was termed as model 'P' and it was decided (December 1968) to reduce the weight of model 'P' to the extent possible within the existing design and to undertake a fresh design of part 'X' to be termed as model 'Q' in view of the emphasis of the Services for a lighter equipment with better mobility.

Accordingly, development of model 'P' continued within the existing design and after necessary rectifications and modifications the performance of the modified model 'P' was found (September 1971) to be satisfactory, but its weight, which was still 23 *per cent* higher than the desired weight, was considered excessive. However, as it was considered that further reduction in weight would affect the functioning and efficiency of the equipment, it was accepted in December 1971 for introduction into service in limited quantities.

Meanwhile, after trials during August to December 1967 of the items of part 'Z' of the equipment developed simultaneously by the RDO and the development team, it was decided (May 1968) to accept the designs developed by the latter and the projects of development undertaken by the RDO were shortclosed. Three varieties of part 'Z' developed by the development team were put to user trials during October 1970 to November 1971 and accepted for introduction into service during January to April 1972. The development of model 'P' and part 'Z' was, however, treated as closed in December 1975 after incurring expenditure of Rs. 3.18 crores against revised sanction (April 1971) of Rs. 2.00 crores (Rs. 0.80 crore originally sanctioned in September 1965 was increased to Rs. 2.00 crores in April 1971 to cover additional development works entrusted to the development team).

As model 'P' did not meet the requirement of the Services fully, the development of model 'Q' was approved in principle by Government in December 1972. However, the qualitative requirement of the latter was finalised by the Services only in April 1974 stipulating, *inter alia,* reduction in the weight of model 'P' as developed by about 40 *per cent* and for its development work, Rs. 4.29 crores were sanctioned by Government only in April 1976. The Ministry of Defence stated (December 1976) that model 'Q' embodied many new and sophisticated design features and the feasibility of undertaking it had to be studied in depth before Government sanction could be issued. The development of model 'Q' was expected to be completed by April 1980 and the life of the development team which was engaged in the development of model 'P' had been extended (April 1976) for the duration of the project.

Planning of production

Unit 'K'—Parts 'X' and 'Y' : In October 1971, Government sanctioned Rs. 46.48 crores (increased to Rs. 54.96 crores in August 1974 and further to Rs 77.69 crores in April 1977) for establishment of facilities in ordnance factories 'A', 'B' and 'C' for production of unit 'K' at the rate of 20 numbers per month together with 25 *per cent* spares in two shifts of 10 hours each. Besides, capacity for production of a major spare of the unit (item 'N') at the rate of 7 numbers per month in a single shift of 8 hours was provided. The production of the main parts was planned in factory 'A' for part 'X', in factory 'B' for a component for part 'X' and in factory 'C' for part 'Y' and spare 'N'. The assembly of parts 'X' and 'Y' of the unit was to be done in factory 'A'.

The total time envisaged for completion of civil works, procurement of plant and machinery and their installation and commissioning was 4 years from the date of issue of Government sanction and bulk production of unit 'K' was expected to commence from October 1976. The Services had programmed replacement of the old equipment by the new equipment by 1980-81 commencing from 1974-75; due to its urgent requirement, it was decided (August 1971) to arrange trickle production of the unit at the rate of 2 numbers per month from 1973-74 utilising part of the capacity already created for another equipment at factories 'A', 'B' and 'D'.

Part 'Z' : The Department of Defence Production stated (August 1971) that :

— the capacity for the production of part 'Z' had already been provided separately in two new factories and that the production capacity set up was 0.40 lakh per month, and

— the bulk production of one variety of part 'Z' was expected to commence from 1971-72 and the designs for other varieties were expected to be cleared shortly.

Execution of the project

Civil works : Though the project was sanctioned in October 1971, administrative approval was accorded late for the production shops in the three factories on dates indicated below alongwith their probable and actual dates of completion :

Factory	Month of issue of administrative approval	Probable date of completion as indicated by the Military Engineer Services	Month of actual completion	Month of actual take over
'A'	September 1972	September 1975	December 1975	May 1976
'B'	July 1972	October 1974	October 1975	October 1975
'C'	Phase I—June 1973	September 1975 to December 1975	April 1977	October 1977
	Phase II—September 1974	February 1976 to November 1976	April 1977 to April 1978	April 1978
	Phase III—December 1974	January 1976 to August 1976	March 1977 to February 1978	*

*(The buildings constructed at factory 'C' under phase III were in the process of take over in January 1979).

There was considerable delay in the issue of administrative approval for civil works required at factory 'C' mainly due to the following reasons :

(i) the civil works were initially planned to be executed by a public sector undertaking. But as its charges were found to be high, it was decided in May 1972 to entrust the work to the Military Engineer Services; and

(ii) the estimated cost of civil works sanctioned in October 1971 (Rs. 3.41 crores) was found to be totally inadequate and was revised from time to time to Rs. 4.48 crores in January 1974, Rs. 12.38 crores in August 1974 and Rs. 16.86 crores in April 1977. The Ministry of Defence stated (February 1979) that the estimated cost of civil works at factory 'C' had increased due to works found necessary consequent to delinking of common services from another project, additional works not included in the original project, increase in cost of railway works etc.

Plant and machinery.—The position regarding procurement of plant and machinery, their erection and commissioning at the end of June 1978 in the three factories was as follows :

	Factory 'A'	Factory 'B'	Factory 'C'
		(in numbers)	
Plant and machinery			
(*a*) provided in the sanction .	440	97	562
(*b*) required as per revised assessment . . .	358	104	517
(*c*) ordered . . .	354	104	468
(*d*) received	328	103	270
(*e*) erected	316	103	186
(*f*) commissioned . . .	316	103	170

Orders for plant and machinery pertaining to factory 'A' and factory 'B' were placed commencing from 1971. Bulk of the machinery required by factory 'A' (233 numbers) and all machinery required by factory 'B' were ordered by September 1974. For factory 'C' orders were, however, placed mainly from 1974. Although all the plant and machinery were to be erected and commissioned by September 1975 as per planning made while sanctioning the project, 73 machines for factory 'A' (20 per cent) and 384 machines for factory 'C' (74 per cent) were not ordered till then. The Ministry of Defence stated (December 1976) that procurement was planned to ensure synchronisation of arrival of the machinery in the factories only when workshops/buildings were ready to house them. However, the civil works in factory 'A' were actually completed in December 1975 and taken over in May 1976 but 32 machines (9 per cent) remained to be ordered till March 1976. In factory 'C', the civil works for Phase I were taken over in October 1977 and those for Phases II & III were then in advanced stage of completion, but orders for 142 machines (27 per cent) remained to be placed by the end of September 1977. Meanwhile, there was increase in the cost of plant and machinery. While the sanctioned estimate in respect of factory 'A' was reduced from Rs. 13.35 crores to Rs. 12.27 crores due to savings arising from reduction in total number of plant and machinery required as compared to that provided for in the project sanction and the increase in the estimate of factory 'B' was from Rs. 2.13 crores to Rs. 2.22 crores, the increase in estimate for factory 'C' was from Rs. 26.17 crores to Rs. 43.98 crores in April 1977 inspite of reduction in the number of machines from 562 to 517 in the revised assessment. The Ministry of Defence stated (February 1979) that the rise in the cost of machines at factory 'C' was due to exchange differential, customs duty and escalation in the international market after energy crisis etc.

Progress of production

Unit 'K'—Parts 'X' and 'Y' : In order to meet urgent requirement of the Services, trickle production of unit 'K' commenced from 1973-74 with the existing facilities available in the ordnance factories. Although the new facilities sanctioned in October 1971 had come up in factories 'A' and 'B' for production of part 'X' and its component, facilities for production of part 'Y' had developed partly at factory 'C' (January 1979). In factory 'C' while the machining capacity had come up, forging capacity was yet to come up (January 1979) due to delay in :

- completion of civil works for melting shop, forging shop and heat treatment shop, and
- receipt/erection of required machines.

The forging facilities were expected to be available at factory 'C' only from May 1979. Meanwhile, to meet the requirements for forgings, apart from orders placed on other factories, orders for import of 100 sets of forgings for a major component of part 'Y' and 100 sets of forgings for various other items for the same part were placed on a foreign firm in March 1977 and

November 1977 respectively at a total cost of Rs. 0.48 crore. Besides, import of 79 forgings for the major component at an estimated cost of Rs. 0.27 crore was in process (November 1978). Till the forging capacity developed in factory 'C', the machining capacity already created in the factory would remain partly unutilised. In 1977-78, for the first time, the factory had machined 18 forgings of the major component which it obtained from factory 'D'.

Part 'Z' : Facilities for production of part 'Z' were sanctioned separately as follows :

Date of sanction	Factory	Components to be produced/activity	Capacity sanctioned in number
November 1964	'E'	Components I and II —finishing	40,000 of each component per month in two shifts of ten hours each
October 1966	'F'	Components I and II (except finishing operations at factory 'E')	40,000 of each component per month in two shifts of ten hours each

(According to the Ministry of Defence the available capacity at factory 'E' for components I and II was 12,500 numbers and 15,000 numbers respectively per month in one ten-hour shift).

After the design of another component (component III) was finalised, it was decided in 1970 to include its production also in factory 'F' at the rate of 60,000 numbers per month (20,000 numbers for other equipment) in two shifts of ten hours each.

Of the three main varieties of part 'Z', which were accepted for introduction into service in 1972 as stated earlier, only one variety had been taken up for bulk production. The production of components I and II for this variety commenced in factory 'F' during 1973-74 and 1974-75 respectively. Against the capacity of 4.80 lakhs per annum for each component, factory 'F' had, however, supplied only 1.69 lakhs of component I and 2.53 lakhs of component II from 1973-74 to 1977-78. The manufacture of component III was yet to be established (January 1979). Pending its establishment, an alternative component manufactured in another factory was being used

While planning the establishment of factory 'F', it was decided in 1964 to include facilities for manufacture of brass strips for production of blanks required for component II. These facilities were, however, not sanctioned and the brass blanks required by factory 'F' for production of component II were being obtained from factory 'G'. But as the strip making facilities at factory 'G' were limited, an order was placed on firm 'M' in July 1977 for 2,000 tonnes (increased to 3,200 tonnes in August 1978) of brass strip which was to be produced from fired cartridge cases to be supplied by factory 'G'. Firm 'M' was to be paid provisionally conversion charge at Rs. 6.25 per kilogram (firm rate to be fixed later) as against the offer of firm 'M' for Rs. 8.50 per kilogram. Against the order, the firm had supplied 2,379 tonnes of brass strips till 25th November 1978. Exclusive of sales tax, if any, payable, extra expenditure of Rs. 1.61 crores (with reference to the cost of Rs. 1.93 per kilogram incurred by factory 'G' during 1976-77 in the manufacture of strips from scraps) was involved in the procurement of 3,200 tonnes of strips from trade. In August 1978 only, Government had accorded sanction for augmenting the capacity of factory 'G' for brass melting and strip making at a cost of Rs. 3.94 crores.

As against the expectation of commencing production of one variety of part 'Z' from 1971-72, finishing of its component I commenced in 1973-74 and of component II in 1974-75 in factory 'E'. The factory had supplied 2.07 lakhs of component I and 2.19 lakhs of component II till March 1978. Although production in this factory was far below the capacity created, finishing of components I and II of part 'Z' was entrusted to factory 'H' also. Factory 'H' had supplied 0.78 lakh of component I and 0.55 lakh of component II during 1973-74 to 1977-78.

Progress made in meeting Service orders

Unit 'K'.—Against the assessed requirement of 900, the Services had placed orders on the DGOF for 595 numbers of unit 'K' (of which 210 were ordered by 1974) during 1971 to 1977. Besides, an indent for 32 numbers of spare 'N' was placed in July 1976. In all, 121 numbers of unit 'K' (model 'P') were issued to the Services till 1977-78 and 2 numbers of spare 'N' had been supplied till January 1979 for proof trial. The total number of model 'P' equipment supplied till March 1978 was only 14 per cent of the total requirement of the Services assessed in January 1971. Thus, the replacement of existing equipment by model 'P' version would still take a long time. Model 'Q' version of the equipment was still under development (January 1979).

Part 'Z' : The orders placed by the Services for components I and II of part 'Z' and supplies made till 1977-78 were as follows :

	Quantity ordered (in lakhs)	Period of placing order	Quantity supplied (in lakhs)
Component I	12.21	September 1970 to April 1978	2.85
Component II	12.55	September 1970 to April 1978	2.74

The orders placed for components I and II till 1974 had not been completed till March 1978. No supply for other two varieties of part 'Z' had been made against orders of the Services placed in February 1974.

In May 1967, Government had sanctioned design and development of another variety of the equipment. After spending a sum of Rs. 0.56 crore, the development project for establishment of indigenous production of this variety of the equipment was closed in August 1976 as the production schedule given by the Department of Defence Production was not acceptable to the Services.

The review of the project thus disclosed the following points :

— Development of the new equipment was taken up in 1965 in order to replace the existing equipment considered to have limited capabilities, but model 'P' of the new equipment, which did not, however, meet fully the requirement of the Services, could be developed and accepted for introduction in 1971 and its technical documents were finalised by December 1975 only. The improved version of the equipment would not come up before 1980.

— The project for production of model 'P' sanctioned in October 1971 and expected to be completed by September 1975 was yet to be fully completed (January 1979). While the facilities sanctioned had been developed in factories 'A' and 'B', the same had come up partly at factory 'C' and consequently import of forgings at a cost of Rs. 0.48 crore was arranged in 1977. Besides, owing to delay in completion of the project, only 14 per cent of the total requirement of the Services for the new equipment could be met till March 1978.

— The capacity created for manufacture of part 'Z' of the equipment had remained largely unutilised. Of the three varieties of part 'Z' cleared for introduction into service in 1972, bulk production of two varieties had not been taken up (January 1979). Manufacture of a third component of part 'Z' had also not been established (January 1979) and consequently an alternate component was being used.

— Design and development of a variety of the equipment sanctioned in 1967 was given up in 1976 after incurring an expenditure of Rs. 0.56 crore.

Hence it would be seen that some of the equipment may well become obsolete by the time it is utilised.

8. **Procurement of a propellant**

(A) The requirement of factory 'M' for the propellant used in the manufacture of an ammunition was being met by imports since 1965. In January 1970, the Director General, Ordnance Factories (DGOF) placed an indent on the India Supply Mission (ISM) abroad for procurement of 230 tonnes of the propellant stipulating that the supply of the propellant was to be made according to the specification indicated against the earlier contract concluded in October 1969 with firm 'A', which provided for supply of double base ball powder in spherical shape. In April 1970, the ISM forwarded to the DGOF offers received from firms 'A', 'B' and 'C' for selection. After conducting series of tests on the samples received from the firms, which took about two years, it was observed that none of them conformed to the requirement of factory 'M'. It was decided by the DGOF in consultation with the authority holding the specification, *viz.*, the AHSP (Authority Holding Sealed Particulars) that the propellant should be obtained in monotubular form single base or double base and the ISM was accordingly intimated by the DGOF in March 1972 to re-invite tenders as per revised specification. Of the fresh offers of firms 'A', 'B', 'C' and 'D', forwarded by the ISM to the DGOF in May 1972, the offer of firm 'B' for supply of the propellant in monotubular form double base was the lowest, but its offer was conditional on the unqualified acceptance of sample 'X' (a revised sample against the earlier tender enquiry) which it had sent in February 1972 as well as of a fresh sample (sample 'Y') it would supply.

On test, sample 'X' was found suitable in all respects and the DGOF intimated the ISM on 12th July 1972 that further advance sample was not considered essential and that a contract could be finalised with firm 'B' immediately for 230 tonnes of propellant with characteristics similar to those of sample 'X'. Firm 'B', however, despatched the second sample (sample 'Y') on 4th August 1972 and intimated the ISM on 9th August 1972 that sample 'X' was produced on a small scale and, therefore, sample 'Y' drawn from a regular production batch should be tested and accepted before the contract was finalised and that sample 'Y' would be used as reference powder against the order. A copy of the firm's specification, on the basis of which sample 'Y' was produced, was also sent to the

ISM. A copy each of the firm's letter of 9th August 1972 and its specification was sent by the ISM to the DGOF and the AHSP on 16th August 1972. (These were stated to have been received by the DGOF on 14th September 1972).

Based on the test report given by the AHSP, which did not include the result of loadability test, the DGOF intimated the ISM on 31st August 1972 that test results were satisfactory and he confirmed that contract with firm 'B' might be finalised immediately. Accordingly, a contract was concluded by the ISM with firm 'B' on 8th September 1972 for supply of 230 tonnes of the propellant at a firm and fixed rate of £ 0.83 per kilogram providing for supply of the material conforming to technical specification indicated by firm 'B' and sample 'Y' supplied by it.

According to the contract, delivery of the propellant was to be made in four quarterly instalments (three of 60 tonnes each and the last of 50 tonnes) commencing from March 1973 and to be completed in December 1973. The delivery of the propellant was, however, held up because certain issues regarding bulk density, loadability and suitability of sample 'Y' (with reference to loadability test) already accepted were raised by the DGOF and were under correspondence with the ISM and firm 'B' from September 1972 to April 1973 when a 5-kilogram sample from the first production lot was asked for by the DGOF for tests as per his specification. In June 1973, firm 'B' sent a 5-kilogram sample 'Z' which was found (September 1973 and January 1974) acceptable marginally only. In April 1974, the DGOF informed the ISM that sample 'Y' (the reference sample as per contract) was not up to his satisfaction and any propellant to the standard of sample 'X' could be treated as reference sample. Firm 'B' agreed (April 1974) to accept sample 'X' as reference sample on the understanding that further advance samples would not be necessary. The DGOF, however, continued to press (May 1974) for a further 20-kilogram sample for tests to which the firm finally agreed in June 1974. But before the sample was actually selected, the DGOF informed the

ISM in July 1974 to arrange inspection and despatch of the second lot of 50 tonnes without collecting sample as the requirement was urgent. In September 1974, he further confirmed that no sample from future production lots was necessary.

Meanwhile, firm 'B' had intimated the ISM (August 1973) that it had suspended production pending agreements on the points raised by the DGOF on its specification. Further, due to abnormal delay in reaching an agreement, it demanded from time to time increased rates as indicated below :

Month in which firm 'B' asked for price increase	Increased rate
December 1973	£0.99 per kilogram for the material to be manufactured in the first 6 months of 1974
December 1974	£1.65 per kilogram for the quantity to be produced during January to March 1975
March 1975	£2.30 per kilogram for the balance quantity

In July 1975, the contract was amended for completion of delivery by June 1976 and the fixed rate of £ 0.83 per kilogram was revised as under :

	Rate per kilogram
20 tonnes	£0.83
20 tonnes	£0.99
40 tonnes	£1.65
150 tonnes	£2.30

The firm, however, supplied only 160 tonnes till June 1976, which were received by factory 'M' by August 1976. The balance of 70 tonnes was received in February 1977 and April 1978. Out of the quantity received, nearly 30 tonnes (valued at Rs. 12.90 lakhs) were rejected (20 tonnes in July 1977 and 10 tonnes in July 1978) due to lower loadability and higher pressure during ballistic proof and further developments were awaited (January 1979).

Procurement of 230 tonnes of the propellant at the increased rates resulted in extra expenditure of Rs. 48.65 lakhs as compared to the original contract rate.

(B) Mention was made in paragraph 15 of the Report of the Comptroller and Auditor General of India for the year 1974-75, Union Government (Defence Services) of an indent for 784 tonnes of the same propellant as mentioned above, placed (March 1973) by the DGOF on the ISM for factory 'M'. It was, *inter alia,* mentioned that due to delay in acceptance of sample (received in October 1973) in March 1974, the offer of firm 'A' (valid up to 31st January 1974) could not be availed of and subsequently (July 1974) a contract had been concluded with firm 'A' for 500 tonnes within the available foreign exchange at an increased price resulting in extra expenditure of Rs. 18.48 lakhs (this figure actually worked out to Rs. 20.81 lakhs) on supply of first 200 tonnes [for which the rate, though fixed as per contract, had to be increased (July 1975) due to delayed supply (April 1975) of certain components by the DGOF to firm 'A' as per contract]. For the balance 300 tonnes for which price escalation was provided in the contract itself, the rate had to be increased (May 1977) from BF 108 to BF 158 (Rs. 37.30) per kilogram. Out of 300 tonnes, only 100 tonnes had been received by factory 'M' during April 1977 to June 1978.

(C) The above contract of July 1974 with firm 'A' provided an option clause to the effect that the quantity contracted (500 tonnes) could be increased to 784 tonnes within six months from the date of contract at the same contracted price plus price increase as per price variation clause. But this option was not availed of. The DGOF initiated action only in February 1975 to place an order for 284 tonnes and the order was actually placed on the ISM in July 1975 after obtaining financial concurrence and necessary foreign exchange sanction. Firm 'A', on being contacted, informed the ISM in July 1975 that it was booked with the orders already received till December 1976 and that it was not in a position to quote for supplies to be made in 1977 due to market fluctuations. The ISM concluded a contract in May 1976 with another firm, 'E' for supply of 284 tonnes of the propellant at a fixed price of FF 25.074 (Rs. 48.87) per kilogram. Thus, failure on the part of the DGOF to take advantage of the option clause resulted in an extra expenditure of about Rs. 33 lakhs in procurement of 284 tonnes of the propellant (as compared to the last procurement rate of Rs. 37.30 per kilogram in the contract of July 1974). Against the contract of May 1976, factory 'M' had received 123 tonnes in May and June 1978.

Thus, the procurement of propellant against the above three contracts resulted in a total extra expenditure of about Rs. 102.46 lakhs as follows :

— Rupees 48.65 lakhs against the contract of September 1972, attributable to delays caused by the DGOF in raising issues regarding suitability of the samples earlier accepted by him,

— Rupees 20.81 lakhs against the contract of July 1974 due to delay in acceptance of firm 'A's sample and delay in supplying components to the firm, as per terms of the contract by the DGOF, and

— Rupees 33.00 lakhs against the contract of May 1976 due to failure to take advantage in time of the option clause of the contract concluded in July 1974.

The Ministry of Defence stated (November 1978) that :

— for ensuring correct supplies against the contract of September 1972, insistence on sample from each production lot was unavoidable, till such time the firm agreed to change the reference standard from sample 'Y' to sample 'X';

— there was no avoidable delay, in respect of the contract of July 1974, in testing the sample and conveying clearance for placement of order; the action for supply of components to firm 'A' could be initiated by the DGOF after the specific requirement of the elements were made known by the ISM in January 1975; and

— the extra expenditure involved in the contract of May 1976 was only notional, as subsequent events proved that the additional quantity would have merely got locked up with firm 'A' without any supply prospects in a reasonable period.

The fact, however, remains that there was a resultant extra cost of Rs. 102.46 lakhs and that advantage of the option clause of the contract of July 1974 was not taken in time.

9. Delay in establishment of manufacture of an ammunition

In paragraph 6 of the Report of the Comptroller and Auditor General of India for the year 1973-74, Union Government (Defence Services), it was mentioned that the establishment of indigenous manufacture of ammunition 'Z' for weapon 'B' was abandoned in April 1972 after obtaining technical documentation at a cost of Rs. 42.42 lakhs (according to Ministry of Defence, the amount finally paid was Rs. 45.17 lakhs) from a foreign Government under a contract concluded with it in 1967.

In order to establish indigenous manufacture of ammunition 'X' and 'Y' for weapon 'B' and its gun tube, Government concluded an agreement with another foreign Government 'P', in October 1966, for obtaining licence and technical documentation. The technical documentation (in foreign language) was received by the Director General, Ordnance Factories (DGOF) in batches in June and July 1967 and foreign Government 'P' was paid Rs. 25.65 lakhs as per terms of the contract. The translation of the documents into English was completed by February 1969. In December 1969, the DGOF placed a development order on factory 'K' for 10,000 numbers of ammunition 'X' and this was followed by another development order for 5,000 numbers of ammunition 'Y' in April 1970. Against the development orders, factory 'K' placed orders in June and September 1970 on factories 'M' (for supply of 10,100 shells for ammunition 'X' and 5,050 shots for ammunition 'Y') and 'N' (for supply of 10,100 cartridge cases for ammunition 'X' and 5,050 cases for ammunition 'Y').

The DGOF expected (April 1972) that subject to the finalisation of the design of propellant primer combination, which was undertaken by the Research and Development Organisation, manufacture of ammunition 'X' and 'Y' would commence in the ordnance factories in 1974. The Research and Development Organisation forwarded approved specifications to factory 'K' in September 1975 and the latter placed an order on factory 'R' in March 1976 for 67 tonnes of propellant.

Clearance for bulk production of empty shells was given only in October 1978 after the pilot batches of shells produced by factory 'M' had passed in proof. The drawings related to the cartridge case were cleared in May 1974. The pilot batch of cartridge cases submitted by factory 'N' in July 1975 was given clearance in March 1977 ; bulk manufacture was, however, yet to be taken up (October 1978). As regards propellant, sample lots produced by factory 'R' in December 1976 and February 1978 could not be tested as sufficient cartridge cases required for proof test were not made available by factory 'N'.

In the meantime, factory 'K' had already procured (May 1973) from trade paper laminated containers worth Rs. 14 lakhs for the entire quantity of ammunition 'X' and 'Y' ordered by the DGOF even before the manufacture of these ammunition was established ; the containers could not be utilised so far (October 1978). It may be mentioned that the weapon was expected to go out of service by 1979-80.

10. A meat factory

A meat factory was established in 1968 under the administrative control of the Department of Defence Production with an installed capacity for annual production of 500 tonnes of freeze dried meat. The meat was to be supplied to troops deployed at high altitudes (above 9000 feet) where supply of fresh meat was a taxing problem due to poor communication facilities.

In paragraph 7 of the Report of the Comptroller and Auditor General of India for the year 1973-74, Union Government (Defence Services), the performance of the factory till 1973-74 was reviewed. It was observed that the Army's demand for this meat had been considerably lower than the capacity set up and the factory's production was still lower. During the years 1970-71 to 1973-74, while the Army's demand varied from 150 tonnes to 350 tonnes, the factory's production varied from 142 tonnes to 264 tonnes, equivalent to 28 to 53 per cent of the installed capacity. Due to shortfall in production in the factory, a substantial part of the requirement of meat at high altitude during these years had been met by providing tinned meat and fish. Further, the taste of freeze dried meat produced in the factory was reported to be not liked by the troops and efforts were being made to improve its taste.

The capacity of the factory continued to remain substantially unutilised even after 1973-74. The demands placed by the Army on the factory for freeze dried meat during 1974-75 to 1976-77, the production achieved and the capacity utilised were as follows :

Year	Army's demand (tonnes)	Quantity produced (tonnes)	Percentage of installed capacity (500 tonnes) utilized
1974-75 . . .	300	307.47	62
1975-76 . . .	350	309.01	62
1976-77 . . .	231	226.86	45

While planning the factory (1965), it was assessed that the cost of freeze dried meat in the factory would be Rs. 36 per kg. as compared to the cost of equivalent fresh meat of Rs. 42 per kg. (six kgs. of fresh meat are equivalent to one kg. of freeze dried meat) and that the annual production of 500 tonnes of freeze dried meat would result in a saving of Rs. 30 lakhs annually. However, the cost of production of freeze dried meat in the factory showed a steep rise from 1973-74 as follows :

	Cost per kg. (Rs.)
1973-74 . . .	85.35
1974-75 . . .	122.59
1975-76 . . .	125.07
1976-77 . . .	124.34

As against the above cost of production of one kg. of freeze dried meat in the factory, the cost of equivalent fresh meat (*i.e.*, 6 kgs.) was only Rs. 51.54 in 1976. The Ministry of Defence stated (January 1979) that the high cost of production in the factory was due to its location in a remote place where transportation of animals and disposal of perishable slaughter hall by-products posed problems, non-materialisation of contemplated yield on live weight, increase in the cost of labour and staff, etc.

Due to high cost of production of freeze dried meat, not only was the anticipated annual saving of Rs. 30 lakhs not realised, but Army was also put to considerable extra expenditure each year in its procurement from the factory. The extra expenditure involved during 1975-76 alone on procurement of 309 tonnes of freeze dried meat amounted to Rs. 227 lakhs approximately (as compared to the cost of fresh meat in 1976). In view of the heavy financial loss in the continued operation of the factory and as there was no problem of supplying fresh or tinned meat to stations of high altitude due to improved communication facilities, it was decided in December 1976 not to place further orders for freeze dried meat on the factory. The factory was closed from 1st April 1977 and plant and machinery and the staff employed in the factory were declared as surplus from that date. The depreciated value of the assets held by the factory on the date of its closure (1st April 1977) was as follows :

	(In lakhs of Rs.)
Building	133.79
Plant and machinery	36.84

There were in addition—

(a) a new generating set costing Rs. 13.26 lakhs, the supply and installation of which had been completed in June 1976 and which was commissioned in December 1976,

(b) dry rendering plant (procured in November 1973) costing Rs. 6.28 lakhs which was taken on charge only in April 1977, and

(c) stores in hand of value Rs. 27.12 lakhs, the main items being spares for the main plant (Rs. 19.26 lakhs) and tin cans (Rs. 2.25 lakhs).

Total value of all the assets amounted to about Rs. 217 lakhs.

The Ministry of Defence stated (January 1979) that the Director General of Ordnance Factories (DGOF) was requested to explore the possibilities of utilising the building and plant and machinery in the factory. Though an expert committee set up (April 1977) by the DGOF to study the question recommended (May 1977) transfer of certain work loads from other ordnance factories to this factory, it was found after subsequent detailed analysis that the cost of modification of the buildings would be very high and, therefore, the DGOF expressed (August 1977) inability to take over the assets of the factory. The Ministry added that :

— it had been decided to retain the land and building for possible utilisation of the same by some other defence undertakings, and

— efforts were being made to dispose of the plant and machinery and stores through the Director General, Supplies and Disposals.

Meanwhile, assets worth Rs. 27.32 lakhs had been transferred from the factory to other ordnance factories and Army during April 1977 to September 1978. Pending completion of disposal of the assets, a skeleton staff had been retained for care and maintenance of the factory and arranging disposal of the assets. Its strength on 1st October 1978 was 3 officers, 32 non-gazetted and non-industrial employees and 11 industrial employees. A sum of Rs. 10.70 lakhs had been spent on pay and allowances of the skeleton staff during April 1977 to September 1978.

11. **Non-utilisation of a phosphating plant**

In order to modernise the existing manual method of phosphating shells in factory 'X', an imported automatic phosphating plant with electrical system of heating phosphating chemicals was purchased (August 1966) from firm 'A' by the Director General, Ordnance Factories (DGOF) and it was installed in the factory in November 1966. The total cost of the plant including erection charges incurred was Rs. 2.76 lakhs. During trial runs of the plant in 1967, it was noticed by factory 'X' that shells phosphated in the plant on automatic cycle failed to pass the requisite tests. Besides, the heater elements were affected by deposition of phosphating chemicals. These defects were reported to firm 'A' which stated (January 1968) that quality of water used for rinsing in the phosphating process was crucial and it should be free from impurities and sediments. Later, after study of the water analysis data supplied by the factory, firm 'A' recommended (June 1969) use of a demineralising plant for getting requisite quality of water. However, factory 'X' initiated action in August 1969 to manufacture a steam condensing unit from its own resources, but it was found that the required quantum of steam could not be had from the exisitng boilers. A demand was, therefore, placed by factory 'X' on the DGOF in January 1970 for procurement of a demineralising plant at an estimated cost of Rs. 0.60 lakh. The DGOF, however, considered (November 1970) after inspection of the phosphating plant that by use of a steam condensing unit the plant could be effectively run without incurring expenditure on procurement of a demineralising plant. No action was, therefore, taken by him to procure the demineralising plant. On the other hand, factory 'X' neither took any action to fabricate a suitable steam condensing unit nor pressed the DGOF for a demineralising plant. Meanwhile, the phosphating plant continued to remain unutilised in the factory for mass production. In March 1977, it was noticed by factory 'X' that some parts of the plant had deteriorated and required rectification.

The Ministry of Defence stated (December 1978) that a similar phosphating plant with steam heating system of phosphating chemicals procured (January 1970) from the same firm and commissioned (December 1970) at factory 'Y' had been working satisfactorily on automatic switch and it had, therefore, been decided to repair the phosphating plant at factory 'X' and modify its heating system from electrical to steam heating.

Necessary repairs and modification to the plant for which a contract had been concluded (November 1978) for Rs. 0.62 lakh were expected to be completed by March 1979.

Thus, even though a modernised phosphating plant was installed in factory 'X' in 1966 to augment production and a sum of Rs. 2.76 lakhs was invested on the plant, no return could be had from it during the last 12 years due to lack of serious efforts to make use of it and the phosphating operations continued to be carried out in the factory by the old manual process.

12. Deficiency of furnace oil in a factory

An ordnance factory had been obtaining furnace oil in supplier's tankers. The supply was being received in its main tank and also in sub-tanks of some production sections. The total receipt was being accounted for in the bin card maintained by the store section. The distribution of the furnace oil inside the factory was done in three ways :

(i) from the main tank to sub-tanks of various sections through pipelines ;

(ii) by direct supply to sub-tanks of certain sections from the tankers ; and

(iii) in drums.

The factory had no arrangements for measuring the actual supply of furnace oil made to various sections and the furnace oil actually consumed by the latter. The demand note was being submitted by each consuming section as per technical assessment of consumption in a month.

During annual stock verification conducted in March 1977, a deficiency of 2,245.45 kilolitres of furnace oil valued at about Rs. 26 lakhs was noticed. The factory authorities considered that the deficiency could not have arisen due to short receipt of the oil in the factory as under the existing procedure the receipt of oil was being supervised jointly by representatives from receipt, stock, works inspection and security office. It was assumed by the factory authorities that the shortage was mostly due to consumption by the shops in excess of what was recorded in their demand notes for years together although no deficiency was detected in earlier stock verifications and it was decided in May 1977 to obtain covering demand notes from the consuming shops to make up the deficiency. On being pressed by the internal audit authorities for an investigation into the deficiency, the General Manager (GM) of the factory set up (August 1977) a Board of Enquiry with two Deputy Managers of the factory to investigate the causes of the deficiency. The Board concluded (October 1977) that it had no ground to have any doubt about the correctness of the receipt of oil. The deficiency was explained as follows :

- — 1,500 kilolitres due to more consumption than that recorded in the demand notes ;
- — 300—400 kilolitres due to non-accountal of oil consumed in the trial run of a plant ; and
- — 300 kilolitres in the sub-tanks not verified during stock verification ; the balance lost in pipelines, leakages etc.

The proceedings of the Board of Enquiry were forwarded by the GM of the factory to the Director General, Ordnance Factories (DGOF) in December 1977 but were not accepted by the latter and a fresh board was set up by him in January 1978 with an Assistant DGOF of his office as President and a representative of the internal audit as a member. The Board was asked to submit its report by 15th March 1978. The report was awaited (December 1978).

In the meantime, from May 1977 the shops continued to record inflated figures of consumption and the total consumption recorded by them during May 1977 to March 1978 was 14,090 kilolitres as compared to 8,022 kilolitres recorded in the preceding eleven months (June 1976 to April 1977). In spite of this, the stock verification conducted in March 1978 revealed that the deficiency of furnace oil had increased to 4,304.55 kilolitres valued at about Rs. 44 lakhs. The Board already set up by the DGOF had been asked in June 1978 to enquire into the additional deficiency disclosed.

13. **Deficiency in stock**

In January 1973, the officer-in-charge of the store section of a factory reported to the General Manager that 238 tents which had been produced by the factory against service orders and passed in final inspection in November 1972 were not available for collection. After investigations by two Boards of Enquiry set up by the General Manager in February 1973 and May 1973, the Additional Director General, Ordnance Factories (Additional DGOF) convened in March 1974 a third Board of Enquiry to investigate the deficiency. The Board concluded (March 1974) that the materials required for the manufacture of 238 tents were drawn, the tents were manufactured and these were passed in inspection ; but these were not handed over to the store section for issue. The Board assessed the value of the deficiency as Rs. 3.26 lakhs but it could neither throw any light as to how the tents manufactured disappeared, nor fix responsibility on any individual for the deficiency.

No action was, however, taken by the factory to regularise the loss. In January 1977, it was intimated by the Additional DGOF to Audit that the tents had been located and 119 out of

238 tents had already been issued to the indentor (during December 1976). Of the balance quantity, 107 tents were reported to have been issued in January 1977 and July 1977. No investigation has, however, been conducted to find out how the tents came to be located after about 4 years and why the three Boards of Enquiry failed to find out their existence.

The Ministry stated (October 1978) that no action to regularise the discrepancy could be taken, as none of the Boards of Enquiry could elucidate as to where the stores had gone and when the same had been manufactured and inspected. Further, as the tents were located, the investigation of the matter was not considered necessary. The Additional DGOF stated (February 1979) that the tents were found stored at different places under the heaps of other textile stores. It had not, however, been explained why these could not be found during the stock verifications conducted during 1973 to 1976.

14. **Purchase of gilding metal strips from trade at high cost**

Factory 'A' had been obtaining its requirements of gilding metal cups used for production of an ammunition from factory 'B' till February 1973 and from factories 'B' and 'C' thereafter. The requirements of metal cups in factory 'A' on the basis of production programme of ammunition given by the Director General, Ordnance Factories (DGOF) and the production of metal cups planned by the DGOF in factories 'B' and 'C' since 1973-74 were as follows :

Year	Requirement of metal cups at Factory 'A'	Production programme for metal cups		Total
		Factory 'B'	Factory 'C'	
				(In tonnes)
1973-74 . . .	517	528	288	816
1974-75 . . .	430	528	240	768
1975-76 . . .	484	570	216	786
1976-77 . . .	323	420	360	780
1977-78 . . .	323	280	72	352

The actual production of ammunition at factory 'A' was less than that planned. The requirements of metal cups on the basis of actual production and the metal cups supplied by factories 'B' and 'C' against the production programmes given by the DGOF were as follows :

Year	Requirements of metal cups at factory 'A' for actual production	Cups produced and supplied Factory 'B'	Factory 'C'	Total
				(In tonnes)
1973-74 . . .	445	343	200	543
1974-75 . . .	270	248	44	292
1975-76 . . .	293	470	111	581
1976-77 . . .	340	423	190	613
1977-78 . . .	353	273	36	309

Besides, factory 'B' at the instance of the DGOF placed an order on firm 'P' in December 1974 for 100 tonnes of metal strips (from which nearly 58 tonnes of cups could be produced) at Rs. 39,250 per tonne to augment its production of cups. Against the stipulated delivery of 30 to 40 tonnes per month commencing from December 1974, firm 'P' actually supplied 97.254 tonnes during January 1975 to August 1975. The production of metal cups picked up in factories 'B' and 'C' in 1975-76. Although both the factories together had the capacity to supply more than 500 tonnes of metal cups in a year and factory 'B' was holding a stock of metal strips procured from trade which was sufficient to produce about 56 tonnes of metal cups, factory 'B' placed, at the instance of the DGOF, a further order on firm 'P' in October 1975 for 160 tonnes of metal strips (from which nearly 92 tonnes of metal cups could be produced) at Rs. 41,450 per tonne to be delivered by March 1976 (extended upto May 1976). The procurement rate from trade was higher as compared to the cost of production of the strips at factory 'B' which was Rs. 24,133 per tonne during 1974-75. Subsequently, an indent was also placed by factory 'B' on the Department of Defence Supplies (DDS) in January 1976 for 225 tonnes of metal strips (from which nearly 130 tonnes of metal cups could be produced).

Supplies against the order of October 1975 materialised during January 1976 to August 1976 (162.918 tonnes).

Meanwhile, as the requirement of factory 'A' for metal cups was more than fully met by factories 'B' and 'C', at the end of March 1976, 115.513 tonnes of metal cups accumulated in factory 'A'. Nevertheless, the indent placed (January 1976) on the DDS was not cancelled and it was covered by the DDS by placing supply orders as follows :

Firm	Month of order	Quantity ordered in tonnes	Rate per tonne	Delivery schedule
			Rs.	
'Q'	July 1976	125	40,500	10 tonnes per month for three months from August 1976 and 20/25 tonnes per month thereafter
'P'	December 1976	60	42,450	30 tonnes per month from February 1977 (extended upto December 1977)
'R'	December 1976	40	42,700	30 tonnes by February 1977 and balance by March 1977 (extended upto 15th July 1977)

At the end of March 1977, the accumulation of metal cups at factory 'A' rose to 461.780 tonnes. Though the production programme of metal cups for 1977-78 set for factory 'B' was 280 tonnes (which was well within its capacity, viz., 300 tonnes), factory 'B' approached DGOF only in October 1977 for short closing the orders of July and December 1976, without financial repercussions, at the quantities tendered for inspection by the firms as trade assistance was no longer necessary. Meanwhile, the stipulated delivery schedule for completion of supply (March 1977) against the order of December 1976 on firm 'P' for 60 tonnes of metal strips was extended in September 1977 by the DDS till December 1977. Firm 'P' had actually supplied 29.161 tonnes during the extended delivery period and agreed in January 1978 to short close the order at the quantity supplied. Firms Q and R had not made any supplies against the orders placed on them. While the order of July 1976 on firm 'Q' was cancelled in March 1978, the order of December 1976 on firm 'R' was yet to be formally cancelled (November 1978).

At the end of May 1978, the stock of metal cups in factory 'A' stood at 522 tonnes (the total cost of which was about Rs. 164 lakhs) in spite of the low production by factories 'B' and 'C' in 1977-78. The stock in factory 'A', as assessed by the factory authorities, would meet the production requirement of about 19 months. Had the production of metal cups at factories 'B' and 'C' been properly coordinated with the actual requirements at factory 'A', the extra expenditure of Rs. 41.37 lakhs (inclusive of taxes) in procurement of 192.079 tonnes of metal strips against orders of October 1975 and December 1976 on firm 'P' (as compared to the cost of production in factory 'A' which was Rs. 22,574 per tonne during 1976-77) and the heavy accumulation of cups at factory 'A' could have been avoided.

The Ministry of Defence stated (January 1979) that :

— towards the beginning of second half of 1974, the stock of metal cups at factory 'A' became critical which continued upto the first quarter of 1976. With a view to meeting the full requirement of the factory and to build up a buffer stock, trade assistance was taken, and

— orders were placed on trade to develop the requisite expertise and technique of production in civil sector.

15. Manufacture of kittable bodies for Nissan vehicles

Mention was made in paragraph 30 of the Report of the Comptroller and Auditor General of India for the year 1974-75, Union Government (Defence Services) that the Army Headquarters had approved in November 1966 the introduction of a kittable body developed by the Defence Research and Development Organisation, in lieu of composite body in use, for Nissan 1-ton vehicle. This decision was reversed (September 1972) as the kittable bodies were costlier and had several disadvantageous design features and the orders already placed during 1972 on trade for kittable bodies (at rates varying from Rs. 2470 to Rs. 2725 each) were substituted during 1973 by orders for composite bodies (at rates varying from Rs. 1696 to Rs. 1878 each).

An order for production of 815 kittable bodies had been placed on factory 'A' in January 1968. After the decision was taken (September 1972) to revert to composite bodies, General Manager (GM), factory 'A', was requested by GM, factory 'B', on 12th September 1972 to short-close the order as the requirement of kittable bodies no longer existed ; but GM, factory 'A', stated (22nd September 1972) that 200 bodies out of 815 had already been supplied to them and added that necessary basic material and hardware items for full quantity of 815 bodies had been procured and it was not possible to short-close the order without financial repercussions. The financial repercussions involved were, however, neither assessed nor intimated to factory 'B'. Factory 'A' continued with the production of kittable bodies and supplied 400 bodies to factory 'B' till March 1976—240 sets till March 1973 and 160 sets during 1973-74 to 1975-76. In July 1976, GM, factory 'B', reported to the Director General, Ordnance Factories (DGOF) that the cost of kittable bodies supplied by factory 'A' was very high, namely, Rs. 11455.04 each (estimated) as against the prevailing procurement price of Rs. 2150 of each composite body—and requested the latter to ask GM, factory 'A', to short-close the order unless the cost could be reduced. GM, factory 'A', intimated (November 1976) his inability to reduce the cost and this question remained under correspondence with the DGOF till June 1977 when the DGOF advised both factories 'A' and 'B' to short-close the order for kittable bodies at 580 sets. Factory 'A' had supplied 105 bodies during 1976-77 and 1977-78 at an average cost of Rs. 9,000 each and the balance 75 remained to be supplied (September 1978). The production of 265 kittable bodies at factory 'A' during 1973-74 to 1977-78 involved extra cost of Rs. 12.99 lakhs as compared to the trade price of composite bodies.

Canopy cover was one of the components of the kittable body which was to be supplied by factory 'A', but as it had no facility for producing the same, it placed demands on factory 'C' in November 1968 and June 1969 for supply of 370 and 445 canopy covers respectively. In July 1969, GM, factory 'A' asked GM, factory 'C' to supply 370 covers against the first demand directly to factory 'B'. This led to unmatched supply of the canopy covers. While factory 'C' completed supply of the entire quantity of 815 covers during 1972—370 were supplied to factory 'B' direct and 445 to factory 'A'—the supply of kittable bodies from factory 'A' lagged behind. The entire quantity of 445 canopy covers received by factory 'A' were, therefore, lying in stock till November 1976, when these were despatched to factory 'B'. Factory 'B', however, rejected them as these were found infested by moths and sent them back to factory 'A' in December 1976. On re-inspection in July 1977, 337 out of 445 covers were accepted by factory 'B' and the remaining 108 covers valued at Rs. 0.60 lakh were finally rejected.

The Ministry of Defence stated (November 1978) that 108 sets of rejected canopy covers would be utilised at factory 'A' as tarpaulin pieces to cover trucks, machinery, materials etc. and that a Board of Enquiry had been set up (August 1978) to investigate into the reasons for their deterioration in storage.

16. **Purchase of shell bars at high cost**

Factory 'A' was given manufacturing programme of 1.10 lakh and 1.30 lakh of shell bodies of an ammunition during 1976-77 and 1977-78 respectively. To meet the production programmes, the factory placed orders on a public sector undertaking in July 1976 for 2000 tonnes and in December 1976 for 3000 tonnes of shell bars at the rate of Rs. 2021 per tonne. The supplies against the orders were to be made "as early as possible".

Against the order of July 1976, factory 'A' received from the undertaking 1049 tonnes of shell bars during 1976-77 and 879 tonnes in April 1977. Against the order of December 1976, 1078 tonnes of shell bars were received from the undertaking during August and September 1977.

The stock of shell bars (291 tonnes) at factory 'A' in the beginning of 1977-78 and the supplies received (1957 tonnes) from the undertaking during April 1977 to September 1977 were sufficient to produce 0.86 lakh shell bodies. Although factory 'A' produced only 0.52 lakh shell bodies during the period, it placed an order, after inviting limited tenders, on firm 'X' (whose offer was the lower of the two received) in October 1977 for 1000 tonnes of shell bars at Rs. 4300 per tonne on the ground that the undertaking was not in a position to meet its requirements. Firm 'X' was asked to supply the material at the rate of 400 tonnes per month commencing within two weeks of receipt of the order.

Factory 'A' received 1896 tonnes of shell bars from the undertaking (against the order of December 1976) during October 1977 to February 1978 and 1012 tonnes from firm 'X' during December 1977 to February 1978. Of the total quantities received from both sources during 1977-78, 1111 tonnes were lying in stock (as per bin card) at the end of March 1978.

As against the production programme of 1.30 lakh shell bodies during 1977-78, factory 'A' had produced only 1.11 lakh requiring about 2886 tonnes of shell bars (which was well within the total receipts of 3853 tonnes from the undertaking during the year). The procurement of 1012 tonnes of shell bars from firm 'X' at a price more than double the rate of the undertaking was, therefore, not necessary and resulted in extra expenditure of Rs. 23.06 lakhs.

The Ministry of Defence stated (January 1979) that :

— trade purchase of shell bars from firm 'X' was made to establish a second source of supply in view of anticipated uncertain supply of the material from the undertaking, and

— the actual quantity of shell bars physically available in stock was only about 400 tonnes at the end of March 1978.

It was observed in Audit that :

— factory 'A' held 0.47 lakh unfinished forged bodies at the end of March 1978, and

— the stock of shell bars remained as per bin card at 1111 tonnes even at the end of April 1978. The Ministry stated (January 1979) that the discrepancy between the quantity as per bin card and actual quantity was due to belated paper transactions.

17. Extra expenditure due to procurement of a costlier material

The specification of "carbamite undyed" used by factory 'X' in the manufacture of propellants provided for procurement of the material in the form of lumps, flakes or powder. The factory had been using the material in powder or flake form since 1973. In January 1975, the Chief Inspector of Military Explosives amended the description of the material in a factory demand, while vetting it from 'carbamite undyed' to 'carbamite undyed powder' and clarified to the factory that the material in powder form was purer and preferable to that in flakes. This, however, did not constitute an amendment to the specification which continued to provide for all the forms.

In April 1977, factory 'X' placed a demand for procurement of 46,000 kilograms of carbamite undyed in powder form on the Director General, Ordnance Factories (DGOF) who, in turn, placed an indent on a Supply Mission abroad in September 1977. In response to the tender enquiry made by the Supply Mission in November 1977, only one quotation for supply of the material in powder form at f.o.b. rate of DM 11.75 (Rs. 49.47) per kilogram exclusive of 2.5 per cent agency commission, was received from firm 'A'. The offer, valid till 14th April 1978, was forwarded to the DGOF in February 1978 for acceptance of product and packing.

Meanwhile, in December 1977, factory 'X' received an offer from the Indian agent of another foreign firm 'B' for supply of the material in flake form at DM 7.90 (Rs. 33.26) per kilogram c.i.f. Madras. While communicating his acceptance to the offer of firm 'A' on 10th March 1978, the DGOF informed the Supply Mission of the offer of the Indian agent of firm 'B' and suggested that firm 'B' might be contacted to tender quotation for the material as the rate was cheaper, but it was not clarified that the offer was for the material in flake form and that the same also could be considered for acceptance. Later, on 20th March 1978 when the offer of the Indian agent of firm 'B' was forwarded by factory 'X' to the Supply Mission, it also did not mention that the material in flake form was acceptable and was actually being used in the factory. On the contrary, when it was pointed out by the Supply Mission on 12th April 1978 that firm 'B' was producing the material in flake form only and not in powder form as provided in the indent and acceptance of the material in flake form was sought for, the DGOF confirmed on 14th April 1978 that the material in flake form was not acceptable and order should be finalised for the material in powder form as mentioned in the indent.

Accordingly, on 20th April 1978 the Supply Mission intimated acceptance of the offer to firm 'A' for supply of 46,000 kilograms of carbamite in powder form at the f.o.b. rate of DM 11.75 (Rs. 49.47) per kilogram exclusive of agency commission. Meanwhile, factory 'X' intimated the Supply Mission on 18th April 1978 (copy to the DGOF) that according to specification forwarded to it along with the indent, the material in flakes was also acceptable. The DGOF also informed the Supply Mission by telex on 22nd April 1978 that his earlier telex of 14th April 1978 conveying non-acceptance of carbamite in flakes should be treated as cancelled. On receipt of these intimations from the factory and the DGOF, the Supply Mission approached firm 'A' for cancellation of the acceptance communicated to it on 20th April 1978, but the latter did not agree. Accordingly, the Supply Mission intimated the DGOF in June 1978 that firm 'A' was not willing to accept cancellation but had agreed to reduce the price from DM 11.75 (Rs. 49.47) per kilogram to DM 11.00 (Rs. 46.30) per kilogram. After negotiations, the rate was further reduced to DM 10 (Rs. 42.10) per kilogram and the formal contract was concluded on 14th July 1978.

On receipt of clarification in April 1978 that the flake form was acceptable to the indentor, the Supply Mission received an offer of DM 8.50 (Rs. 35.79) per kilogram of flake from firm 'B' (c.i.f. Madras) in May 1978. Although this rate was substantially lower than the rate of firm 'A', it could not be accepted as the intimation of acceptance to firm 'A' had already been given. This could have been avoided and a saving of Rs. 2.90 lakhs (in addition to transportation charges upto Madras) effected, had the indentor made it clear to the Supply Mission in March 1978 that the offer received was for flakes and it was covered by the specification and acceptable.

The Ministry stated (January 1979) that initially it was not appreciated that for a superior material which was in powder form price difference would be so high and that when the difference in price of the two qualities was known all attempts were made to cancel the acceptance and bring down the price.

18. Procurement of a material for water containers

An ordnance factory had been purchasing canvas flax (tow) for manufacture of water containers from firm 'A', which was stated to be the only known supplier of the material. In response to two indents placed by the factory in February 1972 and July 1972, the Director General, Supplies and Disposals (DGSD) placed two orders in November 1972 and March 1973 on firm 'A' for supply of 1,40,750 metres of canvas flax at Rs. 8.00 per metre.

The orders placed on firm 'A' provided that the percentage of leakage of water on made up containers after soaking them in water for 48 hours and filling with 4000 c.c. of water was not to be more than 10 per cent in the first hour and not more than 15 per cent after twenty four hours. The procedure followed by the Inspectorate of General Stores (IGS), the inspecting authority, was to assess the leakage of water by measuring the water percolated through the containers and collected in a receptacle.

Firm 'A' supplied 71,769.05 metres of canvas flax till June 1973. The material was accepted after being passed in inspection by the IGS. As the method followed in assessing the leakage did not take into account the water evaporated from the body of the container and the receptacle, the IGS adopted a method, since June 1973, at the instance of the Chief Inspectorate of Textiles and Clothing (CITC), the Authority Holding Sealed Particulars (AHSP), to assess the leakage by subtracting the quantity of water retained in the container from the quantity of water originally filled in. When the method of inspection was thus changed during the pendency of the orders, acceptance of firm 'A' was not taken in advance. Firm 'A' refused to accept this method. It contended (July 1973) that this amounted to change in specification and intimated the DGSD that if the canvas flax was to be manufactured as per this revised specification, costlier raw materials would be necessary which would increase the price of the canvas. The CITC informed the DGSD in September 1973 that there had been no change in the specification. Later, firm 'A' intimated the DGSD in March 1974 that as the inspecting authority had chosen to change the procedure of testing during the pendency of the contracts without confirmation from the firm and as it was to use costlier raw materials and arrange additional processing of the cloth, it should be allowed either an increase in price by 33 per cent over the contract price or cancellation of the orders. In May 1974, the DGSD asked for the views of the factory management on the increase in price. The latter was not agreeable to the price increase and requested the DGSD in February 1975 to persuade the firm to effect the supplies at the rate provided in the orders. As, however, the firm did not supply the material at the contracted rate within the delivery period as extended upto 24th August 1976 (for the order of November 1972) and 24th July 1976 (for the order of March 1973) and the CITC held the view that the revised method of assessing leakage was the correct method and should be followed, the DGSD cancelled the outstanding quantity (68,980.95 metres) against the two orders in November 1976, at the risk and cost of the firm.

Meanwhile, against various indents placed by the factory, the DGSD placed orders on firm 'A' for the same material at higher rates during June 1973 to November 1975 as follows :

Month in which order placed	Quantity ordered in metres	Rate per metre Rs.
June 1973	1,18,520	9.11
December 1973	29,630	9.11
March/April 1975	17,425	14.75
November 1975	52,275	14.75

While the first two orders provided that the percentage of leakage of water on made up containers after soaking them in water for 48 hours and filling with 4000 c. c. of water was not to be more than 10 per cent in the first hour and 15 per cent after twenty four hours, the last two orders provided that the volume of water contained in the containers should not be less than 90 per cent in the first hour and 85 per cent after 24 hours. Against 2,17,850 metres of canvas flax ordered, firm 'A' supplied 2,17,757 metres by November 1976.

In February 1977, two orders for 73,980.95 metres of canvas cotton/jute, an alternative material, were placed by the DGSD on firm 'B' at Rs. 18.26 per metre (for 54,691.10 metres) and at Rs. 18.60 per metre (for 19,289.85 metres) to cover the quantity cancelled against the orders placed on firm 'A' in November 1972 and March 1973. The extra expenditure involved in purchase of alternative material for the cancelled quantity from firm 'B' had been worked out by the DGSD as Rs. 7.54 lakhs. Although the orders of November 1972 and March 1973 were cancelled at the risk and cost of the firm, the extra expenditure could not be recovered from the firm as a different material was procured later.

The Ministry of Defence stated (January 1979) that the method of testing followed by the IGS was faulty and that once it was noticed, the AHSP could not agree to its continuance. The Ministry added that as the orders did not stipulate any specific method of testing, no change was made in the contractual obligations during the pendency of the orders. The firm, being a sole manufacturer of the material, took advantage of the controversy on the method of testing and made it a plea for seeking price rise which led to the cancellation of the orders.

The fact, however, remains that had the revised method of inspection, *viz.,* that the volume of water contained in the containers should not be less than 90 per cent in the first hour and 85 per cent after 24 hours, been provided in the orders placed on firm 'A' *ab initio,* the department could have avoided largely the extra expenditure of Rs. 7.54 lakhs.

19. Extra expenditure in the procurement of plant spares

An ordnance factory placed an indent on a Supply Mission, abroad in June 1973 for procurement of spares of a plant at an estimated cost of Danish Kroners 3.90 lakhs (Rs. 6.79 lakhs). The spares were of proprietary nature. In response to limited tenders issued in September 1973 by the Supply Mission, only one quotation, valid till 28th April 1974, was received in January 1974 from the supplier of the plant. The total cost of the spares offered by the firm was, however, Danish Kroners 5.62 lakhs (Rs. 9.79 lakhs) and exceeded the cost assessed by the factory. The Supply Mission referred the tender to the factory on 14th February 1974 for acceptance and provision of additional foreign exchange. The factory intimated on 4th April 1974 that the firm's offer was acceptable and that Government was being approached for providing additional foreign exchange. It, however, stated that the rates quoted by the firm were high and suggested that other possible suppliers mentioned in the indent might be contacted. On 25th April 1974, the Supply Mission intimated the factory that all the firms shown in its indent were asked to quote, but that response was received from only one firm. The factory, thereafter, approached the Ministry on 28th May 1974 for release of additional foreign exchange which was obtained on 9th October 1974 only. The factory communicated the release of additional foreign exchange to the Supply Mission on 29th October 1974 but the communication was not received by the latter. On 6th December 1974, the factory reminded the Supply Mission; again on 20th February 1975, it informed the Supply Mission that additional foreign exchange had been released and that the contract should be concluded immediately.

Meanwhile, the firm increased (May 1974) its price by 10 per cent which was valid till 31st August 1974. Due to non-receipt of the sanction for additional foreign exchange, the Supply Mission could not conclude any contract within the validity of the revised offer. Later, when the firm was approached (May 1975), it communicated another increase of 15 per cent over the price quoted in May 1974. After negotiations with the firm, the Supply Mission concluded a contract in August 1975 for supply of spares at the price of Danish Kroners 6.80 lakhs (Rs. 11.85 lakhs) which was about 20 per cent higher than the original price. The failure of the factory to arrange additional foreign exchange immediately on receipt of the Supply Mission's request of February 1974 resulted in extra expenditure of Danish Kroners 1.18 lakhs (Rs. 2.06 lakhs) in the procurement of spares with reference to the original offer of January 1974.

Had the factory made foreign exchange available even before the expiry of validity of the firm's revised offer, extra expenditure of Danish Kroners 0.62 lakh (Rs. 1.07 lakhs) could have been avoided.

The Ministry of Defence attributed (January 1979) the delay in release of additional foreign exchange to the following :

— since the quotation was from only one firm and the prices were comparatively higher, the factory had to scrutinise the request for additional foreign exchange thoroughly; and

— certain clarifications were needed by the Ministry and the associated finance from the factory before the case was put up to Economic Affairs Department for release of the foreign exchange.

The Ministry added that remedial measures to avoid recurrence of similar cases in future were being taken.

20. Extra expenditure in the purchase of a component

For establishment of indigenous source of supply for an imported component of a heavy vehicle, tender enquiries were floated by an ordnance factory during October 1972. Only one firm responded but no order was placed on it as its capacity was in doubt. The item was re-tendered in October 1973 and in response two firms tendered in November 1973 as follows :

Firm	Price quoted for each	Validity of offer	Supply promised
'A'	Rs. 850 for order upto 250 nos. Rs. 800 for order upto 500 nos. Rs. 675 for order upto 750 nos.	Till 28-1-74	Prototype within 12 months of receipt of order and subject to release of foreign exchange for import of electrical connectors and bulk supply at 25 nos. per month commencing within 12 weeks of receipt of approval of the prototype.
'B'	Rs. 950 for order upto 250 nos. Rs. 931 for order over 250 nos.	Not mentioned	Prototype within 10 months of the receipt of order and bulk supply at the rate of 20 nos. per month commencing 6 months after receipt of approval of the prototype.

The tenders were considered by a technical committee on 24th January 1974 and it was decided to accept the offer of firm 'A', but a letter of intent was issued to the firm only on 2nd February 1974, after expiry of validity of the offer. On receipt of the letter of intent, firm 'A' sought (5th February 1974) incorporation of a price escalation clause in the supply order attributing increase in the cost of raw material which, according to the firm, could not be visualised earlier in November 1973 when it had tendered. However, the supply order was placed by the factory on firm 'A' on 18th March 1974 for 260 numbers of the component at Rs. 800 each without the escalation clause, stipulating delivery from June 1975 to April 1976.

In May 1974, firm 'A' intimated that the validity of its offer had expired (on 28th January 1974) and requested for increase in price to Rs. 1000 per component. When firm 'B' was approached (June 1974), it also increased its price to Rs. 1045 per component. These revised offers were considered (9th August 1974) by the technical committee which decided to place the order on firm 'B', although its revised quotation was higher, on the ground that firm 'A' was already committed to supply a number of critical items against other orders placed by the factory. Accordingly, the order placed on firm 'A' was cancelled (August 1974) and a fresh order for 260 numbers of the component was placed (September 1974) on firm 'B' at the rate of Rs. 1024.10 each. The bulk supply was to commence at a minimum rate of 20 numbers per month from June 1976 for completion by 1st January 1977, but firm 'B' could not adhere to the delivery schedule and was allowed extensions from time to time. Actual supply of 260 numbers of the component was made by firm 'B' during February 1977 to September 1977.

Meanwhile, due to critical stock position of the item, the factory placed an indent on a Supply Mission abroad in March 1976 for import of 100 numbers of the component which was covered by a contract in May 1976 at the rate of Rs. 2144.33 each stipulating delivery within six to eight months from receipt of the order. The actual supplies, however, materialised during September 1977.

Had the offer of firm 'A' been accepted within its validity date (28th January 1974), extra expenditure of Rs. 0.58 lakh incurred in procurement of 260 numbers of the component from firm 'B' at higher rate could have been avoided. Non-acceptance of the revised offer of firm 'A' was also not justified as firm 'A' had not expressed inability to supply the stores due to its commitments and had offered to establish indigenous production of the store by 1975. Had the revised offer of firm 'A' been accepted, the import of 100 numbers of the component at a much higher cost and incurring foreign exchange expenditure of Rs. 2.14 lakhs could have been avoided. Computed with reference to the revised offer of firm 'A', the extra expenditure on import of 100 numbers of the component amounted to Rs. 1.14 lakhs.

The Ministry of Defence stated (January 1979) that the technical committee, which had considered the offers received (December 1973) from firms 'A' and 'B', was constituted of representatives from several organisations and its meeting could be held only on 24th January 1974 according to convenience of all and after accumulation of adequate number of cases requiring their consideration. The Ministry added that in order to enable firm 'A' to concentrate on the development orders already in its hand and considering past experience with the firm the technical committee had decided to place the order on firm 'B'.

21. Purchase of sub-standard material

After obtaining limited tenders, factory 'A' placed a local purchase order (April 1973) on a firm for supply of 1800 kilograms of high speed steel of two types (type 'M'—1200 kilograms at Rs.78 per kilogram and type 'N'—600 kilograms at Rs. 82.50

per kilogram) by 15th May 1973 (extended upto 25th February 1974). The stores, after being inspected (October 1973) by factory 'B' at the firm's premises, were despatched by the firm and received in factory 'A' as follows :

	Date of despatch	Date of receipt
1st consignment—		
174 kilograms of type 'M' / 211 kilograms of type 'N'	December 1973	December 1973
2nd consignment—		
1022.200 kilograms of type 'M' / 387 kilograms of type 'N'	January 1974	February 1974

As per terms of the purchase order, the firm was paid (December 1973/January 1974) 95 per cent (Rs. 1.36 lakhs) of the contract value on proof of despatch; the balance 5 per cent was payable within 45 days on receipt of the stores in acceptable condition.

On receipt of the first consignment, it was found by factory 'A' that the stores did not bear any inspection mark. These were, therefore, put to chemical tests (January 1974). On the basis of the test results, 211 kilograms of type 'N' steel were rejected (March 1974) due to lower cobalt content; 174 kilograms of type 'M' steel were, however, found acceptable. On receipt of the second consignment, it was found (February/March 1974) by factory 'A' that the size of both types of steel was very much higher than that specified and that there was different inspection mark (not of the Inspector) on the pieces. The consignment was not, however, immediately rejected. Factory 'B', which was informed (March 1974) by factory 'A' about the non-existence of appropriate inspection mark on the steel pieces, stated (April 1974) that only 10 per cent of the stores had been inspected and inspection stamps were put on those pieces only. After conducting chemical tests, the second consignment was rejected *in toto* in July 1974 only. The part rejection of the first consignment and the total rejection of the second consignment were brought to the notice of the firm in March 1974 and August 1974 respectively. The firm was asked in August 1974 to replace the rejected stores. The firm, however, refused (August 1974) to accept any liability stating that the factory had taken delivery of the wrong stores from the Railways. This was repudiated by factory 'A', but efforts made till October 1975 to persuade the firm to replace the rejected steel pieces did not produce any result. No action was, however, taken against the firm.

In August 1976, the General Manager of factory 'A' set up a Board of Enquiry to investigate the case. The Board confirmed in its report that all the steel pieces were not enfaced by the Inspection Authority with inspection stamps and that there was delay in rejecting the stores and reporting the rejections to the firm. As the steel pieces received were of inferior quality (carbon steel instead of super high speed steel) and did not have proper inspection marks on them, the Board concluded that the firm might have replaced the material inspected by factory 'B' during the intermediate period between inspection at its premises and despatches and that it had thus fraudulently supplied inferior material and not that inspected by factory 'B'. The Board recommended that a suit might be filed against the firm if it failed to make good the loss. No action was taken on its recommendations and a fresh Board was set up by the Director General, Ordnance Factories in April 1978; its findings were awaited (December 1978).

CHAPTER 3

WORKS AND MILITARY ENGINEER SERVICES

22. Review of inventory holding patterns in the Military Engineer Services in a Command

1. *Introductory.*—Inventories carried by the Military Engineer Services (MES) include earth-moving equipment, tools and plant like road rollers, generators, concrete mixers and building materials such as steel and cement. Two main authorities that hold engineer equipment, stores, tools and plant are the Engineer Stores Depots (ESDs) which hold them as stock and Garrison Engineers (GEs) who hold them for normal use. Among equipment held by the ESDs are specific items like tractors, receipts and issues of which are controlled by the Engineer-in-Chief (E-in-C). The Chief Engineer (CE) of the Command also controls a pool of items held in the ESDs in common demand for works in engineer formations under him. Inventories of tools, plant and stores held by a GE include those required for project and maintenance work by him against authorisation, as well as on behalf of the Zonal CE. An examination (September 1978) in audit of inventories held in an ESD (other than reserves authorised) and by selected GEs disclosed the following features :

2. *Earth-moving equipment*

2.1 *Tractors.*—In accordance with orders issued (December 1976) by the Ministry of Defence, tractors are to be considered for discard after completion of either 6000 hours or 15 years, whichever contingency occurs earlier. Seventyone tractors (value : Rs. 232 lakhs) backloaded by various units were held by the ESD in repairable condition in September 1978. Test-check of their log books revealed the following :

— 27 tractors (value : Rs. 86 lakhs) had completed 15 years but not 6000 hours; of these 11 had done less than 25 per cent of prescribed 6000 hours and the majority of the remaining between 25 per cent and 50 per cent.

— 24 other tractors (value : Rs. 81 lakhs) stated to be under discard had neither completed 15 years nor 6000 hours; these had been held in the ESD as repairable stock from two to three years and had one to four years left to complete 15 years of life. According to the Ministry of Defence (February 1979), these tractors being surplus to "authorisation" were not to be overhauled.

— 17 repairable tractors (value : Rs. 55 lakhs), not covered under discard, were held in the ESD from various dates from February 1975 onwards; out of these, 8 (value : Rs. 26 lakhs) had (September 1978) only 3 to 5 years left to complete 15 years' life for discard. The Ministry stated (February 1979) that 9 had since been sent for overhaul and the balance would be sent for overhaul on receipt of intimation from the workshop.

— The remaining 3 tractors (value : Rs. 10 lakhs) were held for repairs.

2.2 *Non-utilisation of serviceable tractors.*—The following tractors backloaded by units for repairs or procured from trade remained in the ESD for long periods as shown below :

— 16 tractors (value : Rs. 52 lakhs) due for discard by 1980/1981 had been repaired, but remained (September 1978) in the ESD for 1 to 6 years (14 nos.) and over 6 years (2 nos.); three of these tractors were stated (February 1979) to have been issued out.

— 3 tractors (value : Rs. 5.30 lakhs) procured (August 1972) from a public sector undertaking continued to be held (September 1978) by the ESD for 6 out of 15 years of their prescribed life. The Ministry stated (February 1979) that these had since been issued out.

— 7 serviceable tractors (value : Rs. 23 lakhs) backloaded by units from 1974 onwards (and due for discard by 1980/1981) were held (September 1978) in the ESD for 1 to 4 years; one out of these 7 tractors was stated (February 1979) to have since been issued.

— One tractor (value : Rs. 4 lakhs) backloaded to the ESD in September 1970 and held after overhaul (1971) was issued to the MES only in September 1977.

2.3 *Tractor spares.*—It was observed from the provision review conducted in August/October 1977 that spares to the extent of 51 to 83 per cent of the total stock were held in the ESD in excess of requirement in respect of three models of tractors which were to be phased out by 1980 and which, the Engineers stated, would not be repaired or overhauled. On a test-check in audit of spares for one of these models involving 903 items (cost not known), it was noticed that according to the requirements projected by the ESD for the next two years 581 items would be utilised in over 25 years (98 items), 10 to 25 years (81 items), 5 to 10 years (161 items) and 2 to 5 years (241 items). The Ministry stated (February 1979) that spares were previously procured on the basis of the Initial Stocking Guides for each equipment but these were now being procured on the basis of past wastage rate. The Ministry added that there was accumulation of spares for some items for which disposal action was in hand.

3. *Utilisation of a concreting plant.*—An automatic concrete batching plant with accessories procured in 1966 at an approximate cost of Rs. 8 lakhs (in foreign exchange) excluding Rs. 0.32 lakh paid as commission to the Indian agent was held in stock in an Engineer Park for about three years from November 1970. It was received (October 1973) by an engineer unit for use in concreting work (freight charges: about Rs. 0.35 lakh). Its erection was completed in April 1974 at a cost of Rs. 0.67 lakh.

The contract concluded by the CE stipulated issue of the plant on hire at Rs. 1,020 per day and Rs. 514 per off-day for concreting work of 45,705 tonnes. Under optional clause of the contract, the contractor, however, used ordinary concrete mixers under his own arrangements. The plant was backloaded and received in the ESD in August 1976; Rs. 1.02 lakhs spent on its transportation and erection proved infructuous.

The other points observed were :

— The plant was left exposed to rain awaiting despatch to the ESD and its motors and engines were (August 1976) in rusted condition.

— The plant, though received in August 1976, was not formally handed over by the GE to the ESD till February 1978 and was kept in the open with components getting further deteriorated; on taking it over, the ESD noticed absence of batteries, leakage in fuel system etc.; the engines, generators and motors required major overhaul and the plant was unserviceable.

— In March 1978 the ESD sought orders from the E-in-C whether the plant should be erected to test serviceability or disposed of in 'as is where is' condition. The cost of erection for testing was estimated at Rs. 0.15 lakh. The E-in-C advised (April 1978) the ESD to check the serviceability of each equipment separately to avoid expenditure on erection of the plant.

A Board of Officers was stated to have been detailed (June 1978) by the E-in-C to assess the serviceability of the plant and its proceedings were awaiting finalisation (January 1979).

4. *Other stores.*—In accordance with the Standing Instructions issued by the E-in-C, accounting of Engineer stores is on numerical basis and, therefore, the total value of stores held in the ESD was not available. Besides reserves, tractors and their spares, there were about 1,500 items including generating sets, refrigerators, pumps, plates of various sizes, cables, canvas and steel; out of these 1,078 items had not been issued for over 10 to 15 years and there were meagre issues of the rest. A test-check of the utilisation of 15 items (stone crushers, dumpers, road rollers, etc.), value of which could be ascertained, disclosed that 3 items (value : Rs. 1.27 lakhs) were never utilised and 12 items (value : Rs. 3.74 lakhs) were held without utilisation for over 2 to 3 years. Where the items had been utilised, the percentage of utilisation was below 10 per cent (4 items) and below 40 per cent (8 items). It was stated (June 1978—November 1978) that these stocks occupied an area of about 31,000 square metres (about 7 acres). The cost of 196 out of 1,500 items, assessed by a Board of Officers (June 1977) for the purpose of recommending their disposal, was Rs. 9 lakhs. The items were yet to be disposed of (September 1978).

The Ministry stated (February 1979) that out of the slow moving items, about 130 items of petroleum tank components had been disposed of and that action was in hand for disposal of the remaining items for which there had been no issues.

The cost of stock, other than tractors and stockpile of steel, in terms of weight amounted to Rs. 18 crores approximately (at the rate of Rs. 0.25 lakh per tonne) as indicated by the

ESD. The Ministry stated (February 1979) that spares worth Rs. 17 crores were included in these items.

5. *Procurement of 20-ton tractors and trailers.*—Orders for 12 tractors (cost : Rs. 20.15 lakhs) and 12 trailers (cost : Rs. 10.61 lakhs) with their fifth wheel assemblies (cost : Rs. 0.72 lakh) were placed by the E-in-C on two private firms during November 1973 and July 1974 respectively. The trailers without fifth wheel assemblies were received in one MES Division in October and November 1974 and parked in the open and the tractors received in October 1975 were kept in covered accommodation in a nearby ESD.

In January 1976 and again six months later, the GE reported that 20 per cent of the trailer bodies had rusted, that hair-cracks in tyres had increased and that normal life of batteries of the tractors was over. Thereafter, instructions were received (August 1976) by the GE from the Commander Works Engineer (CWE) to divert the batteries from the tractors for use in nearby Engineer formations.

As tractors were procured without cabins, work of construction of cabins was allotted to a firm in March 1976 at Rs. 0.82 lakh and completed in 3 months. The 5th wheel assemblies of trailers were received and fitted only by September 1976. Thereafter, the tractors and trailers were formally consigned to outstations during December 1976—February 1977, but 3 tractors with trailers (out of 12) costing Rs. 8.07 lakhs continued to remain in the nearby ESD.

The Ministry stated (February 1979) that the trailers being large in size, no covered accommodation was available for them and their deterioration was of a minor nature. The Ministry added that 3 tractors along with trailers were held by the ESD as loan for transporting plants and that out of 48 batteries, alternative use for 22 was found.

6. *Idle tools and plant with GEs.*—A test-check of utilisation of tools and plants in three divisions indicated (September 1978) the following :

GE 1

Forty-six serviceable plants (value : Rs. 2.38 lakhs) held in the division had not been utilised for over 7 years (except 3 used in one year only). These included a tractor (value : Rs. 0.66 lakh) held without use from 1969 and 28 other plants (value : Rs. 0.51 lakh) never used since receipt and held idle for over 15 years. According to the Ministry (February 1979), most of these plants were under discard policy.

GE 2

Twenty-two plants (value : Rs. 24.73 lakhs) including 10 tractors (value : Rs. 23.06 lakhs) in repairable condition, 4 generating sets (value : Rs. 1.23 lakhs) and one concrete mixer (value : Rs. 0.28 lakh) were held for over 8 years in the division after completion of a project. In addition, tools and spare parts (value : Rs. 4.34 lakhs) were held by the division as surplus to requirements. Of 9 serviceable plants, 4 items (value : Rs. 0.38 lakh) remained unused from January 1975. The Ministry stated (February 1979) that the plants had become surplus on completion of a project, and most of these were under disposal.

GE 3

In this division, 10 plants (value : Rs. 3.90 lakhs) were held. These included a well-boring rotary rig (value : Rs. 2.02 lakhs) held as repairable since September 1976, bitumen sprayers and concrete mixers (value : Rs. 0.23 lakh) not utilised during the last 3 years. These were reported (February 1979) to be under disposal.

7. *Divisional Stock.*—Government regulations stipulate holding of a stock of stores in each division (GE) to cater for

rapid execution of minor works and maintenance (paints, bulbs, etc.). Limits of such stocks not exceeding four months' average requirement are to be fixed by the CWE. A test-check in 5 divisions revealed that the value of stock held at the end of each of the years 1975-76 to 1977-78 as well as the maximum limit fixed was considerably more than the average consumption of 4 months as indicated below :

Division	Year	Average consumption for 4 months	Maximum limit fixed by CWE	Actual stock held
				(Rs in lakhs)
1	1976-77	0.73	1.56	1.94
	1977-78	0.73	4.35	4.74
2	1975-76	0.17	1.49	0.75
	1976-77	0.79	1.68	1.09
	1977-78	0.32	0.87	0·66
3	1975-76	0.03	1.17	0.90
	1976-77	0.21	1.17	1.18
	1977-78	0.11	1.17	0.23
4	1975-76	0.54	3.78	1.08
	1976-77	0.21	1.45	1.18
	1977-78	0.36	1.43	1.12
5	1975-76	0.62	3.13	0.89
	1976-77	0.67	2.67	1.01
	1977-78	0.68	1.79	1.13

According to the Ministry (February 1979), the CE has issued instructions to Zones to ensure that stocking is limited to essential requirements.

8.0 *Procurement and holding of steel and cement.*—A review of the pattern of procurement of steel for 32 civil works projects (cost : Rs. 1280 lakhs) executed by 14 GEs during 1972—1978 and 7 projects (cost : Rs. 257 lakhs) covering the review of cement procurement indicated the following position :

	Steel		Cement	
	Qty. (in tonnes)	Cost* (Rs. in lakhs)	Qty. (in tonnes)	Cost** (Rs. in lakhs)
Procurement against monetary allotment for each of the projects . . .	17,901	311.47	11,673	30.46
Used in these projects	6,016	104.68	5,852	15.27
Excess procurement .	11,885	206.79	5,821	15.19

8.1 *Procurement and utilisation of steel.*—In respect of 32 projects, procurement and utilisation patterns were analysed and the following points were noticed :

— Against total requirement of 6,016 tonnes of steel (cost : Rs. 104.68 lakhs), procurement amounted to 17,901 tonnes (cost : Rs. 311.47 lakhs) which included 8,253 tonnes (cost : Rs. 144 lakhs) obtained by transfer from other works. Thus, excess procurement was of the value of Rs. 206.79 lakhs. Consequently, 10,558 tonnes (including 2,305 tonnes procured from steel mills) costing Rs. 184 lakhs had to be transferred to other projects (6,581 tonnes) and outside divisions (3,977 tonnes).

— The percentage of utilisation of steel procured for the 32 projects varied from nil to 53.

— Handling charges at the rate of 6 per cent (laid down by the E-in-C) on excess quantity of steel procured that had to be transferred to outside divisions worked out to Rs. 4.14 lakhs.

* Computed at Rs. 1,740 per tonne.

**Computed at Rs. 261 per tonne.

— Steel obtained from producers was free on rail destination. Freight charges for transfers to other GEs at the flat rate laid down by E-in-C amounted to Rs. 3.45 lakhs.

— In Project S-1 despite the fact that contracts for execution of works concluded by the Zonal CE stipulated that steel would be provided by the contractor, 473 tonnes of steel (cost : Rs. 8.23 lakhs) were procured in 1975-76 against monetary allotment for the project. The GE indicated (July 1977) that this was not required for the project. The Ministry stated (February 1979) that procurement action was taken in advance on the assumption that the department would supply steel to the contractor; the contract, however, provided that steel items would mostly be arranged by the contractor.

— 1,251 tonnes (cost : Rs. 22 lakhs) of certain sections of steel procured for 18 projects remained entirely unused (September 1978). Out of 311 tonnes of certain other sections of steel (cost : Rs. 5.41 lakhs) procured for 6 projects, only 54 tonnes (cost : Rs. 0.94 lakh) could be used in works (September 1978).

— In respect of Project S-17, the GE stated (October 1978) that 364 tonnes of steel (cost : Rs. 6.33 lakhs) transferred to the project were not required for the project, but transferred only for financial adjustment of funds.

— According to the GE (September 1978) who executed Project S-2, the poor utilisation was due to provisioning of steel before finalisation of designs for specific work. Thirtyone tonnes of 4 steel items (cost : Rs. 0.54 lakh) received by transfer from other projects during 1972-73 had remained entirely unused (September 1978). The extent of deterioration of steel in storage could not be ascertained.

— The GE, who executed projects S-4, S-10, S-12, S-18, S-30 and S-31, stated that unless unwanted stores procured for the projects were transferred therefrom, funds would not be available for actual requirements of those projects and hence there were large number of inter-project and inter-divisional transfers. It was indicated that excess procurement was because of transfers from other projects and that steel was procured from funds provided for specific projects for possible use in future projects. This amounted to unauthorised utilisation of funds for specific projects and diversion of monetary allotment without approval of the sanctioning authority for the projects.

8.2 A few cases of repetitive transfers involving utilisation of funds allotted for specific projects and fictitious adjustments in one division are given below :

40 *mm Square Bars*.—Eighty tonnes (cost : Rs. 1.39 lakhs) were procured by the GE in January 1973 for use in a specific project. The entire quantity remained unused (September 1978) after a series of transfers as follows :

— Fourteen tonnes were transferred out to another project in March 1973, to a second project in December 1974 and to a third project in September 1975.

— Another 14 tonnes were debited against another project in March 1974 and thereafter to a second project in September 1974 which already had a balance stock of 2 tonnes.

— Ten tonnes were transferred in March 1974 and again (August 1974) to another project where it continued to be held unutilised (September 1978).

— Thirtyseven tonnes were transferred (September 1975) to another project which already had a stock of 13 tonnes.

— Five tonnes were transferred to three different projects in March 1974. The project to which the cost of three tonnes was debited in the first instance already held a quantity of 11 tonnes transferred from elsewhere.

The GE stated (May 1978) that the entire quantity (80 tonnes) was being declared surplus.

Rolled Steel Joists.—Out of 16 tonnes (cost : Rs. 0.28 lakh) obtained for a project in December 1973, 14 tonnes were transferred to another project and thereafter to yet another project in September 1975, where it remained unutilised (November 1977). Nineteen tonnes (cost : Rs. 0.33 lakh) obtained in December 1973 by transfer and debited against a project were subjected to a series of (5) transfers up to November 1976. It was observed that despite these transfers, 14 tonnes (cost : Rs. 0.24 lakh) remained unused (April 1978).

Torsteel 10 *mm.*—One hundred and eightyone tonnes (cost : Rs. 3.15 lakhs) were procured and debited against a project in September 1975, by transfers. The utilisation in the project was only 2 tonnes and the balance had to be subjected to a series of further transfers. The position regarding the ultimate utilisation of the balance 179 tonnes was awaited (January 1979).

A test-check of utilisation of certain specific sections of steel held in the inventory of another GE for a project showed that against a requirement of 23 tonnes of 6 sections (cost : Rs. 0.40 lakh), the division procured 229 tonnes (cost : Rs. 3.98 lakhs) during 1972 and debited its cost to the project. This necessitated transfer of 188 tonnes to other projects or divisions involving additional expenditure on freight and handling; the balance stock left with the GE was 9 tonnes only after utilising 32 tonnes in the project. The Ministry stated (February

1979) that procurement action was taken by a CE (different from the present one) when the area was under his jurisdiction.

9. *Procurement and transfers leading to surpluses*

9.1 *Zonal CE I.*—A test-check of stores declared surplus by the Zonal CE indicated that out of 2,234 tonnes of steel (cost : Rs. 38.87 lakhs) held (May 1978) on charge of projects undertaken by 17 GEs, 1,479 tonnes (cost : Rs. 22.57 lakhs) had to be declared surplus. Out of 1,479 tonnes declared surplus, an analysis of 962 tonnes pertaining to two GEs indicated the following position :

Division 1—806 *tonnes surplus.*—In this Division it was observed that out of 675 tonnes of certain sections of steel procured/obtained by transfer from other projects (1971 to 1977), 453 tonnes (cost : Rs. 6.91 lakhs) remained unused and were declared surplus. The GE stated (October 1978) that the non-utilisation was due to change in design, steel having been procured at the planning stage. It was, however, observed that while 80 tonnes (cost : Rs. 1.22 lakhs) of a specific section were procured in March 1973 and remained unutilised, another 84 tonnes (cost : Rs. 1.28 lakhs) of the same section were procured in December 1977 and the entire lot declared surplus. Out of another lot (409 tonnes) of steel obtained by transfers, only 56 tonnes could be used, leaving a surplus of 353 tonnes (cost : Rs. 5.39 lakhs).

Division 2—156 *tonnes surplus.*—Six hundred and eightyone tonnes of 5 specific sections of steel were procured for a project. Out of these, 427 tonnes were obtained by transfer and 254 tonnes purchased (between 1965 and 1968) from producers. One hundred and fiftysix tonnes were held (30th September 1978) surplus, though the project was completed in 1971. The Ministry stated (February 1979) that though the completion of the project was shown as 1971, stores for the project were issued even during 1975-1976, that building works were completed in November 1976 and that surplus steel had been circulated to defence priority indentors.

9.2 *Zonal CE II.*—Four hundred and fortyseven tonnes of steel—cost : Rs. 9.10 lakhs—(including 386 tonnes procured in 1971 and 1972) were declared surplus in 1975 by a GE, but orders regarding its disposal were awaited (August 1978). The GE stated (August 1978) that the non-utilisation of steel was due to change in location of the buildings planned as well as the design. It was, however, observed that while suspension of work on this account was ordered in March 1972, 358 tonnes (cost : Rs. 7.16 lakhs) of steel (since declared surplus) had actually been obtained during April 1972—March 1978 *i.e.,* after the suspension of the work. Further, from 1972 to 1977, while the stock was held in the division, 50 tonnes (cost : Rs. 0.87 lakh) of the same section were purchased by other divisions under the same Zonal CE and 490 tonnes (cost : Rs. 8.53 lakhs) for a Project at a nearby station.

10. *Payment of advance for steel.*—In accordance with Government orders, CEs are authorised to make 100 per cent advance payment to stockyards of main producers after ensuring that the quantity and quality of steel actually available is strictly in accordance with the offer made by the suppliers. A test-check of payments for steel procured by three MES divisions showed that supplies (a) of the value of Rs. 19.68 lakhs were received after lapse of 5 months to 15 months and (b) of the value of Rs. 2.44 lakhs after a lapse of over 15 months. It was also observed that supplies received were less than the quantity for which orders had been placed (expected to have been placed after ascertaining availability) but refund due was obtained only after one to three years.

	(Rs. in lakhs)
Refund obtained between one and two years	1.40
Refund obtained after two years	3.06

The Controller of Defence Accounts (CDA) concerned intimated (January 1979) that advances of Rs. 156.15 lakhs were outstanding in 54 MES divisions in the Command for periods ranging from one to over seven years (1970—1977).

The Ministry stated (February 1979) that :

- orders for advance payment for supplies of steel to stockyards of main producers were issued with a view to obtaining supplies quickly;
- due to procedural delays there was always a time-gap between ascertaining the availability of stock and actual payment and during this period the stock held in the stockyards depleted as a result of other sales and consequential delay in supplies; and
- efforts were made to reduce the outstandings and according to the Command authorities, the amount outsanding as on 30th November 1978 was Rs. 9.51 lakhs.

There was, however, wide variation between the figures of outstanding advances as furnished by the CDA (Rs. 156.15 lakhs—January 1979) and those by the Command authorities (Rs. 9.51 lakhs—as on 30th November 1978).

Billet re-rollers were to be paid for supply of steel only against delivery or against proof of despatch. Advances totalling Rs. 36.49 lakhs were, however, paid to billet re-rollers by 6 divisions during 1972 to 1975. In one such case, out of Rs. 1 lakh paid in November/December 1971, supplies were made only for Rs. 0.52 lakh and an amount of Rs. 0.48 lakh was yet to be recovered (September 1978) from the firm. According to the Ministry (February 1979), the outstanding amounted to Rs. 0.62 lakh for which legal action was in progress.

11. *Procurement of steel for a Naval project*

In a Naval project for repair and maintenance facilities approved by Government in September 1968, the project authorities proposed in July 1969 that a stores sub-park be created to hold and account for stores centrally. The creation of a central store for the project was sanctioned (December

1969) by the Ministry of Defence subject to the following conditions :

— Stores held for non-sanctioned works were not to exceed Rs. 50 lakhs at any time.

— Only stores that were essential to the speedy execution of the project were to be procured against budget provision for non-sanctioned works.

— It would be ensured that stores procured for works in anticipation of issue of administrative sanctions would be fully utilised and did not become surplus.

— Separate material accounts (indicating value) and material ledger (indicating quantity) would be maintained.

The above orders of December 1969, which were to expire in March 1972, were extended up to March 1975 subject to a reduction in the monetary ceiling from Rs. 50 lakhs to Rs. 30 lakhs. No further extensions were either sought or granted. The value of inventory of steel as observed from the concerned ledgers considerably exceeded the ceiling throughout the period as under :

	Prescribed ceiling (Rs. in lakhs)	Value of steel held (Rs. in lakhs)	Percentage of excess over prescribed ceiling
March 1971	50	78	57
March 1972	50	258	416
March 1973	30	276	820
March 1974	30	226	653
March 1975	30	102	240

While there were no orders authorising holding of stock for non-sanctioned works after March 1975, such stocks continued to be held for Rs. 102 lakhs (March 1975), Rs. 81 lakhs (March 1976), Rs. 61 lakhs (March 1977) and Rs. 48 lakhs (March 1978).

According to the project authorities, the value of steel held against non-sanctioned works was Rs. 23.51 lakhs only (January 1979) and a case for obtaining covering sanction for the central stock holding till the end of March 1979 had already (November 1978) been initiated.

Further, a test-check of inventory of steel held in the project indicated that stock levels maintained were considerably more than the requirement as analysed below :

Year	Procurement	Total including previous closing balance	Used	Closing balance
	(............in tonnes	....	....	)
Prior to 1970-71	2,350	—	93	2,257
1970-71	4,920	7,177	3,024	4,153
1971-72	13,256	17,409	1,826	15,583
1972-73	6,966	22,549	5,711	16,838
1973-74	3,665	20,503	6,729	13,774
1974-75	3,398	17,172	6,896	10,276
1975-76	3,213	13,489	4,199	9,290
1976-77	1,015	10,305	2,877	7,428
1977-78	543	7,971	2,172	5,799

As a result of the excess holding, 1,586 tonnes of steel (including 1,360 tonnes procured for non-sanctioned works) valued at Rs. 24.18 lakhs had to be declared surplus in October 1977. While the EinC was approached (December 1977) for exploring utilisation of the surplus, 391 tonnes of steel (value : Rs. 5.94 lakhs) had to be transferred (up to October 1978) to other outstation Divisions incurring an expenditure of Rs. 1.13 lakhs on freight plus Rs. 0.36 lakh (6 per cent of the value of Rs. 5.94 lakhs) as handling charges. Remaining 1,195 tonnes of surplus steel (cost : Rs. 18.22 lakhs approximately) were held in stock awaiting disposal (October 1978). Handling charges alone for this quantity would work out to Rs. 1.09 lakhs.

In regard to holding stock above the authorised limit for non-sanctioned works, the project authorities explained (March 1978) that stores were procured in the initial stages of the project when supply of steel was controlled and no estimates for works were pending with Government for sanction.

3,644 tonnes of steel were obtained for the Naval project from stockyards of steel plants. As steel ex-stockyard was stated to be costlier by Rs. 245 per tonne (approximately) than that available ex-steel plant, such procurement involved an additional expenditure of Rs. 8.93 lakhs. The project authorities stated (January 1979) that essential demands (other than bulk) were placed on the stockyard and extra expenditure so entailed was unavoidable.

12. *Procurement of cement*

An analysis of procurement and utilisation of cement in 7 projects disclosed the following points :

— As mentioned in sub-paragraph 8.0 against the total procurement of 11673 tonnes of cement during 1972—1978 for 7 projects, 5852 tonnes were used leaving the balance of 5821 tonnes (cost : Rs. 15.19 lakhs) out of which 5811 tonnes of cement (cost : Rs. 15.17 lakhs) had to be transferred to other works including 2,245 tonnes (cost : Rs. 5.86 lakhs) to other MES divisions, involving expenditure of Rs. 0.64 lakh on freight and handling.

— According to the procedure for provisioning of cement, requirements for a period of 3 months at a time are forecast 6 months in advance and reviewed 3 months hence. Out of the 7 projects analysed, this procedure was followed only in 2 projects (C-3 and C-6). Even here, against 940 tonnes estimated and demanded, 3,874 tonnes were procured, out of which 1,961 tonnes only were used resulting in excess procurement of 1,913 tonnes.

— The utilisation ranged from 6 to 65 per cent of procurement in 7 projects.

In a division against the requirement of 16,545 tonnes of cement (cost : Rs. 43.18 lakhs) for a project, 19,698 tonnes (cost : Rs. 51.41 lakhs) were procured resulting in a surplus of 3,153 tonnes (cost : Rs. 8.23 lakhs). The surplus stock was transferred to other divisions during May 1976—June 1977, incurring an expenditure of Rs. 1.85 lakhs on freight and handling. This included 105 tonnes despatched under the orders (May 1976) of a Zonal CE to another station 600 kms. away and not accepted by the consignee for want of storage facilities. The consignment was subsequently received back resulting in an infructuous expenditure of Rs. 0.16 lakh on freight. The Ministry stated (February 1979) that on the findings of a Court of Inquiry held in this case, one officer was awarded severe displeasure of the Army Commander and disciplinary action against another officer was under their consideration.

13. *Summing up*

The important points emerging from the above review are mentioned below :

— 71 tractors (value : Rs. 232 lakhs) which had been utilised to a limited extent were held (2 to 3 years) in a repairable condition in an ESD and allowed to age. Of these, 27 (value : Rs. 86 lakhs) were under discard, 24 (value : Rs. 81 lakhs) due for discard during 1980/1981 and 17 (value : Rs. 55 lakhs) had 3 to 5 years of their prescribed life of 15 years left for discard.

— 19 serviceable tractors (value : about Rs. 62 lakhs), which had not been fully utilised, continued to be held in the ESD without turnover.

— Spares for certain models of tractors (value not known) due for discard by 1980 were held in the ESD much in excess of requirements.

— A concrete batching plant (approximate cost: Rs. 8 lakhs) procured in 1966 and issued to an engineer park in 1970 remained unutilised for 3 years. It was subsequently (October 1973) transferred to an engineer unit for issue to a contractor, backloaded in August 1976 without being put to use and received in the ESD where it was lying in an unserviceable condition.

— About 1,500 items of other stores (approximate value: Rs. 18 crores) held in the ESD for long periods were awaiting disposal; of these 130 items were stated (February 1979) to have been disposed of.

— Tools and plant (value: Rs. 31.01 lakhs) were lying idle for 3—8 years with 3 GEs in the Command.

— Stock for maintenance was held in 5 divisions in excess of requirements at the end of 1975-76 to 1977-78.

— Building materials (steel and cement) of the value of Rs. 221.98 lakhs, procured in excess of requirements for various projects, resulted in diversion of surplus stock to other works (without adequate requirements in some cases so as to avoid lapse of funds) and involving unnecessary expenditure (Rs. 8.23 lakhs) on transportation and handling.

— As per information furnished (January 1979) by the CDA concerned, a sum of Rs. 156.15 lakhs on account of advance payments made to suppliers of steel was outstanding for periods ranging from one to over seven years in 54 MES Divisions, though according to Ministry of Defence (February 1979) the outstanding amount as on 30th November 1978 was Rs. 9.51 lakhs only. There were also delays in receipt of supplies and obtaining refunds for supplies not materialised/short supplied.

- Steel was held in excess of the authorised limit of Rs. 50 lakhs applicable up to March 1972 (thereafter reduced to Rs. 30 lakhs applicable up to March 1975) for central stores park for a Naval project. Even after March 1975, large stock of steel continued to be held without proper authorisation. The value of such stock at the end of March 1978 was Rs. 48 lakhs (as against Rs. 102 lakhs at the end of March 1975). According to the project authorities, the value of such stock was Rs. 23.51 lakhs only (January 1979).
- Additional expenditure of Rs. 8.93 lakhs on procurement of 3,644 tonnes of steel for the Naval project from stock-yards instead of from steel plants directly.

The Ministry of Defence offered (February 1979) general comments as under :

- According to a decision taken by the E-in-C, serviceable new plants meeting the discard criteria would not be discarded because of age.
- Tractors due for discard in 1980 were not repaired/overhauled in order to avoid expenditure on repair/overhaul.
- Surpluses had cropped up over the years due to various reasons like change in the authorisation of units and Engineer Theatre Store Reserves.
- Review of surplus stores held in the ESD was carried out (February 1977 and thereafter) and action for disposal of net surpluses was being progressed in order to reduce the dead inventory.
- The maximum limit of divisional stock was fixed based on the assessment of normal requirement for

4 months and not with reference to average consumption for that period.

— Stocking also took into account the lead time for procurement of stores. As per instructions now issued by the E-in-C to the Zonal CEs, stocking was to be limited to essential requirements.

23. **Execution of a Naval project**

In paragraph 19 of the Report of the Comptroller and Auditor General of India, Union Government (Defence Services) for 1974-75, mention was made of the execution of a contract (May 1967) for dredging in a Naval project bringing out the following points :

— suspension of the dredging of the degaussing basin in 1969 after incurring expenditure of Rs. 50 lakhs and deferment of the programme of dredging to 1978-79 due to inadequacy of soil survey of the area;

— extra payment of Rs. 9.85 lakhs to the contractor by way of higher rates on areas dredged due to inability of the project authorities to make available the total area for dredging and due to foreclosure of the contract; and

— negotiation of a fresh contract (in 1973-74) for dredging inclusive of the residual quantity of the earlier contract at a higher rate of Rs. 8.20 per cubic metre against the earlier rate of Rs. 3.50 per cubic metre (*i.e.* 234 per cent of the earlier rate) with the same contractor, involving additional expenditure of Rs. 122.53 lakhs as a result of conclusion of the new contract.

The project authorities stated (June 1975) that the work of dredging beyond 5 million cu.m. had to be suspended, *inter alia,* due to non-completion of acquisition of 22 acres of Port

Trust land and increased presence of rock in the degaussing basin, the site of which had to be shifted.

An analysis of the process of acquisition of land and dredging of the degaussing basin revealed the following :

Increase in cost of Port Trust land required for the project.— It was observed that as far back as 1971 (when the earlier dredging contract was still in force), the Port Trust had indicated their willingness to make available 22 acres of land, then estimated to cost Rs. 13.45 lakhs, subject to the Navy meeting expenses on the re-location of a Mercantile Training Establishment (3.66 acres) under the Ministry of Shipping and Transport and a private boat building yard (1 acre) in the area. However, in 1972 the Navy considered that on security considerations, it was not desirable for the two establishments to continue in the area. The question of shifting these establishments (at the instance of the Navy) remained under discussion till October 1973 when the Navy agreed to allow them in the existing location until they were able to shift to a new location. The Navy also agreed to accommodate the private yard in another unused space belonging to it and to pay the cost involved in its shifting. Thereafter. sanction of the Ministry of Defence was accorded in October 1975 to the payment of Rs. 10.50 lakhs, to the Port Trust for re-siting the two establishments. In the meantime, quinquennial revision of the value of the Port Trust land due in March 1973 was undertaken by the Port Trust authorities in January 1974; consequently, the delay in taking a decision by the Naval authorities resulted in additional payment of Rs. 21.52 lakhs (over the earlier estimated cost of Rs. 13.45 lakhs) to the Port Trust (March 1975).

The Ministry of Defence stated (January 1979) that increase in the cost of acquisition was due to yardsticks adopted by the Port Trust which is an autonomous body and was entirely beyond the control of the project authorities.

Degaussing basin.—The sub-soil investigations, laboratory tests, etc. for determining rock surfaces for dredging in the degaussing basin were carried out between March 1968—December 1972 at a total cost of Rs. 10.89 lakhs. The dredging of the site selected for the basin could not, however, be completed due to the existence of rocks and the site had to be shifted after an expenditure of Rs. 50 lakhs had been incurred. The contractor had offered (April 1969) to execute the work of rock blasting at Rs. 102 per cu.m. and removal and transportation of blasted material at Rs. 45 per cu.m. during the pendency of the first contract. Based on the approved rates of the Port Trust, the Ministry of Defence sanctioned (February 1971) the rates for rock blasting and grab dredging of the area at Rs. 85 per cu.m. and Rs. 28.02 per cu.m. respectively.

Due to change in the alignment of the degaussing basin, the cost of dredging and rock blasting (June 1978), based on the quantities of work actually done, increased by Rs. 80.87 lakhs (91 per cent) as shown below :

	Rs. in lakhs
Cost of dredging 22.74 lakh cu.m. at the earlier contracted rate of Rs. 3.50 per cu. m.	79.59
Cost of rock blasting (8,185 cu.m.) at Rs. 85 per cu. m. and removal (9,221 cu.m.) at Rs. 28.02 per cu.m. as per sanction issued in February 1971	9.54
TOTAL :	(A) 89.13
Completion cost of dredging 22.74 lakh cu.m.	123.60
Actual cost of rock blasting (8,185 cu.m.) at Rs. 107.25 per cu m. and removal (9,221 cu.m.) at Rs. 35.75 per cu.m.	12.07
Mobilisation charges*	25.00
Price escalation allowed to the contractor	9.33
TOTAL:	(B) 170.00

Increase (B)—(A) : Rs. 80.87 lakhs

The Ministry of Defence stated (January 1979) that the decision for shifting the degaussing basin was taken after detailed discussions with the specialists in order to reduce the quantity of rock blasting.

Mobilisation charges.—A sum of Rs. 25 lakhs was payable to the contractor as mobilisation charges for dredging work.

*No such charges were payable under the first contract.

80 per cent (Rs. 20 lakhs) of the amount was payable within seven days of arrival of two dredgers (including the unloading dredger). The balance of Rs. 5 lakhs was to be paid after completion of work. There was no return for mobilisation charges (included in Rs. 25 lakhs) paid (May 1974) for the unloading dredger which required repairs in the dry dock before it could be put into operation.

According to the Ministry (January 1979), the fact that the unloading dredger was not operational did not establish that the same was not required or could not be made operational, when required. The unloading dredger was, however, not utilised for the project.

Procurement of a motor boat not needed.—In January 1972, the Ministry of Defence sanctioned procurement of a motor boat for the project at an estimated cost of Rs. 1.32 lakhs. The boat procured through the Director General, Supplies and Disposals at a cost of Rs. 1.04 lakhs was scheduled to be delivered in May 1973; but was actually received in January 1977. Although the requirement was projected (August 1970) for purposes of inspection and measurement of dredging work, the boat could not be used due to :

- — no qualified crew being available to operate the boat;
- — provision in the dredging contract for the contractor to provide at his cost a boat to the project authorities for inspection and measurement of work done; and
- — non-materialisation of attempts to transfer the boat to a neighbouring dry dock project (December 1977).

The Ministry stated (January 1979) that the boat was transferred to the Naval Command Boat Pool to avoid fresh employment/recruitment of necessary crew and it was always available for use in the project.

Change in requirement in an oxygen plant.—In January 1972, the Ministry of Defence accorded sanction, *inter alia,* to the provision of a building for installation of an oxygen plant at a cost of Rs. 3.49 lakhs, revised to Rs. 8.87 lakhs in April 1975. As per the Project Report, the oxygen plant was to be procured from abroad. In November 1973, it was decided by the users to instal a captive (oxygen) plant of an indigenous make. During the project review meeting held in September 1974, a decision was taken to defer installation of the plant and to procure liquified oxygen. Notwithstanding this decision, work on a portion of the building for installing the plant was commenced in January 1976 and stopped only after it had progressed up to plinth level and an expenditure of Rs. 1.20 lakhs had been incurred.

The project authorities stated (March 1978) that foundation and plinth for the plant room were constructed keeping in view the decision of the users taken in November 1973.

The main points, that emerge, are :

— additional payment of Rs. 21.52 lakhs for the transfer of Port Trust land required for the project consequent on delay in taking a decision on shifting two establishments;

— increased expenditure of Rs. 80.87 lakhs on dredging and rock blasting due to change in the alignment of the degaussing basin;

— procurement of a motor boat (cost : Rs. 1.04 lakhs) not needed/utilised for the project; and

— incurring an expenditure of Rs. 1.20 lakhs on the work relating to construction of building for the installation of the captive (oxygen) plant although its installation had been deferred.

24. Provision of temporary blast pens and link taxi-track at an airfield

In July 1966, an Air Command accorded sanction—under the operational works procedure—for construction of 8 temporary blast pens (to protect aircraft and stores against aerial attacks) at a station. The work was to be taken up immediately and completed within the shortest possible time. According to the key location plan, no fighter aircraft were to be based at this station and the blast pens were primarily intended to be used for dispersal of helicopters (including vital stores and equipment).

According to an engineer appreciation (June 1965), the work (including the provision of a link taxi-track) was estimated to cost Rs. 8.67 lakhs. The sanction (of July 1966) for the blast pens, however, did not specify the provision of link taxi-track connecting the blast pens and the runway. In March 1969, the requirement for the link taxi-track was projected to the Air Command which decided (April 1969) to provide only a 12 feet wide road with bituminous surface. The work sanctioned as an operational requirement in July 1966 had not by then (April 1969) been commenced.

A contract (value : Rs. 6.98 lakhs) for construction of the blast pens was concluded with firm 'A' only in July 1970 due to the time taken in planning (up to June 1967) and contract action by the Military Engineer Services (from December 1968 to July 1970). The work was completed in September 1971 at a cost of Rs. 6.20 lakhs.

In the meantime (December 1970), the earlier decision to provide 12 feet wide road was reconsidered by the Air Command and it was decided to provide 35 feet wide link taxi-track with flexible pavement for the blast pens so as to cater for the eventuality of use of the blast pens by fighter aircraft. The original sanction of July 1966 was amended in February 1971 to provide bituminous link taxi-track. The cost of laying the link taxi-track and flooring in blast pens was estimated (January 1971) at Rs. 10.03 lakhs. Since the sanction was only for blast pens, the construction of link taxi-track and approaches could not be included in the contract and their construction had to be planned and taken up separately.

In May 1973, the Engineer-in-Chief pointed out that with the existing levels of the blast pens and the runway, the proposed taxi-track and approaches could not be constructed within the prescribed gradient of 1 in 66 and stated that a specified gradient of 1 in 25.5 was unavoidable if the blast pens were to be put to use. After prolonged consideration, the Air Headquarters accepted (November 1974) the specified gradient. The responsibility for maintenance of the airfield was, meanwhile (October 1973), transferred to the Border Roads Organisation.

In August 1977, the Chief Engineer of the Border Roads pointed out to the Air Command that it was not possible to ease or improve the existing steeper gradient (1 in 17) as the blast pens had earlier been constructed haphazardly. Thereupon, the Air Command suggested (October 1977) that the length of link taxi-track be increased with new alignment. Accordingly, the Chief Engineer submitted (May 1978) an estimate of Rs. 76.56 lakhs for a new alignment of the link taxi-track and flooring in the blast pens. This estimate was under consideration (November 1978) of the Director General, Border Roads.

In addition to the blast pens, the Air Command had approved (July 1972) the immediate commencement of work relating to construction of two operational readiness platforms with associated track links, as an operational necessity, under the revised works procedure, short-circuiting the normal procedure of obtaining administrative approval for the work. The proposal was revised in August 1972 to provide these operational readiness platforms to permanent specifications and the work was to be completed in three phases during October 1972—August 1973 as shown against each :

Phase	Details of works	To be completed by
I	Provision of bituminous link taxi-track	October 1972
II	Provision of hardstanding in concrete with traverse wall	December 1972
III	Provision of complete blast pens with external services	August 1973

The work was entrusted to the Border Roads Organisation in August 1972. Work under Phase I was completed in December 1972 at a cost of Rs. 6.07 lakhs. In respect of Phases II and III, the drawings were finalised by the Engineer-in-Chief's Branch in October 1975 and 99 per cent of the work was completed by November 1977; the remaining work comprising electrification was pending (December 1978).

The following are the main points that emerge :

— the sanction accorded (July 1966) for the blast pens did not include the link taxi-track and as a result, the blast pens and link taxi-track could not be planned simultaneously;

— when, finally, it was decided (February 1971) to provide taxi-track and the work of drawing up the designs was taken up, it was found (August 1977) that the specified gradient could not be achieved with reference to the already constructed blast pens and an additional expenditure of Rs. 76.56 lakhs would have to be incurred to lay a taxi-track of the specified gradient;

— the blast pens constructed in September 1971 at a cost of Rs. 6.20 lakhs as an operational necessity still remained (December 1978) unusable; and

— the operational readiness platforms sanctioned in July 1972 as an operational necessity and envisaged for completion by August 1973 were yet (December 1978) to be fully completed even after 6 years of the sanction.

The Ministry of Defence stated (January 1979) that the blast pens were constructed at the site approved by the users presumably after taking into account the various tactical and operational requirements but the requirement of the users regarding the width and type of link taxi-track was not finalised till December 1970. The Ministry also stated that the work on link taxi-track was held up due tó non-finalisation of gradient of the taxi-track. The Ministry added that the case for issue of a consolidated administrative approval covering all the three phases of the work (estimated cost : Rs. 23.04 lakhs) relating to construction of operational readiness platforms was pending with the Engineer-in-Chief.

25. Provision of bulk electric energy from a State Electricity Board for an Air Force Station

An Air Force Station was obtaining its electric supply from a power house (installed generation capacity : 1400 kw.) run by the Military Engineer Services at the station. In order to economise on the cost of electric supply, the Air Force Station submitted proposal for a work in December 1971 to the Air Force Maintenance Command for obtaining bulk supply from the State Electricity Board, which was available at cheaper rates. The work was sanctioned in January 1973 by the Maintenance Command at an estimated cost of Rs. 3.02 lakhs for completion by 31st May 1974. The estimate was revised to Rs. 3.34 lakhs in August 1973 to cater for some additional electric poles.

Tenders for the work were invited by the Commander Works Engineer in November 1973. Of the tenders received in January 1974, the tender of firm 'A' which had been enlisted for works up to a limit of Rs. 1 lakh (and was invited to tender with the approval of the Zonal Chief Engineer), was the lowest (Rs. 4.19 lakhs). As, however, it backed out of its offer and as the second lowest tender of firm 'B' (Rs. 4.57 lakhs) was considered high, tenders were reinvited (12th February 1974). Firm 'C' which was enlisted in January 1974 for electrical works up to a limit of Rs. 1 lakh was also invited to tender (February 1974) with the approval of the Zonal Chief Engineer. The tender (value : Rs. 4.52 lakhs) of firm 'C', being the lowest, was accepted by the Commander Works Engineer on 27th February 1974 for completion of work within 6 months.

The value of work done by firm 'C' up to the end of August 1974 *i.e.* due date of completion was, however, Rs. 1,389 only. The Garrison Engineer therefore issued (August 1974) a notice to firm 'C' stating that Government would be entitled to claim compensation for non-performance of the contract within the time agreed. Further notices were issued in September 1974, December 1974, March 1975, April 1975, and May 1975 asking firm 'C' to progress the work diligently failing which the contract would be cancelled at its risk. The contract was finally cancelled with effect from 12th September 1975 at the risk and cost of firm 'C'.

In August 1975, a Board of Officers was convened by the Commander Works Engineer, to assess the quantity of work done and check the accounting of stores in respect of the cancelled contract. The Board observed, *inter alia,* the following irregularities in the administration of the contract by the engineers :

— neither the Engineer-in-Charge nor the Garrison Engineer took action to record complete measurements of the work done and the materials brought to site by the contractor for incorporation in the work ;

— dismantled stores valued at Rs. 0.51 lakh were not returned by firm 'C' and the supervisory staff (including the Engineer-in-Charge) failed to watch their return ;

— the works diary maintained by the Engineer-in-Charge did not reflect the day-to-day progress of the work ; and

— the demolition statement and the demolition register did not reflect details of quantities, *e.g.* the number or length of the spans, the size of copper conductor, the length or weight of crossed arms/clamps.

The residual work was tendered in September 1975 and awarded in January 1976 to the lowest tenderer (firm 'D') at a cost of Rs. 5.23 lakhs for completion by August 1976. The work was actually completed on 30th June 1977 and electricity supply commenced by the State Electricity Board from the same date. Extension of time was granted to firm 'D' mainly due to delay in supply of certain equipment by the manufacturer, additional work ordered and delay in commissioning of transformer on account of the time taken for inspection by the electrical inspector.

The total cost of the work (originally contracted for Rs. 4.52 lakhs) amounted to Rs. 6.15 lakhs including Rs. 0.51 lakh for stores not returned by firm 'C'. The defaulting firm 'C' was liable for refund of Rs. 1.63 lakhs (excluding establishment charges). The whereabouts of firm 'C' were not known (January 1979).

A staff Court of Inquiry held in April-May 1977 in this connection observed that the financial viability of firm 'C' was not sound enough to be given a contract of value of Rs. 4.52 lakhs.

Delay in completion of work for taking the bulk supply of electricity from the State Electricity Board resulted in an avoidable expenditure of about Rs. 15.19 lakhs due to continued supply of electricity generated departmentally during September 1974 to June 1977.

The Ministry of Defence stated (December 1977) that :

— no extension of time was formally granted to firm 'C' ; an opportunity was given to it to complete the work but since no progress was made the contract was cancelled in September 1975 ; and

— an amount of Rs. 17,190 available by way of security deposits of firm 'C' had been withheld.

Thus, apart from the extra cost of Rs. 1.63 lakhs due from firm 'C', delay in the cancellation of contract with firm 'C' and also delay in completion of the residual work by firm 'D' had resulted in avoidable expenditure of Rs. 15.19 lakhs.

26. Laying of inferior quality water pipes

I. In July 1972, a Commander Works Engineer (CWE) placed a supply order on firm 'A' for supply of 13,700 metres of cast iron pipes (300 mm : 12,700 metres and 250 mm : 1,000 metres) for water supply works at a station 'X' at a cost of Rs. 12.89 lakhs as per the Director General, Supplies and Disposals (DGSD) rate contract of June 1972. The scheduled delivery date indicated in the supply order was 31st March 1973. The pipes ordered were of class 'A' as per the ISI specifications to withstand a test pressure of 18 kgs. per square centimetre (sq. cm.) after installation.

The pipes despatched by the firm in various consignments were received by a Garrison Engineer (GE) during August 1972—June 1975. The pipes could not be tested at the time of receipt due to lack of testing facilities and were accepted on the basis of the markings and physical inspection by the DGSD. Pipes (242 metres) were reported to have been damaged in transit, for which claims amounting to Rs. 0.28 lakh were preferred during August 1973—February 1975 on the Railways. Claim for loss of 137 metres of pipes (value : Rs. 0.17 lakh) was rejected by the Railways.

A contract for laying and fixing pipes (value : Rs. 2.19 lakhs) was concluded by the CWE with firm 'B' in January 1975 for completion in January 1976 ; the work was actually completed in June 1977.

Work of laying 10 kms. (out of 12 kms.) of the pipeline was completed by January 1976. During execution of the work, bursts occurred at test pressures less than 18 kgs. per sq. cm. (for class 'A' pipes) when water was passed through the pipeline. The CWE brought this matter to the notice of the DGSD in February 1976. Consequently, a joint inspection by the representatives of the firm and of the inspection authority of the DGSD along with the GE was arranged in March 1976. The inspection tests carried out on certain sections comprising 3,076 metres of the pipeline revealed that 7 pipes had cracked in the middle at test pressure varying from 6 to 9 kgs. per sq. cm.

Meanwhile, samples of the pipes were sent (February 1976) to the Indian Standards Institution (ISI) for obtaining a test report. According to the test report furnished by the National Test House (under the Department of Supply) in July 1976, the pipes appeared to be of the lower class 'LA' specification (to withstand maximum test pressure of 12 kgs. per sq. cm.).

The contract for laying of pipes included testing of pipes laid to the satisfaction of the Engineer-in-Charge. In August 1976, the contractor informed the GE that the test pressure prescribed for class 'A' pipes could not be developed due to bursting of pipes even at pressure not exceeding 10 kgs. per sq. cm.

Of the pipes found cracked and unserviceable (169 metres), 39 metres were replaced (January 1977) by firm 'A'. Attempts were also made to seal the cracks and replace the cracked pipes with collars which also proved futile (February 1977). The firm was yet (December 1978) to replace 130 metres of pipes (value : Rs. 0.12 lakh).

In May 1977, the GE informed the CWE that since the pipeline had already been laid and connected to reservoirs, it was not possible to test the pipeline to pressure of 12 kgs. per sq. cm. (applicable to class 'LA' pipes), as these pipes were not able to withstand working pressure higher than 6 to 6.5 kgs. per sq. cm. As, however, the pipeline was withstanding the working pressure, the GE proposed that completion certificate could be given to the contractor. In July 1977, the GE sought approval to vary the particular specification of the contract by carrying out testing to 6.5 kgs. per sq. cm. instead of the prescribed test pressure of 18 kgs. per sq. cm. and this was agreed to by the CWE. However, in November 1977, the CWE reported to the DGSD that the bursting of the pipes had not come to a stop and that further action be taken so as not to jeopardise the interests of the State.

In May 1978, the inspection authorities of the DGSD stated that it was not possible for them to entertain complaints on stores which had been received by the consignee five years ago and which had already been inspected. The DGSD informed (June 1978) the CWE accordingly and added that since the warranty period had expired even before the first complaint (February 1976) was received, the complaint (of sub-standard supply) would not be legally tenable.

The case revealed the following :

— against class 'A' pipes ordered, pipes actually supplied by the firm were found to be inferior to even the lowest class 'LA' specification ; on the basis of difference in prices of class 'A' and class 'LA' pipes, the loss worked out to Rs. 1.17 lakhs ;

— the Engineers were unable to test pressure load even up to 12 kgs. per sq. cm. (applicable to class 'LA' specification) after laying of pipes ; instead the specified pressure was reduced from 18 kgs. per sq. cm. to 6.5 kgs. per sq. cm. (even below the ISI specification for class 'LA') thereby indicating that the original specification was not warranted ;

— completion of the work was delayed by 17 months due to frequent bursts of the pipes ;

— according to the engineers bursts were likely to occur in future also ;

- delay in reporting to the DGSD about the inferior quality of pipes foreclosed the option to take action against the firm ;
- the firm was yet to replace 130 metres of pipes (value : Rs. 0.12 lakh) ; and
- out of Rs. 0.28 lakh worth of pipes damaged in transit, claims worth Rs. 0.17 lakh were rejected by the Railways. Out of the balance of Rs. 0.11 lakh, Rs. 0.06 lakh had already been paid by the Railways and the remaining claims of Rs. 0.05 lakh were under consideration.

The Ministry of Defence stated (December 1978) that :

- it was not possible to verify the class of pipes received, as no testing facilities were available and that the defects found visually were reported to the DGSD and firm 'A' ;
- as claims for 137 metres (cost : Rs. 0.17 lakh) were rejected by the Railways and firm 'A' also disowned responsibility asserting that it had despatched the pipes duly packed as per the terms of the contract, the loss was got regularised under orders of the competent authority ;
- the matter regarding any devaluation or replacement of the balance pipes was being pursued with the DGSD and firm 'A' ;
- no warranty/guarantee had been provided in this rate contract though normally in other rate contracts warranty period was 12 months starting from the date of receipt of the consignment ;
- completion of the work got delayed as the pipes laid had to be cut and collar joints made afresh on many locations ; and
- on recent testing the pipes were found to withstand a test pressure of 9 kgs. per sq. cm. and that bursts were not frequent.

II. In another project at station 'Y' where the laying of cast iron pipes was completed in March 1975, the water supply system was taken over by the users only in September 1977 due to defects in the system on account of frequent bursts. A test-check in audit disclosed the following points :

7,550 metres of pipes (value : Rs. 6.98 lakhs) were received by a GE during 1972—74 under two supply orders placed (March 1972 and August 1973) against the DGSD rate contracts. The pipes ordered and received were of class 'LA' as per ISI specification. In September 1973, the GE informed the CWE that considering the requirements, the pipes should be of class 'C' (to withstand a higher pressure of 30 kgs. per sq. cm. after installation). The CWE replied (October 1973) that when the pipes were originally indented by the GE, the class of pipes was not mentioned and that about 494 metres of class 'LA' pipes had already been incorporated in the work without considering their suitability.

The work of laying the pipes was executed through three contracts and completed during October 1973—March 1975 at a total cost of Rs. 8.04 lakhs (excluding cost of pipes). After laying, the pipes burst on a number of occasions during July 1974—February 1976 at various pressures ranging from 3 to 4 kgs. per sq. cm. involving rectification measures etc. at a cost of Rs. 1.94 lakhs (Rs. 0.62 lakh on strengthening of existing anchor blocks etc ; Rs. 0.53 lakh for pressure release valves and pumps ; Rs. 0.79 lakh for repairs/replacement of burst pipes). After completion of laying of pipes in March 1975, it took 30 months before the users could formally take over the water supply system in September 1977.

The water supply system was part of a project for erection of a plant at an ordnance factory manufacturing strategic stores. As the water supply system was not ready in time, trial runs of the plant were delayed. In April 1977, the factory authorities indicated that this resulted in shifting of commissioning trials of the plant by six months. While the magnitude of loss suffered on account of delayed handing over of the water supply system could not be estimated, the factory authorities stated that when the plant was run in shifts, the shut down time of the plant on account of defects in water pipelines worked out on an average to about 10 per cent.

The Ministry stated (December 1978) that :

— the class of pipes (*i.e.* class 'LA') procured and incorporated in the work was quite suitable for the system ;

— during testing there were certain water hammering effects in the pipelines and consequently heavy pressures were developed, which were beyond the permissible test pressures and caused bursts ; and

— there was no delay in formal taking over (September 1977) as the installation was under operation and trial run by the users during March 1975—August 1977.

The fact, however, remains that Rs. 1.94 lakhs had to be spent on rectification and strengthening of the pipes and that the water supply system was formally taken over by the users in September 1977.

27. **Overpayment in a building contract**

For construction of 308 married quarters for Army personnel at a station, a Zonal Chief Engineer concluded a contract (value : Rs. 46.88 lakhs) in August 1968 with a partnership firm 'A' (constituted under a partnership deed of July 1962). The work was commenced in September 1968 for completion in phases by 1st August 1971.

By June 1970, construction of 120 quarters was completed by the firm. Slow progress of work was noticed from January 1971. In April 1971 firm 'A' stopped work due to financial difficulties and finally abandoned it in August 1971. Notices were served on firm 'A' from time to time to complete the work. Extensions in the completion date(s) as per the contract were also allowed, the extended date for the last phase being 22nd August 1972. In view of the continued default by firm 'A', the contract was terminated by the Zonal Chief Engineer with effect from 27th September 1972. The incomplete work was got executed through another contractor at the risk and expense of firm 'A' and the same was completed in November 1974 at a cost of Rs. 5.11 lakhs.

An examination in audit of the implementation of the contract (of August 1968) with firm 'A' revealed the following interesting features :

(i) In March 1973, one of the partners of firm 'A' (who was reported to have retired from the business of the firm from 1st January 1969) approached the Engineer-in-Chief for appointing an arbitrator to adjudicate on certain disputes in the implementation of the contract. An arbitrator was accordingly appointed in September 1973, but he resigned in January 1976; another arbitrator was thus appointed.

In the meantime (August 1975), the Garrison Engineer asked firm 'A' to remit a sum of Rs. 8.56 lakhs (revised to Rs. 8.62 lakhs in July 1976) on account of compensation for delay, extra cost in getting the incomplete work done through another agency and other dues. Two of the partners repudiated the claim in September 1975 on the plea that they had retired from the partnership since July 1965.

In September 1976, the department submitted to the arbitrator a statement of claims totalling Rs. 8.51 lakhs against firm 'A', which included the following :

Item	Rs. in lakhs
—Extra cost due from firm 'A' to the department in getting the incomplete work executed	4.36
—Compensation for delay in completion of work	2.43
—Difference between market rate and issue rate of departmental stores overdrawn by firm 'A'	0.95
—Other claims	0.77

The second arbitrator appointed in January 1976 also resigned (January 1978). A third arbitrator was, therefore, appointed in February 1978.

The arbitration proceedings were in progress and the award was awaited (November 1978).

(ii) Firm 'A' was paid Rs. 36.50 lakhs as 'on account' payments in 28 instalments, the last one having been paid in December 1970. In September 1976, a Board of Officers was convened by the Zonal Chief Engineer to determine whether any overpayment had been made to firm 'A'. The Board observed that against Rs. 30.14 lakhs due to firm 'A' up to end of December 1970, 'on account' payments aggregating Rs. 36.50 lakhs had been made to it, resulting in an overpayment of Rs. 6.36 lakhs. The Board attributed the overpayment to over-estimation of the value of work done while allowing 'on account' payments. The Board also observed that after the last 'on account' payment and before termination of the contract, firm 'A' had executed some more works, value of which was assessed at Rs. 3.50 lakhs, thus reducing the overpayment to Rs. 2.86 lakhs.

(iii) In November 1976, the matter was referred by the Zonal Chief Engineer to the Engineer-in-Chief for convening a Staff Court of Enquiry with a view to fixing responsibility. A Court of Enquiry was convened in November 1977 and its findings/recommendations were awaited (November 1978).

The case revealed :

- overpayment of Rs. 2.86 lakhs to firm 'A' by over-estimation of value of work done in 'on account' payments ;
- dues of Rs. 8.51 lakhs (including Rs. 4.36 lakhs on account of extra cost of work done through other agencies) to be recovered from firm 'A' ; and
- delay in finalising the case since September 1972.

The Ministry of Defence stated (November 1978) that the question of recovery of overpayment made to firm 'A' would be decided after receipt of the arbitration award and that necessary action in regard to disciplinary aspect of the case would be initiated after receipt of findings/recommendations of the Court of Enquiry.

CHAPTER 4

PROCUREMENT OF STORES AND EQUIPMENT

28. Extra cost in procurement of items due to delay in issuing amendment to an indent

In April 1975, the Ministry of Defence accorded sanction to

(a) mounting of a weapon system on a vehicle ;

(b) procurement of certain additional items (for maintenance) at an approximate cost of Rs. 48 lakhs ; and

(c) acceptance of surplus acquisition of items (assessed at Rs. 27.55 lakhs) as a result of reduction of an order (from 140 to 100 sets) placed on a public sector undertaking for allied ground equipment.

On 10th September 1975, the public sector undertaking furnished to the Director of Ordnance Services (DOS) the unit rates in foreign currency as per quotation (valid up to the end of October 1975) received from a foreign firm for nine additional maintenance items to be imported through the undertaking. The DOS placed an indent for these items on the undertaking on 25th September 1975, by taking the unit price of each item as the cost of the entire quantity indented for each item with the result that the cost of the items indented was arrived at Rs. 0.10 lakh only. Prices indicated in the indent were stated to be fixed and firm subject to variation only to the extent of the higher prices payable to the foreign firm (in pursuance of the price escalation clause contained in the agreement entered into by the undertaking with the firm in March 1970).

Meanwhile, on 19th September 1975, the undertaking amended its quotation by stating the unit rates in rupees (which had been arrived at by converting the foreign currency into rupees and adding 10 per cent to cover handling charges, freight, insurance, inspection, storage and profit); this communication was received by the DOS on 29th September 1975. The DOS replied to the undertaking on 10th October 1975 that any amendment to the indent already placed on the basis of price quotation of 10th September 1975 was not possible at that stage.

On 26th October 1975, the undertaking pointed out to the DOS the errors committed by the latter while placing the indent and also stated that the total cost of the nine items at the unit rates indicated in its quotation of 19th September 1975 would be Rs. 59.92 lakhs as against Rs. 0.10 lakh in the indent. As the validity of the quotation of the foreign firm had been extended only up to the end of November 1975 (further extended up to the middle of December 1975) and prices were likely to go up thereafter, the undertaking requested the DOS to amend the indent early to enable it to take necessary procurement action.

The DOS initiated a proposal on 5th November 1975 for obtaining financial concurrence for the additional funds. On 30th December 1975, the Ministry of Finance (Defence) accorded concurrence to the import of nine items at a revised cost of Rs. 46.05 lakhs after reducing the requirements of three items and also after reducing handling charges etc. to 6 per cent. The amendment to the indent indicating the revised cost as Rs. 46.05 lakhs was accordingly issued by the DOS on 1st January 1976.

On 14th February 1976, the undertaking while informing the DOS that the validity of the foreign firm's offer had expired in December 1975, indicated the revised cost of the nine items as Rs. 62.94 lakhs. After obtaining financial concurrence, the DOS placed the amended indent on the undertaking on 31st March 1976. In July 1976, the DOS deleted one item, thus reducing the total cost to Rs. 58.82 lakhs. The supplies had not been completed so far (November 1978) though scheduled for delivery by December 1977.

The total cost of the eight items on order at the unit rates indicated by the undertaking on 19th September 1975 was only Rs. 44.66 lakhs. Failure on the part of the DOS to amend an apparent wrong indent in time (in which the total estimated cost was shown as Rs. 0.10 lakh against the total sanctioned cost of Rs. 48 lakhs) resulted in non-availing of the foreign firm's offer before the expiry of its validity date (December 1975) and avoidable extra cost of Rs. 14.16 lakhs (Rs. 58.82 lakhs minus Rs. 44.66 lakhs).

The Ministry of Defence stated (December 1978) that by the time the amended quotations were received (from the public sector undertaking), the indent had already been placed and that the whole question of the items to be procured had to be reviewed again to contain the expenditure within the funds allotted.

29. Infructuous expenditure consequent on delayed review of requirements

The Engineer Theatre Stores Reserve (ETSR) is an operation reserve of stores required for provision of engineer support to military operations in various theatres during war. In April 1969, the Ministry of Defence sanctioned, *inter alia,* the "authorisation" of 2,118 pre-fabricated shelters of four types for the ETSR at a cost of Rs. 349.57 lakhs. These shelters were authorised on *ad hoc* basis in anticipation of indigenous development of such shelters by the Research and Development Organisation. A Research and Development Establishment successfully developed (1967-1968) pre-fabricated shelters of three different types at a cost of Rs. 5.96 lakhs. On the suggestion of the Army Headquarters, the "authorisation" of pre-fabricated shelters for the ETSR was revised in August 1972 to 1,318 numbers of four types.

The Engineer-in-Chief initiated proposals during October 1972—February 1973 for the procurement of 1,290 pre-fabricated shelters of three types at an estimated cost of Rs. 340 lakhs. The Ministry of Finance (Defence) agreed (July 1973) to the procurement of two-thirds of the authorised number of shelters only as the question of revision of ETSR with a view to effecting economy was already (June 1973) under consideration by the Army Headquarters. Accordingly, the Engineer-in-Chief placed (September 1973) an operational indent on the Director General, Ordnance Factories (DGOF) for 861 numbers of pre-fabricated shelters (of three different types) at an estimated cost of Rs. 227 lakhs; 50 per cent of the quantity was to be delivered by 30th September 1974 and the balance 50 per cent by 30th September 1975. The delivery period was later (June 1974) extended to 30th September 1975 and 30th September 1976 respectively. The work was entrusted by the DGOF to an ordnance factory in December 1973.

In view of financial stringency and consequent need to effect economy, the Engineer-in-Chief enquired in October 1974 from the DGOF the financial implications in the event of cancellation of the indent *in toto* or reduction in the requirement to 204 shelters. By that time the ordnance factory had placed 47 indents (value : Rs. 192 lakhs) on operational priority on the Joint Plant Committee and the Director General, Supplies and Disposals for bulk supplies of standard sizes of mild steel and aluminium sections etc. and 101 orders (value : Rs. 10 lakhs) on trade for local purchases against which material costing Rs. 2.57 lakhs had already been received by the factory.

In February 1975, the Engineer-in-Chief decided to reduce the requirements from 861 to 211 shelters (of two types) pending finalisation of review of the authorised scale of ETSR and the indent was amended (April 1975) to 211 shelters at an estimated cost of Rs. 62.80 lakhs with the revised delivery date as 31st December 1975.

In June 1976, the Army Headquarters deleted the entire provision of shelters in the ETSR. Consequently the Engineer-in-Chief enquired (June 1976) from the DGOF the financial implications of cancellation of the indent. Immediately the factory was asked by the Additional Director General, Ordnance Factories to suspend procurement of material and production of the item. The factory authorities intimated (September 1976) that the total value of material, excluding the tools and fixtures, procured would be roughly Rs. 42 lakhs and that they were exploring the possibility of utilisation of the material in other works. The indent was cancelled on 30th September 1976.

The Ministry of Defence confirmed (February 1979) that the total value of material rendered redundant as a result of cancellation of the indent worked out to Rs. 18.91 lakhs, besides expenditure of Rs. 0.16 lakh incurred on tools and fixtures and semi-fabrication of stores. Apart from this, Rs. 5.96 lakhs were spent on development of the shelters.

The Ministry stated (February 1979) that :

— the type of items and their quantities to be held in the ETSR was based on the operational plans as visualised at any time ;

— the operational plans were constantly reviewed and modified to suit the changing strategic requirements ;

— the delay in finalisation of the review was due to changes in the strategic environment and the need to cater for long term requirement ;

— the ETSR was under review and initial considerations indicated that there might probably not be any requirement of these shelters ; and

— the review, however, would only be completed by March-April 1979 and no firm indication could be given till then.

30. Extra expenditure on procurement of kraft waxed paper

Based on an indent placed by the Director of Ordnance Services (DOS) in July 1970, the Director General, Supplies and Disposals (DGSD) concluded a contract with firm 'A' in April 1971 for the supply of 28,100 rolls of kraft waxed paper at the rate of Rs. 29.25 each (total cost : Rs. 8.22 lakhs). The supplies were to be completed by June 1971. The quantity on order was later reduced to 20,450 rolls in March 1972/December 1972, at the instance of the DOS, due to reduction in requirements.

Inspite of three extensions in the delivery date upto 10th March 1973, firm 'A' could supply only 8,700 rolls by that date. In February 1973, firm 'A' sought extension of time by eight weeks for delivering the balance quantity. In May 1973, the DOS split the balance quantity into two lots and suggested to the DGSD to extend the delivery period for 5,000 rolls (immediate requirement) by eight weeks and for the residual quantity of 6,750 rolls to May 1974. The DGSD accordingly issued an amendment to the contract in June 1973 stipulating the delivery date for 5,000 rolls as 20th August 1973 and for 6,750 rolls (later reduced to 5,850 rolls in April 1974 at the instance of the DOS) as 31st May 1974.

Firm 'A' did not make any further supplies and the outstanding quantities of 5,000 and 5,850 rolls were cancelled at its risk and cost in December 1973 and July 1974 respectively. The DGSD concluded two contracts with firm 'B' in February 1974 (5,000 rolls) and in December 1974 (5,850 rolls) at the rate of Rs. 45 (excluding excise duty) per roll and Rs. 110 (inclusive of excise duty of Rs. 8.80) per roll respectively. Supplies against these two contracts were to be completed by October 1974 and April 1975 respectively. Supplies against the contract of February 1974 commenced only on 30th September 1975 and were completed (after various extensions) by January 1977. Supplies against the contract of December 1974 commenced in October 1975 and were completed by March 1976.

Claims totalling Rs. 5.68 lakhs for recovery of extra expenditure incurred in making risk purchases from firm 'B' were preferred by the DGSD on firm 'A' in February and November 1975, but there was no response from firm 'A'. Consequently, the matter was referred to arbitration by the DGSD in January 1976. The arbitrator rejected the Department's claims *in toto* in a non-speaking award given in December 1977.

During the arbitration proceedings firm 'A' had represented that the Department had 'wrongly' bifurcated the outstanding quantity of 11,750 rolls into two lots. The Ministry of Law whose advice was sought as to whether the award should be accepted or challenged, opined (January 1978) that any contention to the effect that the purchaser had no business to split the outstanding quantity and render the contract as one of instalment was altogether without substance, even though this contention appeared to have found favour with the arbitrator. The Ministry, however, advised acceptance of the award as it was a non-speaking one.

Thus, due to bifurcation of outstanding quantity of 11,750 rolls in two lots by the Department, the extra cost of Rs. 5.68 lakhs, on account of risk purchase, could not be recovered from the defaulting firm 'A'.

31. Extra expenditure in procurement of stores

In December 1975, the Supply Wing of a mission abroad received four indents (A, B, C and D) from the Air Headquarters for procurement of three types of stores.

On 13th February 1976, the Supply Wing received yet another indent (E) from the Air Headquarters for procurement of similar stores. In this indent there was no reference to the previous four indents placed in December 1975, though the Air Force Manual of Provisioning provides that at the time of placing an indent, details of outstanding indents for similar items should be given.

At the time of receipt of this indent (E), offers in respect of two items of the indent were valid (being offers received against indents A, B and C) and in respect of the third item, which was already indented (indent D), even tender enquiry had not been issued. The Supply Wing could not correlate indent (E) with the other indents and concluded four separate contracts between March 1976 and May 1976 to cover indents A, B, C and D on firm 'X' offer of which was the lowest.

In respect of indent E, the supply wing issued limited tender enquiry on 7th May 1976 and concluded a contract on 26th July 1976 with the same firm 'X' offer of which was again the lowest. The rates paid in the contract dated 26th July 1976 were higher compared to the rates paid to the same firm for similar stores ordered in March—May 1976, resulting in extra expenditure of Rs. 2.23 lakhs.

The Ministry of Defence stated (March 1977) that the details of outstanding indents for the items included in the indent E were inadvertently omitted to be noted, although the Air Force Manual of Provisioning required the same to be indicated.

Thus, had the fifth indent been linked with the earlier four indents and orders placed simultaneously, the extra expenditure of Rs. 2.23 lakhs could have been avoided. Further there was a possibility of getting some price reduction as the quantities required had increased.

CHAPTER 5

UTILISATION OF EQUIPMENT AND FACILITIES

32. Non-utilisation of a mess building

In August 1970, an Air Command accorded sanction for construction of an additional officers' mess at station 'A' at an estimated cost of Rs. 18.87 lakhs. The work was executed through three contracts by the Military Engineer Service authorities as under :

Particulars of work	When concluded	Value of contract (Rs. in lakhs)	Date of completion Scheduled	Date of completion Actual
Construction of mess building, servants' quarters and garages	September 1972	15.66	April 1974	December 1975
External water supply and electrification	March 1975	0.32	July 1975	July 1975
Site clearance, approach road, cattle fencing and area drainage	May 1975	2.38	February 1976	December 1977

In June 1974, when the work was in progress, the question of utilising this building for accommodating the Air Force hospital temporarily till the hospital complex came up was under consideration of the Air Command. The Zonal Chief Engineer, therefore, issued (June 1974) directions for not progressing the work further. After about a fortnight, at the instance of the Air Command, the Zonal Chief Engineer, however, issued instructions for resumption of the work. The work of construction of the mess building was completed in December 1975.

The local Air Force authorities were asked (January 1976) to take over the officers' mess building, but they declined (March 1976) to do so as according to them, certain essential works, *i.e.* site clearance, levelling of the area, approach road to main building, cattle fencing and area drainage were not complete. The work on site clearance etc. was completed in December 1977 ; the delay in completion was attributed to non-availability of road roller with the department and rains. A Board of Officers convened by the Air Command to take over the mess building pointed out (February 1978) the following defects :

— large cracks in walls/ceiling of the building ;

— heavy dampness on the roof/walls as well as terrazo flooring ;

— water pipes cracked at a number of places ;

— capacity of water tank not sufficient ; and

— lawns not provided.

The Commander Works Engineer informed (April 1978) the Air Command that the above defects had been rectified and the mess building be taken over.

Another Board ordered in May 1978 for the purpose of taking over the mess building observed that cracks and dampness on the walls still existed. In June 1978, the local Air Force authorities informed the Garrison Engineer that the matter regarding converting the mess building for use by the Air Force hospital under its expansion scheme was under consideration and that till such time decision was taken, the taking over of the mess building should be held in abeyance.

Thus, the officers' mess constructed at a cost of Rs. 20.22 lakhs (main building constructed as early as December 1975) was yet (November 1978) to be used.

The Ministry of Defence stated (January 1979) that delay in taking over the building was due to the Engineers not being able to rectify the defects.

33. Imported equipment lying idle

Mention was made in paragraph 28(b) of the Audit Report, Defence Services, 1961 and again in paragraph 23 of the Audit Report, Defence Services, 1967 about non-utilisation of certain equipment for a fixed degaussing range procured from abroad during 1955—1958, at a cost of Rs. 4.13 lakhs (£ 31,000). In paragraph 60 of its Fortythird Report, the Public Accounts Committee (1961-62—Second Lok Sabha) had observed as under :

> "................... costly equipment ordered and received could not be installed for want of proper site. The Committee are astonished to see such bad planning. In their opinion, it is no consolation to be assured that the equipment is in good condition and will be installed soon".

The Ministry of Defence had informed the Public Accounts Committee (Eleventh Report—1962-63—Third Lok Sabha) that hydrographic and magnetic surveys were being progressed and the installation of equipment would be undertaken after arriving at a final decision about the surveys.

It had originally (before 1953) been planned to instal the equipment in an island near a port on the West Coast but the Port Trust authorities objected to the laying of any equipment in the island. This site was, therefore, abandoned. Towards the end of 1969 the Naval Headquarters finalised the plan to instal the equipment at a port on the East Coast, and in February 1970 made this proposal to the Ministry of Defence.

With a view to utilising this equipment, the Ministry of Defence accorded sanction in January 1972 for additional range equipment including installation at the port on the East Coast at an estimated cost of Rs. 4.69 lakhs. The sanction was, however, not acted upon since the Navy felt (February 1973) that due to strategic reasons, it could not do without the facility of the equipment in the West Coast. Consequently, the sanction (accorded in January 1972) was cancelled in May 1973. A suitable site on the West Coast had yet (November 1978) to be found. Thus, the equipment (value : Rs. 4.13 lakhs) had largely remained unutilised for over 20 years (November 1978).

The Ministry of Defence stated (November 1978) that :

— a suitable site could not be located so far and efforts were continuing to find out an appropriate site ;

— pending setting up of the range, certain items of the main equipment (cost : Rs. 0.64 lakh) were issued to ships or merged with depot stock ; and

— more sophisticated and sensitive equipment developed abroad was available but this equipment was still expected to provide a "rough magnetic signature and deperming".

CHAPTER 6

ARMY

34. Unsatisfactory performance/grounding of indigenously manufactured vehicles and consequential losses

Shaktiman vehicles (3 ton) were introduced in service in 1957. These vehicles were being indigenously manufactured, under a collaboration agreement with a foreign firm, in a vehicle factory (in ordnance factory 'X' from early 1959 to 1970-71) under the Director General, Ordnance Factories (DGOF).

Initially the hubs fitted to these vehicles were made of steel forgings. Due to non-availability of forging facilities indigenously, the use of steel castings instead of steel forgings was approved (October 1960) by the collaborator. Cast hubs were manufactured in ordnance factory 'Y' from 1962 and also procured from two other agencies, *viz.,* a public sector undertaking (1,705 sets) and a private firm (596 sets) during April 1971—January 1973.

Shaktiman vehicles (2820) fitted with cast hubs were issued by the vehicle factory to the Army in 1971-72 (25), 1972-73 (641), 1973-74 (1750) and 1974-75 (up to 10th October 1974 : 404). Vehicles with cast hubs were not manufactured after 10th October 1974.

During September and December 1973, a Transport Workshop Company raised defect reports on the failure of the cast hubs fitted to two vehicles manufactured in 1973. In both these cases, the front hub was found broken at the flange. Similar defect reports on the failure of cast hubs in respect of 48 vehicles were raised (during December 1973—March 1975) by 16 other workshops.

Meanwhile, a joint investigation team of the vehicle factory and the Inspectorate of Vehicles (Central Zone) examined 16 vehicles (manufactured in 1973) in October 1974 when it was found that by and large the defects were attributable to poor quality of the castings which had been accepted by the factory for use in the vehicles.

During August 1973—September 1974, 14 vehicles (manufactured in 1973) fitted with cast hubs had met with accidents. The extent of loss involved in these accidents was not known. As failure of cast hubs was considered a major defect, the Army Headquarters (Army HQ) instructed the Commands in October 1974 to ground all Shaktiman vehicles (manufactured in 1973 and 1974) fitted with such hubs pending their replacement with forged ones. Pursuant to these instructions, 2,358 vehicles (fitted with cast hubs) valued at about Rs. 24 crores were put off the road in all the Commands. Besides, another 1,298 vehicles (fit : 478 ; unfit : 820) held in stock in vehicle depots etc. were also found to be fitted with cast hubs and remained grounded.

With a view to replacing the cast hubs by forged ones, a central ordnance depot (depot 'A') placed indents during January 1975—June 1976 for 3,263 sets of forged hubs on the vehicle factory on free replacement basis. The cost of 3,263 forged hubs required for replacement of cast hubs ordered on the vehicle factory worked out to Rs. 18.70 lakhs (at the rate of Rs. 573.10 per set). In addition, the cost of labour involved in replacement was assessed at Rs. 1.31 lakhs (at Rs. 40 per vehicle).

Meanwhile, an Enquiry Committee constituted by the Ministry of Defence in September 1975 had made an analysis of the defect reports relating to 50 affected vehicles and found that 19 of these vehicles had completed less than 5,000 kms. when the defect had occurred. The Enquiry Committee had come to the conclusion (November 1975) that the failure of the cast hubs in Shaktiman vehicles was due to poor quality of the castings obtained from all the three sources (ordnance factory 'Y', the public sector undertaking and the private firm). This, coupled with extensive weld rectification/reclamation method adopted by the vehicle factory, contributed to the failure of the cast hubs. The findings of the Committee were, *inter alia*, as under :

— the cast hubs fitted on vehicles of 1973 and 1974 production were of inferior quality ;

— complete specifications of the cast hubs were not supplied to the suppliers by the vehicle factory ;

— no written inspection criteria were laid down by the vehicle factory for inspection of the cast hubs, thereby leaving a lot of latitude and room both for the manufacturers and the inspectors in regard to the quality of the hubs during manufacture and inspection ;

— the failure of the hubs was by and large on the castings supplied by the public sector undertaking due to blow holes and porosity ;

— having known the quality of the castings supplied by the undertaking and the private firm, the vehicle factory should not have resorted to using them by weld reclamation indiscriminately ; and

— having placed orders for cast hubs on the public sector undertaking and the private firm for the first time, the vehicle factory should have carried out extensive tests on vehicles fitted with these castings before clearance for bulk production was given.

Examination of the case in audit in one of the central ordnance depots—depot 'B'—disclosed the following interesting points :

(a) At the time of receipt of the Army HQ's instructions (October 1974) regarding grounding of vehicles fitted with cast hubs, depot 'B' was holding 239 Shaktiman vehicles manufactured in 1973 and 1974 and received during December 1973—September 1974. As a result of inspections carried out during November-December 1974, 203 (out of 239) vehicles were found to have been fitted with cast hubs and were accordingly grounded.

Anticipating considerable delay in the replacement of cast hubs by forged ones in these vehicles and also due to paucity of covered accommodation, depot 'B' approached (May 1975) the Command HQ for transfer of these grounded vehicles (which were parked in the open) to any other vehicle depot so as to avoid deterioration in the condition of these vehicles due to adverse climatic conditions. The Command HQ, in turn, referred (June 1975) the matter to the Army HQ but the latter did not accept the proposal (July 1975).

In December 1975, depot 'B' informed the Command HQ that since the vehicles were practically kept in the open for the last two rainy seasons, "tremendous damage" had occurred to their upholstery, besides corroding and rusting of certain iron parts. In June 1976, the depot again intimated the Command HQ that certain fitments such as battery terminals, hose pipes connecting radiators, water pumps, auto pulse inlet and outlet flexible pipes, etc. had deteriorated due to long storage in the open for 2½ years.

For replacement of cast hubs, depot 'B' received 406 numbers (203 sets) of forged hubs during June and September 1976 and replacement was completed by December 1976. Most of these vehicles, after necessary repairs, were issued to the user units during August 1976—August 1977.

The Ministry of Defence stated (February 1979) that repairs to the (grounded) vehicles in depot 'B' were carried out by the workshops as per their repair schedule without any extra cost involved. It may, however, be mentioned that though the loss arising out of damages was not determined, the repairs could not have been carried out without cost.

(b) During replacement of cast hubs, the workshop authorities found that 8 out of 203 grounded vehicles were already fitted with forged hubs originally and did not need any replacement. Thus, these 8 vehicles (cost : Rs. 8.16 lakhs) were erroneously grounded and parked in the open resulting in deterioration of their condition.

(c) According to the procedure prescribed by the Army HQ, batteries fitted to vehicles received in the depot were to be removed and stored in battery stores. It was, however, seen that out of 406 batteries pertaining to 203 grounded vehicles, 316 remained fitted in the vehicles and were removed only during January 1976 (262 numbers) and August 1976 (54 numbers). These 316 batteries remained exposed to the vagaries of weather for over 2 years. While giving refresher charges to these batteries during February 1976—February 1977, cells of 283 batteries were found dead. The Ministry of Defence stated (February 1979) that cells of 283 batteries were found to have feeble output and out of these, 49 batteries could be utilised leaving a balance of 234 (value : Rs. 1.12 lakhs) which were finally condemned as unserviceable due to aging. The Ministry added that the batteries fitted to vehicles were manufactured during 1970—1974 and were in use in the vehicle factory at various stages of manufacture of vehicles, loading etc. and even during the three years of storage (in the depots) the vehicles had to undergo periodical inspection and maintenance where batteries had to be used.

Thus the case revealed the following points :

- inspection criteria for inspection of cast hubs (to be used in lieu of forged hubs) procured from different agencies were not prescribed by the vehicle factory;
- unsatisfactory performance of vehicles due to use of cast hubs of inferior quality;
- replacement of cast hubs by forged hubs involving an expenditure of Rs. 20.01 lakhs;
- accidents to 14 vehicles resulting from failure of cast hubs (extent of loss not known) ;
- grounding of 203 (including 8 erroneously grounded) vehicles in the open in one depot for over 2 years and consequential deterioration in their condition resulting in avoidable repairs; and

— 234 batteries (value : Rs. 1.12 lakhs) not removed from grounded vehicles parked in the open for over 2 years and rendered unserviceable in consequence.

35. **Loss due to heavy downgradation of an imported component**

A vital component 'X' of a device fitted on tanks had been imported from a foreign supplier since 1971. The component, being sensitive to light, was required to be handled in darkness and stored in airconditioned space. It was guaranteed by the supplier for 12 months from the date of delivery subject to observance of storage conditions etc. in accordance with the instructions and other documents to be received from the supplier.

The supplies were received in a central ordnance depot and due to non-availability of testing/inspection facilities at the depot, the components were sent for inspection by the Controller of Inspection (Instruments)—hereafter referred to as the inspection authority—located at a different station.

No literature/instructions indicating the shelf-life and storage conditions under which the components were to be stored were received by the depot. It was only in July 1977 that the inspection authority, after discussions with a research organisation, determined the shelf-life of the component as 2 years provisionally under the following storage conditions :

— room temperature between 20 degree centigrade (minimum) and 25 degree centigrade (maximum); and

— relative humidity between 40 per cent (minimum) and 50 per cent (maximum).

The supplies were stored in the depot in airconditioned space from March 1975 only.

Due to absence of literature regarding the shelf-life and storage conditions, the supplies could not be properly preserved by the depot. Further, the shelf-life of the component was determined by the inspection authority after a period of over 5 years from the date of receipt of first lot of supplies in 1971. Even when the shelf-life was determined in July 1977, the depot could not regulate the issues on a "first-in first-out" basis in the absence of any marking regarding the date of manufacture on the cartons.

During 1971 to January 1978, 8,708 numbers of the components were received in the depot from the supplier; out of these, 768 were found unserviceable on inspection. Out of 768 unserviceable components, claims for 185 numbers (value : Rs. 1.01 lakhs) preferred during September 1975—January 1978 were pending with the supplier (October 1978), 349 had been replaced by the supplier, 3 adjusted within the tolerance limit, claim for 5 was rejected by the supplier and position of balance 226 was not known (January 1979). Apart from these, 1,152 components (value : Rs. 6.22 lakhs) were also rendered unserviceable as indicated below :

— 82 numbers issued by the depot to a unit during March—June 1976 were found unserviceable on their receipt in the unit; according to the unit, packages of the component were found open resulting in exposure to light;

— out of 700 numbers of the depot stock sent to the inspection authority during December 1976—January 1977 for pre-issue inspection, 345 numbers were declared (March 1977) unserviceable due to defects such as poor luminosity, leakage, etc.; and

— on inspection of the depot stock of 3,887 numbers during February 1977 and thereafter by a specialist officer detailed by the Army Headquarters and an Inspection Team, 725 numbers were found unserviceable due to causes such as exposure to light while handling, rust formation, etc.

The loss of Rs. 6.22 lakhs was yet to be regularised (February 1979).

The Ministry of Defence stated (February 1979) that :

— no separate literature/instructions laying down storage conditions were received alongwith the equipment and in the absence of technical literature and manufacturing details, shelf-life of component 'X' could not be fixed earlier;

— on receipt of components from abroad the depot had not opened packages before forwarding them to the inspection authority and as such damage due to exposure to light could not have occurred at the depot; and

— the date of manufacture was given only on component 'X' and not on the cartons and as such the particulars could not be noted by the depot on receipt.

36. Encroachment on Defence land by a co-operative housing society

In 1964-65, a private co-operative housing society, promoted by a group of ten service officers in a metropolitan city, secured land on 99 years' lease from the State Government. This land was beyond the Defence land in occupation of the Military authorities. On 2nd March 1965, the society approached the Sub-Area Commander (who was one of the promoters of the society) for grant of permission for constructing an access road through the Defence land to its land to enable it to start construction of building and the latter intimated (5th March 1965) that he had "no objection" to the proposal.

In August 1968, the Military Estates Officer (MEO) brought to the notice of the Station Headquarters that Defence land had been encroached upon by the society by constructing an approach road and that this would constitute an easement on the land for which sanction of Government of India would be necessary. In September 1968, the society approached the MEO for a "no objection" certificate for construction of a permanent access road (already under construction). Since the Ministry of Defence was the authority competent to sanction transfer of land by way of lease, licence, etc. the MEO asked (September 1968) the society to submit an application for regularisation of the case. The society submitted (10th October 1968) the application for land for the access road (and not for land encroached for laying water pipelines, sewage connections, etc.) to the MEO. The construction of the access road and sewage and water supply lines was completed in December 1968.

On 10th January 1969, the Military Lands and Cantonments (MLC) Directorate in the Ministry of Defence called for a detailed report on the encroachments and the MLC authorities of the Command intimated (20th January 1969) that the encroachments were of a permanent nature and requested that an early decision be taken on the manner of regulating the encroachments. At the instance of the Army Headquarters, the Command Headquarters directed (May 1969) the Sub-Area Headquarters that the encroachments should be cleared and where it was not possible, land should be transferred to the MEO who should take regularisation action. Thereafter, the matter remained under correspondence between the Command authorities, MLC Directorate and the MEO.

In June 1970, the MEO asked the society to submit a fresh application alongwith the site plan for taking up the matter with the Ministry of Defence as the previous application had been misplaced. The society immeditely complied with this request. The MEO forwarded the revised application to the Station Headquarters in July 1970 for necessary action and the latter was also reminded on four occasions during October 1970--March 1971. Thereafter, the case was not pursued for over six years.

On receipt of an audit observation (September 1977), the MEO requested (October 1977) the Station Headquarters that the society be directed to submit (fresh) application for getting the occupation regularised as Defence land occupied by the society was under the latter's management. Rent for 1017 sq. yds. of Defence land for which the society had applied for lease was calculated (December 1977) by the MEO at Rs. 4.20 lakhs (@ Rs. 38,156 per annum based on the value of land, *viz.* Rs. 1,500 per sq. yd. prevailing during 1961) for the period 1967—1977. In March 1978, the Station Headquarters asked the society to deposit this amount by June 1978. The society declined to do so (June 1978) stating that the permission granted for the access road was not conditional to the payment of any rent and that, the road having been in use for the last ten years, the right of way accrued to the inhabitants of the area might not be denied to them nor any exorbitant charges levied.

The following interesting points were observed :

— "no objection" was given to the society for construction of access road through Defence land by the Sub-Area Commander (who was one of the promoters of the society) without consulting the MEO and without obtaining sanction of the Ministry of Defence;

— although permission was given only for construction of access road, Defence land was also utilised for laying permanent sewage and water pipe-lines;

— the revised application for lease of the Defence land for access road submitted (June 1970) by the society (the original application submitted in 1968 having been misplaced by the MEO) and forwarded by the MEO to the Station Headquarters in July 1970 was not processed till October 1977 when the MEO revived the case as a result of an audit observation; and

— rental of Rs. 4.20 lakhs (@Rs. 38,156 per annum) as worked out by the MEO for the period 1967—1977 for the Defence land through which the approach road was built and other services were laid, was yet (December 1978) to be recovered from the society.

The Ministry of Defence stated (December 1978/January 1979) as under :

— Since there was no other access road to the society's land, access to it had necessarily to be through Defence land only and necessary permission would in any case have been given on suitable terms.

— The rent of Defence land calculated by the MEO at Rs. 38,156 per annum was not worked out on correct premises as the total area utilised by the society for access road etc. was 630.03 sq. yds. (in addition to 303.11 sq. yds. of MES road being used by the society) and based on the prevailing market value of land in 1964 the Command Headquarters had since recommended the rate of Rs. 250 per sq. yd. as against Rs. 1,500 per sq. yd. adopted by the MEO.

— The lapse on the part of the Army authorities in not obtaining prior approval of the Ministry and delay in processing the case on the part of Defence Lands and Cantonments authorities had been brought to the notice of the respective authorities for suitable remedial action.

— From March 1971 till October 1977 the matter seemed to have been lost sight of by all concerned.

CHAPTER 7

NAVY

37. Delay in the procurement of boats

The Ministry of Defence accorded three sanctions in May 1967 (Rs. 6.30 lakhs), December 1967 (Rs. 4.20 lakhs) and May 1968 (Rs. 2.10 lakhs) for the procurement of six boats of type 'X' for the Navy at a total estimated cost of Rs. 12.60 lakhs. Against indents placed by the Naval Headquarters during November 1967—June 1968, the Director General, Supplies and Disposals (DGSD) concluded a contract with firm 'A'—the lowest tenderer—in January 1969 for construction and supply of these six boats at a total cost of Rs. 14.13 lakhs. Since firm 'A' was registered with the DGSD for small fishing crafts, the DGSD, before concluding the contract, had obtained (April 1968) confirmation from the Naval Headquarters regarding technical capability of firm 'A' for boats of type 'X'. The boats were scheduled to be delivered between October 1969 and July 1970. The contract provided, *inter alia,* for :

— furnishing of security deposit of Rs. 0.20 lakh by the firm by January 1969; and

— stage payments to the extent of 90 per cent in four instalments for work done according to the progress of construction of these boats against hypothecation deed and indemnity bond and the balance 10 per cent on expiry of 6 months' guarantee period.

Firm 'A' failed to furnish security deposit even after extension of time of about 6 months up to 15th July 1969 was granted. The contract was, therefore, cancelled by the DGSD in August

1969 at the risk and expense of the firm. Thereafter, the firm agreed to furnish the security deposit and the contract was revived in January 1970.

According to the revised (January 1970) schedule, the firm was to deliver the boats during October 1970—July 1971. The firm, however, completed only the first stage of construction (*viz.* laying of keel) on all the boats up to June 1971 and obtained during March—September 1971 initial stage payment of Rs. 2.83 lakhs (*viz.* 20 per cent of the total cost). Further extensions of the delivery period were granted (December 1970—November 1973) to the firm and the boats were finally scheduled to be delivered by end of May 1974. After June 1971, there was no progress in the construction of the boats and the contract was eventually cancelled in September 1975 at the risk and expense of firm 'A'.

In December 1976, the DGSD concluded a risk purchase contract with another firm 'B' for the construction of six boats at a total cost of Rs. 35.72 lakhs. Under the contract, the boats were to be delivered during July 1977—March 1978, subsequently extended up to October 1978. Three boats were delivered during May—June 1978. The fourth boat was inspected in August 1978 and was stated to be in transit and the remaining two boats were stated to be under final stage of completion (January 1979).

Meanwhile (May 1977), the DGSD sent a demand notice to the defaulting firm 'A' for recovery of a sum of Rs. 23.57 lakhs representing the risk purchase loss (Rs. 20.74 lakhs) and the initial stage payment (Rs. 2.83 lakhs) made to it; the recovery was yet (January 1979) to be effected.

Thus, even after a lapse of about 10 years only three boats were delivered (May-June 1978) and the fourth inspected (August 1978); the remaining two boats were yet (January 1979) to be delivered.

The Naval Headquarters stated (August 1977) that :

— non-availability of these boats affected the operational efficiency of the Naval units; and

— it was not possible to quantify in terms of money the loss suffered due to non-supply of these boats.

The Ministry of Defence stated (January 1979) that :

— the assessment of technical capability of firm 'A' by the Naval Headquarters was based on availability of adequate space, expertise, skilled labour, machinery, tools and equipment; and

— the assessment of Naval Headquarters was correct as after placement of the order for six boats of type 'X', firm 'A' had completed and supplied a certain number of motor cutters (powered) and dinghies/ drop keel cutters (non-powered).

38. **Transfer of a Naval oil installation to the Indian Oil Corporation**

In order to meet the fuelling requirements of the Navy, the Ministry of Defence accorded sanction in November 1964 for construction of an oil installation at a Naval base for holding 16,000 tonnes of fuel at an estimated cost of Rs. 51.80 lakhs (including cost of transportation of material from the mainland). The oil installation was to be constructed by the Indian Oil Corporation (IOC) which was to be paid an advance of Rs. 51.80 lakhs in two instalments of Rs. 35.00 lakhs and Rs. 16.80 lakhs during 1964-65 and 1965-66 respectively. The sanction stipulated that orders regarding terms and conditions for maintenance, manning and operation of the installation by the IOC on behalf of the Navy would be issued separately. The entire expenditure on construction of the oil installation was to be borne by the Ministry of Defence on the ground that this was not a sound commercial investment from the IOC's point of view and it was required exclusively for defence purposes. The question of meeting the civil requirements from the Naval installation raised by the Civil Administration in March 1964 had, however, not been kept in view at the time of issue of sanction (November 1964).

The construction of the installation on land measuring 3.50 hectares transferred by the Civil Administration to Defence was completed by the IOC in July 1966 and the installation was commissioned soon after. Against the advance of Rs. 51.80 lakhs paid to the IOC, the completion cost of the installation came to Rs. 42.95 lakhs but the balance amount of Rs. 8.85 lakhs was not refunded by the IOC on completion of the work. Neither were orders prescribing the terms and conditions for maintenance, manning and operation of the installation issued nor was the question of charging rent for land used for the installation considered at that point of time.

With a view to minimising the cost of operation of the installation, the possibility of commercial off-take of the petroleum products was considered in a meeting held in May 1970 in the Ministry of Petroleum and Chemicals, which was attended by the representatives of the Ministry of Defence and the IOC and the following decisions were taken :

- the installation should be taken over by the IOC on an integrated basis in order to meet civil and defence requirements of petroleum products;
- the installation should be transferred to the IOC latest by 1st April 1971; and
- the IOC and the Naval authorities should work out jointly details of written-down book value of investment on the installation.

The installation was handed over to the IOC on 31st May 1971. The off-take of petroleum products for commercial purposes during the years 1971-72 to 1973-74 was found to be 16,632 kilolitres, *i.e.* about 50 per cent of the total off-take of 32,928 kilolitres during that period.

In May 1975, the IOC informed the Ministry of Defence about adjustment of its claim of Rs. 8.74 lakhs for maintenance, manning and operation of the installation up to May 1971 against the balance (Rs. 8.85 lakhs) due for refund to the Ministry.

The question of determining the value of the installation to be realised from the IOC remained under consideration since May 1970. While the IOC indicated the written-down value of the assets taken over by it as Rs. 26.73 lakhs, the Ministry of Finance (Defence) suggested (November 1975) that written-down value of the assets (excluding land) should be settled at Rs. 36 lakhs. In February 1976, the Ministry of Defence conveyed to the IOC its willingness to the outright transfer of the installation on payment of Rs. 26.73 lakhs plus interest at bank rate (year-wise) with effect from 1st June 1971, besides payment of the value of land as obtaining on 1st June 1971. The IOC made payment of Rs. 26.73 lakhs in March 1976 but expressed its inability to pay interest and the cost of land. Formal Government orders for transfer of the installation to the IOC were yet to be issued (January 1979).

The case revealed the following :

— the Ministry of Defence agreed to bear the entire cost of construction of the oil installation although the possibility of its commercial use for civil purposes was in view as early as March 1964;

— one of the tanks with a capacity of 7,500 tonnes (out of the total capacity of 16,000 tonnes of the installation) remained idle ever since the date of its construction/commissioning in 1966;

— the installation constructed in 1966 at a cost of Rs. 42.95 lakhs was transferred (May 1971) to the IOC at a written-down value of Rs. 26.73 lakhs only but formal orders of transfer were yet to be issued (January 1979);

— the value of 3.50 hectares of land transferred to the IOC alongwith the installation was yet to be determined and recovered (January 1979) from IOC;

— interest on the value of the installation transferred from the date of its handing over to the actual date of payment was yet to be paid by the IOC (January 1979); and

— instead of insisting on refund of the unspent amount of Rs. 8.85 lakhs (out of the advance of Rs. 51.80 lakhs paid to the IOC for construction of the installation), the IOC was allowed to adjust against this amount its claim of Rs. 8.74 lakhs for maintenance, manning and operation of the installation up to May 1971 for which Government orders were not issued.

The Ministry of Defence stated (January 1979) that:

— the written-down value of Rs. 26.73 lakhs as also the adjustment of the claim for maintenance etc. of the installation up to May 1971 against the amount of Rs. 8.85 lakhs due for refund by the IOC was accepted as a package deal with the IOC and the matter regarding recovery of interest (and cost of land) was being pursued with the Ministry of Petroleum and Chemicals;

— at the time of sanction (1964) it was not considered desirable to hold up the Naval project, which was intended to maintain reserve stock for Defence, as the civil need for fuel was not estimated to be large and the then Ministry of Mines and Fuel had stated that the installation at Naval base was not a sound commercial investment; and

— as the Navy did not have requisite experience or personnel to deal with civil departments and private agencies, it was decided to hand over the installation to the IOC.

CHAPTER 8

AIR FORCE

39. Procurement of cameras

The Air Headquarters proposed (June 1972) a comprehensive scheme for modernisation of the photo reconnaissance capabilities of the Air Force. This scheme envisaged modification of a large number of aircraft partly by fitment of cameras currently in use and partly by procurement of new cameras over a phased period. The proposal, *inter alia,* provided for purchase of 15—later (September 1972) increased to 18—low level panoramic cameras.

Three types of cameras 'A', 'B' and 'C' offered by foreign firms 'X', 'Y' and 'Z' respectively to the Air Force were subjected to user evaluation trials by the Aircraft and Systems Testing Establishment (ASTE) during February-March 1973. The trials revealed that while camera 'A', yet under development, was unsatisfactory in design and performance, the other two cameras 'B' and 'C' (the latter used with satisfactory results in the 1971 Indo-Pak hostilities) were found suitable in all respects. The ASTE, however, recommended introduction of camera 'B' in service as it was found to be the best in performance and design comparison. The comparative costs of the three types were as follows :

Type	Price ruling in	Price (Rs. in lakhs)
'A'	February 1974	1.29
'B'	December 1973	1.89
'C'	December 1973	4.11

Firm 'X' whose camera 'A' was found unsatisfactory offered (March 1973) to improve the design of the camera at its own cost. After modifications, three more trials on a prototype of this camera were carried out by the ASTE in October 1973, August 1974 and October 1974. According to the report of ASTE based on trials in October 1973, the camera was not acceptable for "service use" ; as per the later report based on trials in October 1974, the performance of the camera was satisfactory in a particular aircraft. The latter position was confirmed by trials carried out in July 1975 at a Base Repair Depot and the camera was recommended for introduction in service by the Air Headquarters (July 1975). Based on this recommendation, sanction for the purchase of 12 cameras (including accessories) at an estimated cost of Rs. 21.60 lakhs was issued by the Ministry of Defence in December 1975 and an indent for their procurement was placed by the Air Headquarters on an overseas Supply Mission. The Supply Mission concluded a contract with firm 'X' at a cost of Rs. 20.81 lakhs in March 1976 and the supplies were received in September 1976.

It was noticed in audit that Rs. 5.04 lakhs were spent by the Air Headquarters in conducting five development trials (including last two confirmatory trials) exclusively on camera 'A' during October 1973—January 1976. In addition, Rs. 5.34 lakhs were spent by the Base Repair Depot from May 1974 to December 1975 in modifying the aircraft used for the trials. Costs incurred on development and modification prior to this period were stated to be not available. Based on further trials conducted in January 1976, the ASTE stated in its final report (July 1976) that information obtained from camera 'A' had to be supplemented by using another type of camera in conjunction with camera 'A' and that both cameras were required to operate simultaneously. The ASTE added that under the existing arrangement, it would not be possible to achieve the desired objective of conducting low level panoramic photography by a single unified system.

The case revealed the following interesting features :

— twelve cameras procured at a cost of Rs. 20.81 lakhs did not meet the requirements of the Air Force in regard to the conduct of low level panoramic photography by a single unified system ;

— the Air Force had conducted development trials and modifications of the camera at a cost of Rs. 10.38 lakhs, which should have been normally borne by the manufacturer ; and

— camera 'B' which was recommended for introduction in service at the initial trial itself by the ASTE was available for Rs. 1.89 lakhs as against the procurement cost of Rs. 1.73 lakhs (including Rs. 0.44 lakh on account of accessories) plus part cost of development and modification of camera 'A' at Rs. 0.87 lakh per camera, but excluding cost of another type of camera.

The Ministry of Defence stated (January 1979) that :

— the price factor was one of the considerations adopted for the selection of camera 'A' ; and

— camera 'A' was at present operating satisfactorily.

40. Provisioning of air film panchromatic

Air film panchromatic (film) is used in aircraft engaged in high altitude day reconnaissance. According to Air Force Manual of Provisioning, film, being an item with limited or short life (specified by the manufacturer), is required to be provisioned with a reasonable degree of accuracy to minimise loss on account of life-expired items and to avoid stock out. For purposes of working out future requirements, issues from the depot stock were treated as consumption irrespective of actual consumption by the user units.

In January 1970, a stock of 1,009 rolls (depot 'A' : 684 rolls ; unit 'B' : 325 rolls) of the film was held by the Air Force out of procurements made in 1962. The provision reviews were conducted by the Air Headquarters on the basis of the stocks with depot 'A' plus dues-in and the requirements of user units ; the periodical reviews conducted during May 1970—November

1974 and indents placed by the Air Headquarters are shown below :

Review as of (month)	Consumption (preceding two half-years) I	II	Total require-ments	Total stock (with depot 'A') plus dues-in	Net defi-ciency	Quantity indented
	(In rolls)					
May 1970 .	7	205	424	280*	144	144 (quantity contracted : 133 rolls)
November 1970 .	5	6	49	4	45	45
October 1971 .	Nil	Nil	389	149	240	240
March 1972 .	Not shown		410	384	26	26 (quantity contracted : 23)
July 1973 .	..........Review not available..........					231
November 1973	1	263	501	370	131	131
November 1974 .	2	216	414	265	149	149

*200 rolls were shown less due to misposting.

During test-check by Audit (April 1977), the following points were noticed :

(a) *Assets not correctly taken into account resulting in over-provisioning*

In the review of May 1970, a stock of 280 rolls was taken instead of 480 rolls because of misposting of 200 rolls. On the basis of the correct stock of 480 rolls, there would have been a surplus of 56 rolls instead of a deficiency of 144 rolls which were indented in February 1971.

In subsequent reviews of November 1970 and October 1971 also, the above stock of 480 rolls was ignored while assessing the net deficiency as these rolls were considered life-expired and unfit for further use. These rolls were issued to units during May 1970—December 1971. Unit 'B', however, reported in May and September 1977 to the Air Headquarters, in reply to an audit observation, that some rolls out of the old stock had been consumed with satisfactory results. Nevertheless, provisioning of 418 rolls (value : Rs. 3.26 lakhs) was made in the above three reviews by ignoring the stock of 480 rolls.

(b) *Provisioning for a war wastage reserve not authorised by Government*

Based on a review of March 1972, advance action was taken to provide for a war wastage reserve of 360 rolls and one year's training requirement of 50 rolls in anticipation of Government sanction. Government sanction for the creation of the war wastage reserve was not issued and the war wastage reserve was not provided for in subsequent reviews. A deficiency of 26 rolls was thus worked out after providing for war wastage reserve not sanctioned by Government and an indent for this quantity placed on the Director General, Supplies and Disposals in September 1972 with the approval of the Ministry of Finance (Defence). This resulted in over-provisioning of 23 rolls actually contracted (value : Rs. 0.45 lakh).

(c) *Non-cancellation of pending indents leading to over-provisioning*

The Air Headquarters placed an indent on an overseas Supply Mission in July 1973 for 231 rolls for meeting 'operational immediate' requirements and requested that films might be procured and despatched on highest priority by air. Accordingly, 12 rolls were obtained by the Supply Mission from a foreign Government and despatched (August 1973) by a commercial air carrier. On instructions from the Air Headquarters, the rolls were consigned directly to unit 'B' which had not raised any demand for the film. Unit 'B' reported (August-September 1973) to the Air Headquarters that 12 rolls received from the foreign Government were almost life-expired (expiry in September 1973) and as it already had a stock of 207 rolls (expiry in July—September 1974), there was no demand for the film and that any pending order with the Supply Mission might be cancelled. However, no action was taken by the Air Headquarters to advise the Supply Mission for cancelling the remaining quantity (219 rolls) for which contract was entered into in November 1973.

Unit 'B' sought (September 1974) instructions from the Air Headquarters for backloading 300 rolls out of 406 rolls held by it to depot 'A'. Unit 'B' stated that it had inadequate storage facilities to handle large quantities of the film which had been supplied to it even though it had not raised any demand for the two preceding years. At this stage, a quantity of 131 rolls indented in July 1974 (based on a review of November 1973) was pending contract action by the Supply Mission. The Air Headquarters did not consider cancelling the quantity indented. A further indent for 149 rolls (based on a review of November 1974) was placed on the Supply Mission in March 1975.

In July 1975, the Air Headquarters instructed unit 'B' that surplus quantities of the film held by the latter should be backloaded. In October 1975, unit 'B' backloaded 569 rolls to depot 'A'. Thereafter, the Air Headquarters requested (13th November 1975) the Supply Mission to cancel the entire quantity (149 rolls) indented in March 1975. Firm 'C' with whom a contract had been concluded on 7th November 1975 by the Supply Mission agreed (January 1977) to cancel the order for only 10 rolls without financial implications. Thus non-cancellation of pending indents led to over-provisioning to the extent of 501 rolls (approximate value : Rs. 3.92 lakhs).

(d) *Issues to units treated as consumption resulting in over-provisioning*

In the review of November 1973, 240 rolls received by unit 'B' direct from abroad during August 1972 were taken as consumption, although these were held in stock by it. Thus, instead of a surplus of 564 rolls, a deficiency of 131 rolls was worked out. Similarly, in the review of November 1974, 216 rolls received by unit 'B' direct from abroad during August 1974 were taken as consumption though not consumed. Thus, instead of a surplus of 477 rolls, a deficiency of 149 rolls was worked out and an indent placed for this quantity in March 1975.

(e) *Non-observance of the 'first-in first-out' principle in the issue/consumption of film*

The issue/consumption of the film rolls at depot 'A' and at unit 'B' was not regulated on the principle of 'first-in first-out'. The stock of the rolls held (July1978) by depot 'A' consisted of 527 rolls (value : Rs. 4.37 lakhs) received against various indents of February 1971, November 1971, September 1972, July 1973, July 1974 and March 1975 ; 370 rolls out of this stock had been downgraded (December 1977) as fit for training purposes only. Since the annual training requirements had been assessed at 50 rolls by the Air Headquarters, it would take over 7 years for this stock (approximate value : Rs. 3.07 lakhs) to be consumed.

Summing up, the following are the main points that emerge :

(i) Out of a total stock of 1,952 rolls (1,009 rolls held in January 1970 and 943 rolls procured during 1971—1975), 602 rolls were consumed by unit 'B', 218 rolls were issued to other units (not major users of the film), 539 rolls were struck off charge (during January 1970—November 1975) being life-expired and the balance of 593 rolls (depot 'A' : 527 rolls ; unit 'B' : 66 rolls) valued at Rs. 4.92 lakhs (approximately) was held in stock in July 1978.

(ii) The total consumption from January 1970 to May 1978 was 820 rolls, which could have been met from the stock of 1,009 rolls held in January 1970. There was, thus, no necessity for the procurement of 943 rolls of the film (value : Rs. 7.63 lakhs) during

1971—1975. Further, there was no justification for airlifting a quantity of 502 rolls during July 1972—August 1974 at a cost of Rs. 0.87 lakh.

The Ministry of Defence stated (January 1979) that :

— the stock of 1,009 rolls held by the Air Force in January 1970 had been procured in 1962 and had become life-expired in 1965, hence fresh provisioning was resorted to ;

— the commitments on account of the 1971 Indo-Pak hostilities were met by use of film from the 1962 stock pending receipt of fresh stock in August 1972 ;

— consumption of the film had been reduced in 1973-74 on account of changed circumstances and Air Defence requirements ;

— the operational indents were not cancelled since the requirements had been projected by the Specialist Directorate at the Air Headquarters ;

— the Air Headquarters were now considering alternative use of the film in stock ; and

— to safeguard against recurrence of over-provisioning in future, instructions were issued by the Air Headquarters to the units to show monthly consumption as well as stock held in the monthly returns.

41. **Procurement of aircraft spares**

On receipt of an indent from the Air Headquarters in September 1975 for procurement of 208 items of aircraft spares, the Supply Wing of a mission abroad invited limited tenders in October 1975. On 25th November 1975, a manufacturing firm offered to supply 33 items ; the offer was valid for 30 days.

As the estimated rates in the indent were based on previous purchases made in February 1973 without taking into account escalation in prices, the rates quoted by the firm (November 1975) varied widely from those rates. Hence, the Supply Wing of the mission placed an order (24th December 1975) on the firm for 17 out of 33 items within the amount of foreign exchange sanctioned. The other items were referred to the indentor by telex on 6th January 1976, after the expiry of the validity period of the tender, for approval of the enhanced cost and release of additional foreign exchange. The firm did not extend the validity of the tender beyond 24th December 1975 and quoted higher rates in January 1976 for 10 items. These revised rates were also communicated by the Supply Wing to the indentor by telex on 29th January 1976 indicating at the same time the expiry date (20th February 1976) of the validity of the offer. The offer was actually valid till 29th February 1976, extended (1st March 1976) by the firm, on request, till the end of March 1976.

Meanwhile, the indentor after ascertaining (3rd February 1976) the requirement from the concerned repair agency, communicated the revised requirement on 12th March 1976 (received in the Supply Wing of the mission on 18th March 1976) which included additional quantity for one of the items (item A increased from 19 to 76) already covered in the contract of December 1975 and for which the firm had quoted higher rates in January 1976.

The indentor was aware of this additional requirement of item A on the basis of two provisioning reviews made by the concerned repair agency in May 1975 and July 1975. The Ministry of Defence stated (January 1979) that bulking of the requirements by the indentor was not practicable as the indent (September 1975) had already been cleared by the concerned authorities . But the indentor had not also processed the requirements with a view to bulking it even at the procurement stage (December 1975).

Further, though the indentor was aware that the offer of the firm was expiring by 20th February 1976 (which was actually

29th February 1976, subsequently extended upto 31st March 1976, though not known to the indentor) the information regarding revised requirements was obtained from the repair agency only on 3rd February 1976 and the proposal for sanctioning additional foreign exchange was initiated (by the indentor) on 18th February 1976. As the Ministry of Defence released the additional foreign exchange on 2nd April 1976 (information received in Supply Wing of the mission on 9th April 1976), purchase order could not be placed within the validity period of the revised offer. The firm increased the price further for six items (other than item A and including 3 items for which prices were increased in January 1976) in April 1976. This offer was kept open till August 1976. The increase in prices from April 1976 was communicated to the indentor in May 1976 and after obtaining his approval, orders were placed on the firm in August 1976 for supply of 15 items (including additional quantity of item A).

Thus, due to initial inadequate provision of foreign exchange by under estimation of cost, delay in release of foreign exchange (before 31st March 1976) and non-bulking of the requirement in respect of item A, there was extra expenditure of Rs. 2.39 lakhs (£ 13,728) on 15 items (including item A).

42. Avoidable extra expenditure incurred on the procurement of aircraft spares

According to the procedure in vogue, separate reviews for maintenance and repair requirements of all ranges of spares are carried out by the Air Headquarters and the Air Force Equipment Depots respectively on the basis of past consumption and the forecast factor.

Twenty-seven indents placed by the Air Headquarters on an overseas Supply Mission in thirteen months during August 1975—May 1977 after short intervals for the procurement of spares of a particular type of aircraft to meet maintenance and repair requirements were reviewed during June 1977—July 1978 in audit. These indents were found to contain, *inter alia*, 133 items common to more than one indent. The quotations received from firm 'X' by the Supply Mission against its enquiries were referred (February 1976 to January 1977) to the Air Headquarters in respect of, *inter alia,* 106 common items for arranging additional foreign exchange required for covering these items. The quotations for the remaining 27 items were, however, not referred by the Supply Mission to the Air Headquarters either due to availability of adequate funds or coverage of items by the Supply Mission under its powers.

The following points were noticed in audit :

(a) In the quotations referred to the Air Headquarters by the Supply Mission vast price differential for the common items existed. Illustrative cases of such price differential are tabulated below :

Item	Date of indent	Date of quotation	Quoted unit rate	Date of contract	Contracted unit rate	Quantity contracted
			£		£	Nos.
'A'	26-11-75	3-2-76	1,258.00	30-12-76	1,258.00	3
	17-1-76	22-4-76	921.00	23:12-76	755.00	5
'B'	5-1-76	16-7-76	70.00	23-12-76	70.00	50
	17-1-76	22-4-76	0.85	23-12-76	0.85	50
'C'	26-11-76 & 5-1-77	3-2-76	3,510.00	30-12-76	3,510.00	22
	17-1-76	22-4-76	2,866.00	23-12-76	2,715.00	18
	10-2-76	20-5-76	4,010.00	23-12-76	4,010.00	4
'D'	26-11-75	3-2-76	3,836.00	30-12-76	3,836.00	2
	17-1-76	17-6-76	2,750.00	23-12-76	2,750.00	5
	10-2-76 & 5-1-77	20-5-76	2.310.00	23-12-76	2,310.00	3

After receipt of firm 'X' 's quotations, the Air Headquarters rechecked its requirements of items referred to it by the Supply Mission. However, the Air Headquarters did not scrutinise the price differential existing among the common items with a view to bulking the requirements for procurement at the most economical rates.

According to the Ministry of Defence (January 1979), the provisioning procedure did not stipulate any analysis or study of price differential at the stage of rechecking of requirements but emphasised the determination of revised requirements only. However, details regarding outstanding indents for the same items, which were required to be mentioned on each indent as per the provisioning procedure, were not mentioned on the majority of 27 indents in question.

The Ministry of Defence noticed an exorbitant increase in the prices quoted by firm 'X' and brought (August 1976) to the notice of the Supply Mission certain extreme cases of price escalation. The Supply Mission replied (September 1976) that according to firm 'X' the tooling for the manufacture of spares was no longer available as the aircraft was not in production. Firm 'X' had also stated that where the quantities required were larger, the prices would be less than those where the quantities required were small. Had the Air Headquarters bulked its requirements at this stage, advantage could have been taken of the cheaper rates offered by firm 'X'.

Non-bulking of requirements of 133 common items in different indents resulted in extra expenditure of £ 89,055 (Rs. 13.60 lakhs) approximately on procurement of these items.

(b) In one of the common items (out of 133 items) for an indented (August 1975) quantity of 43 numbers (estimated rate : £ 36 each), firm 'X' had quoted £ 259 each. This quotation was referred to the Air Headquarters in February 1976 for obtaining sanction for additional foreign exchange. In April 1976, the Air Headquarters indicated its requirement as 'nil' and the Supply Mission was advised (May 1976) to cancel the indented quantity in full. On an *ad hoc* review of requirements as on 14th July 1976 (finalised in August 1976), the net requirement of this item was assessed at 57 numbers and indented in January 1977. This was covered (July 1977) by the Supply Mission at the rate of £ 745 each through an amendment to the subsisting contract of December 1976 (for 3 numbers only)

Thus, cancellation of the earlier indented quantity (43 numbers) in May 1976 resulted in avoidable extra expenditure of £ 16,733 (Rs. 2.56 lakhs).

On the basis of a Technical Instruction issued early in 1972, periodic inspections of this item were conducted and 111 numbers of this item were consumed during May 1972—April 1974. The consumption of this item from May 1974 to February 1976 was nominal but at the time of carrying out an in-depth study in mid-1976, the Air Headquarters considered that a certain quantity of the item should be stockpiled so as to meet the wastages which might accrue as a result of periodic inspections.

(c) It was also noticed during June 1977—July 1978 in audit that out of the 133 common items, 7 items which could be locally manufactured by the Air Force in its Base Repair Depots were also ordered at a cost of £ 11,685 (Rs. 1.78 lakhs).

The Ministry of Defence stated (January 1979) that :

— in a number of cases cited by Audit, the price charged by the firm had been directly proportional to the quantity on order ;

— for many items, the firm had charged differential rates even when the quantity on order was the same ;

— any analysis or study of the price differential was to be made by the Supply Mission being the procurement agency and not by the Air Headquarters ; and

— the fact that certain items were capable of local manufacture in Air Force Base Repair Depots was known to the Air Headquarters only after most of the indents relating to these items were contracted.

Nevertheless, the fact remains that extra expenditure of Rs. 17.94 lakhs had been incurred in the process.

(S. M. MAITRA)
Director of Audit, Defence Services.

NEW DELHI
Dated the 9 MAY 1979

Countersigned

(GIAN PRAKASH)
Comptroller and Auditor General of India.

NEW DELHI
Dated the 9 MAY 1979