

**FIFTIETH REPORT**  
**PUBLIC ACCOUNTS COMMITTEE**  
**(1980-81)**

**(SEVENTH LOK SABHA)**

**LOADING COILS AND OVER-STOCKING  
OF BARRETTOR LAMPS**

**MINISTRY OF COMMUNICATIONS**  
**(P & T BOARD)**



*Presented in Lok Sabha on 30 April, 1981*  
*Laid in Rajya Sabha on 30 April, 1981*

**LOK SABHA SECRETARIAT**  
**NEW DELHI**

*April, 1981/Vaisakha, 1903 (Saka)*

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CORRIGENDA TO 50TH REPORT OF PAC (7TH LOK  
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### PART II\*

Minutes of sittings of the Committee held on—

    12-1-1980

    24-12-1980

    18-4-1981

    22-4-1981

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\*Not printed (One cyclostyled copy laid on the Table of the House and five copies placed in Parliament Library.

PUBLIC ACCOUNTS COMMITTEE  
(1980-81)

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## INTRODUCTION

1, the Chairman of the Public Accounts Committee, as authorised by the Committee, do present on their behalf this Fiftieth Report on Paragraphs 22 and 18 of the Reports of the Comptroller and Auditor General of India for the years 1978-79 and 1977-78, Union Government (Posts and Telegraphs) relating to Loading Coils and Over-stocking of barrettor lamps respectively.

2. The Reports of the Comptroller and Auditor General of India for the years 1977-78 and 1978-79, Union Government (Posts and Telegraphs) were laid on the Table of the House on 18 May, 1979 and 12 June, 1980 respectively.

3. In this Report, the Committee have observed that a decision was taken in 1970 and 1972 by the P&T Department to go in for pressurisation of underground cables to prevent entry of moisture into the cables and help locate the cable breakdown speedily. Based on the manufacturing capacity of the ITI and the demands forecast by the P&T Circles and Districts, the DGP&T even after the decision of pressurisation of coils continued to place orders on the Indian Telephone Industries Ltd., Bangalore for supply of unpressurised loading coils which resulted in accumulation of its large stocks valuing at Rs. 1.30 crores. Faced with this problem of accumulation of unpressurised coils, the Department negotiated with M/s. Electrohoms, Bangalore for their conversion into pressurised type coils on experimental basis but the cost of conversion of an unpressurised coil involved an expenditure of over Rs. 8,000 per piece. Whereas the Committee have desired to be informed as to how, when and where the balance stock of unpressurised coils is proposed to be utilised, they have also recommended that a technical team of experts should go into the matter of conversion of unpressurised coils and advise about the performance of the converted coils.

In Chapter II of the Report, the Committee have dealt with another case of overstocking of barrettor lamps—a device introduced in electrical circuits to keep the current at a constant level in selector switches in telephone and telex exchanges. The Committee have observed that as a result of the decision taken in 1972-73 to decentralise the purchase of barrettor lamps, against the fore-



cast requirement of 11.92 lakh nos. for the 3 years 1973-74 to 1975-76, the actual orders placed on ITI were for 13.95 lakh nos. and the supplies received by the Department were 13.48 lakh lamps. Thus as on 31-7-1980, the stock of this item with the user units was 9.19 lakh numbers against the average consumption of around one lakh pieces in a year. Having observed that there was a failure of inventory control system and orders had been placed on the ITI without proper assessment of requirements as per consumption, the Committee have desired that an investigation be made to find out how such grossly exaggerated forecasts were made and to what extent orders placed on ITI were for quantities higher than those estimated. For this state of affairs, the Committee have recommended that responsibility be fixed on the officers at different levels who placed orders in large quantities resulting in overstocking of these lamps.

4. The Committee (1980-81) examined Paras 22 and 18 at their sittings held on 24 December and 12 November, 1980 respectively. The Committee considered and finalised the Report at their sittings held on 18 and 23 April, 1981. Minutes of these sittings of the Committee form Part II\* of the Report.

5. For reference facility and convenience, the observations and recommendations of the Committee have been printed in thick type in the body of the Report and have also been reproduced in a consolidated form in Appendix III to the Report.

6. The Committee would like to express their thanks to the Officers of the Ministry of Communications (P&T Board) for the cooperation extended by them in giving information to the Committee.

7. The Committee also place on record their appreciation of the assistance rendered to them in the matter by the Office of the Comptroller and Auditor General of India.

NEW DELHI;

CHANDRAJIT YADAV,

April 25, 1981

Chairman,

Vaisakha 5, 1903 (S).

Public Accounts Committee.

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## REPORT

### I

#### LOADING COILS

##### *Audit Para:*

##### I. Over-stocking of unpressurised loading coils and their conversion.

1.1. To remove distortion and attenuation of speech, loading coils are inserted in the underground cables at regular intervals. These loading coils (unpressurised type) were procured by the Director General, Posts and Telegraphs (DGP&T) from the Indian Telephone Industries (ITI), Bangalore. To prevent entry of moisture into the cables and help locate the cable break downs speedily, the department decided (1970 and 1972) on pressurisation of underground cables and the Telecommunication Research Centre (TRC) finalised a tentative design of the pressurised type loading coil in consultation with the ITI in 1971-72. Notwithstanding the aforesaid developments, based on the manufacturing capacity of the ITI and the demands forecast by the circles and districts, the DGP&T continued to place orders on the ITI for supply of the unpressurised type loading coils.

1.2. In April 1976 and January 1977, taking note of less requirements of unpressurised loading coils and the above developments, the department cut down the orders placed on the ITI for this type of loading coils. However, on protests by the ITI that it had arranged substantial quantities of raw material and components for completing manufacture against pending orders, the DGP&T agreed (February 1977) to accept 429 loading coils awaiting tests in the departmental test room at Bangalore. After making all these supplies, the ITI was still (November 1979) left with loading coils of various sizes and the connected sub-assemblies costing Rs. 10.84 lakhs.

1.3. Though the TRC had apprehended in January 1977 that the pressurised cables would be damaged if used with unpressurised loading coils, the DGP&T instructed (July 1978) the field units to utilise these unpressurised loading coils so that the large stocks (value Rs. 1.16 crores) that had accumulated in the store depots, could be exhausted. There was, however, not much response from the field units for lifting the coils. The General Manager, Telecommunications, Bangalore had also pointed out (February 1979) to



the DGPT that the use of unpressurised loading coils with pressurised cable led to serious difficulties and would, "amount to running of lakhs worth of cables for the sake of a few thousands worth of loading coils." There was nothing on record to show that the department examined the question of assessing damages on this account.

1.4. Faced with the problem of accumulation of unpressurised loading coils, the TRC held (May 1979) discussions with firm 'A' of Bangalore, a supplier to the ITI, for conversion of unpressurised loading coils into the pressurised type. Firm 'A' accordingly, quoted (May 1979) Rs. 23.64 lakhs for de-assembling, and conversion of half the accumulated stock of the unpressurised loading coils; the cost of this conversion together with the cost of half the accumulated stock would amount to Rs. 81.64 lakhs (Rs. 58 lakhs plus Rs. 23.64 lakhs) as against Rs. 49.76 lakhs for the same number of new loading coils of the pressurised type available from the same firm 'A' in September 1979, the department placed an experimental order on firm 'A' for converting a part of the unpressurised loading coils into 23 loading coils of 400 pairs of pressurised type at a cost of Rs. 1.30 lakhs. The results of conversion of unpressurised into pressurised coils, the stock actually got converted and its cost were enquired from the department; reply was awaited (January 1980).

## II. Procurement of pressurised loading coils:

1.5. (a) Based on technical specifications jointly arrived at by the TRC and the ITI (March 1972), the ITI developed a prototype of 400 pair loading coil (pressurised type) and submitted (March 1976) it to the TRC which cleared it in October 1977. The department placed (January 1976) an order for 250 coils on the ITI; this was reduced to 175 coils in November 1976 and the ITI supplied 31 coils by March 1979. While the ITI could develop a prototype only in March 1976, a private firm 'A' (as mentioned below) fabricated and offered a prototype in April-May 1973.

1.6. Simultaneously, based on the guidance and the know-how given by the TRC to the ITI, firm 'A' fabricated a prototype of 400 pair loading coils and offered (April and May 1973) to supply them at a price of Rs. 14,650 per coil and enquired from the department its requirements to enable it to arrange for raw material. On receipt of this offer, the department issued (September 1973) a tender enquiry for supply of 200 loading coils of 400 pairs each to TRC's specifications; it was, inter alia, stipulated that, simultaneous with the submission of tender, the tenderer should submit a prototype of the loading coils to the TRC for evaluation. Out of 13 firms which



submitted their tenders, only firm 'A', whose rate of Rs. 15,940 per loading coil was the sixth lowest, had submitted the prototype. Having found the prototype of firm 'A' to be satisfactory although there were some minor defects, the department placed (April 1974) on it an order for supply of 200 loading coils of 400 pairs each (value: Rs. 31.88 lakhs) at the tendered rate.

1.7. The final pototype received from firm 'A' in July 1975 was approved by the department on 7th January 1976 though formal approval was issued in March 1976. In the meantime, at the request of the supplier, the date of delivery of the coils was first extended to 31st May 1976 and then to December 1976. The number of loading coils to be supplied was also reduced from 200 to 150 coils. The supply of 150 coils was completed by firm 'A' by December 1976. The department also decided (September 1977) not to recover any liquidated damages (Rs. 0.29 lakh) from the supplier for late delivery of coils on the ground that this was a development order. The order for the 50 loading coils curtailed earlier was restored in November, 1977 with the date of delivery as December 1977, later extended to April 1978 when the supply was completed. The rate was increased (April 1975) from Rs. 15,940 to Rs. 16,215 per coil on account of change in specifications by the department and again (June 1977) to Rs. 16,727 per coil because of the reported variation in the price between the imported and the indigenous stub cable purchased by the firm from the Hindustan Cables Ltd. (HCL) for manufacture of loading coils. The total cost of the 200 coils was, thus, Rs. 33.45 lakhs against the original order for Rs. 31.88 lakhs.

1.8. (b) In February 1978, firm 'A' approached the department for placing further orders of 50 coils on it in consideration of which it offered a discount of 2 percent on the earlier price of Rs. 16,727 per loading coil. The department placed further three orders for total of 200 coils on it in July 1978, August 1978 and January 1979 for total cost of Rs. 32.79 lakhs for supply of 100 coils by 31st December 1978 and 100 coils by June 1979, on receipt of the order of January 1979 for 100 coils, firm 'A' requested the department to enhance the rate of Rs. 16,727 to Rs. 17,750 per loading coil on the ground that the prices of raw material had gone up. This was agreed to by the department in June 1979. On a further request by the firm that its offer of 2 percent discount was only for 50 coils ordered in July 1978 and not for any subsequent order placed on it, the department amended the order of January 1979 further in September 1979 cancelling the provision of discount of 2 percent. The total value of the three orders, thus, increased from Rs. 32.79 lakhs to Rs. 34.15 lakhs. The delivery periods were also extended from time



to time. Supplies against first two orders (50 coils each) were completed within the extended delivery period (May and August 1979) and those against the third order (100 coils) extended up to December 1979 were continuing (November 1979).

1.9. (c) During the course of the above supplies, firm 'A' informed the department (April 1978) that it had also completed prototype samples each of the 50, 100 and 200 pair loading coils suitable for pressurised cable. The rate quoted by firm 'A' were considered by the department to be comparable with that of 400 pair coils which had already been supplied by firm 'A'. While recording in departmental file that a tender enquiry would be floated before placement of bulk orders in future, the department placed on firm 'A' (August 1978) an order for supply of 6 coils each of 50, 100, 200 and 800 pairs at a cost of Rs. 2.76 lakhs. In September 1979, however, the department decided to negotiate the rates for bulk order with firm

'A' instead of inviting tenders on the ground that:

- there would be a procedural time lag between floating a tender and taking a decision to place actual orders; and
- the proposed order would be restricted to the requirements of the current year and that for the next year onwards, tenders would be called for.

1.10. Following negotiations, the department placed an order (October 1979) on firm 'A' for 480 loading coils of 50 to 800 pairs for Rs. 59.39 lakhs.

1.11. Thus, orders worth Rs. 1.30 crores as detailed in (a), (b) and (c) above were placed on firm 'A' partly (Rs. 33.45) lakhs) on the basis of its tender and partly (Rs. 96.30 lakhs) on negotiations without inviting tenders.

The department stated (February 1980) that:

- based on the forecast of demand and keeping in view the slow progress in development of pressurised loading coils, the department placed a number of orders for non-pressurised loading coils in small sizes on ITI;
- it had not been possible to utilise the entire stock mainly because in the larger telephone districts, the requirements were for larger sizes and there were no large size loading coils in the accumulated stock;



- it was conceded that the total cost of converted coils would exceed the cost of the new pressurised assemblies, but this was inevitable;
- While firm 'A' had been able to develop a prototype and had submitted a quotation, in the interest of developing a wider base it was decided to call for tenders (September 1973). Orders were placed on this firm on the basis of proven capability.

1.12. The following are the main points that emerge:

- Despite decision (1971-72) to introduce pressurised loading coils, the department continued to place orders on the ITI for unpressurised loading coils resulting in accumulation of stock of unpressurised coils worth Rs. 1.16 crores by 1978 with very slow off-take because they were of smaller sizes while requirements were for larger sizes.
- Although the TRC had apprehended (January 1977) damage to the pressurised cables if used with unpressurised loading coils, instructions were issued (July 1978) by the department for such use by making some improvisation; but no assessment of the quantum of damage to cables on this account was made.
- The estimated cost of conversion of half the accumulated stock of unpressurised loading coils (Rs. 58 lakhs) into the pressurised type would amount to Rs. 23.64 lakhs making their total cost as Rs. 81.64 lakhs against the cost of Rs. 49.76 lakhs for the same number of pressurised coils.
- Based on the technical guidance and the know-how given by the TRC to the ITI, firm 'A' fabricated the prototype of 400 pairs in April—May 1973 itself while the ITI developed the same only in March 1976.
- Order worth Rs. 59.39 lakhs was placed (October 1979) on firm 'A' without inviting tenders even though the department had stated in August 1978 at the time of earlier purchase that tender enquiry would be issued before making further purchases.

[Paragraph 22 of the Report of the Comptroller and Auditor General of India for the year 1978-79, Union Government Posts and Telegraphs)].



*I—Overstocking of unpressurised loading coils and their conversion*

1.13. The Audit Para points out that to remove distortion and attenuation of speech, loading coils are inserted by the P&T Department in their underground cables at regular intervals. Earlier these loading coils were of unpressurised type and were procured by the Director General Posts and Telegraphs (DGPT) from the Indian Telephone Industries, Bangalore.

1.14. The Committee desired to know whether the unpressurised loading coils were manufactured within the ITI and/or also obtained from outside firms in the form of manufactured parts or complete assemblies. The Ministry of Communications, in a note, have stated:

“Complete Loading Coils ‘Pot Assemblies’ were manufactured in ITI by purchasing cast iron cases from outside sources. Loading coil assemblies were also obtained from outside sources apart from being manufactured in ITI. Particulars indicating supplies of loading coil assemblies during the period 1972—77, the quantities and the values as furnished by ITI, are given below:

Sl. No.	Name of Supplier	Quantity	Value in Rs.
1.	M/s. Mysore Electronics, Bangalore . . . .	181 Nos.	2,80,048
2.	M/s. Southern Electronics, Bangalore . . . .	155 „	2,54,460
3.	M/s. Electrohm, Bangalore . . . .	455 „	7,53,000
4.	M/s. BDS Electronics, Bangalore . . . .	460 „	6,72,973
5.	M/s. Arrow Electronics, Bangalore . . . .	190 „	2,62,670
6.	M/s. SK Electronics, Bangalore . . . .	890 „	11,59,840
7.	M/s. Siwvel Electronics, Bangalore . . . .	500 „	62,450
8.	M/s. Lunar Electronics, Bangalore . . . .	59 „	83,901
		2440 Nos.	

Note : Cost of Loading Coil Assembly varies according to the number of coils in the pot. It varies from Rs. 1240 00 for 50 coil assembly to Rs. 2500.00 for 200 coil assembly. The imported Core material for manufacture of coil assembly is supplied by ITI to the manufacturer.

The suppliers of cast iron castings are:

1. M/s. Bangalore Foundries (P) Ltd.
2. M/s. AG Iron & Steel Works.
3. M/s. Venus Metal Works.
4. M/s. Castings Foundry (P) Ltd.
5. M/s. Mysore Metal Industries.



The supplies were selected on basis of competitive offers and their manufacturing capacity."

1.15. The Audit Para further points out that to prevent entry of moisture into the cables and help locate the cable breakdowns speedily, the Department decided in 1970 and 1972 on pressurisation of underground cables implying thereby that the unpressurised loading coils in use till then would gradually be replaced by pressurised loading coils for which the Tele-Communication Research Centre (TRC) had also finalised a tentative design in 1971-72. However, notwithstanding the aforesaid developments, based on the manufacturing capacity of the ITI and the demands forecast by the Circles and Districts, the DGPT continued to place orders on the ITI for supply of unpressurised type loading coils.

1.16. It was only in April 1976 and January 1977 that the P&T Department cut down the order placed on the ITI for the unpressurised loading coils. Since the ITI had arranged substantial quantities of raw material and components for completing manufacture against pending orders, the DGPT agreed in February 1977 to accept 429 loading coils awaiting tests with the ITI. After making these supplies, the ITI was still left in November 1979 with loading coils of various sizes and the connected sub-assemblies costing Rs. 10.84 lakhs. The Committee enquired (i) why the ITI could not stop further manufacture of unpressurised loading coils and divert the material in hand to other uses or dispose it of otherwise and (ii) what were the broad items of material then in hand which would have become surplus because of switch over to pressurised loading coils and what was their cost. The Ministry of Communications, in a note, have stated:

"Manufacture of loading coils and loading coil assemblies were immediately discontinued. The ferrite core material which was available in stock and which was also on order was utilised in other projects. Other materials such as castings and loading coil assemblies could not be utilised on other projects as these are special items unique to loading coils. Items which became surplus and their cost are:

(a) Loading coil assemblies 589 Nos.

valued at

Rs. 8.51 lakhs

(b) Castings 663 Nos. valued at

Rs. 2.33 lakhs

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Rs. 10.84 lakhs



1.17. Asked how the above mentioned stock of loading coil assemblies and castings was disposed of, the Ministry of Communications have stated that "This amount has been taken for writing off".

1.18. To another question whether any further supplies in the form of raw material or parts etc. for being used in unpressurised loading coils were procured by the ITI from outside firms even after April 1976, the Ministry replied:

"No further procurement of items for unpressurised loading coils was taken after April 1976. However, some items for which orders were placed earlier and could not be cancelled were received after April, 1976."

1.19. The Committee desired to know the figures of total unpressurised coils and cables in the entire P&T system during 1971-72 when the decision to pressurise them was taken. The information furnished by the Ministry of Communications is given below:

"Data collected in 1971-72 was in respect of junction cables and primary cables in the Telephone Districts of Bombay, Calcutta, Delhi, Madras, Ahmedabad, Bangalore, Hyderabad, Poone, Nagpur, Kanpur, Patna and Jaipur as only these cables were proposed to be pressurised. The total length involved at that time was 9000 Km. The number of unpressurised loading coils in these District at that time was 560."

1.20. Since the Audit Para points out that by July 1978 large stocks of unpressurised loading coils valued at Rs. 1.16 crores had accumulated in the Store Depots of the P&T Department, the Committee enquired whether the field units had been informed in 1972 or in 1973 of the use of pressurised loading coils and asked to keep this in view while sending their requirements of unpressurised loading coils. The Ministry of Communications, in a note, have stated that as a suitable design of pressurised type loading coil was not available no such intimation was sent to the field units during those years.

1.21. In this connection, the Secretary, Communications stated in evidence:

"Orders were placed earlier by the various circles and districts directly on the ITI orders were also placed from the Directorate. Now it seems there was some amount, though not very much, of excess ordering compared to what was



actually needed on an annual basis or on one or two year basis. This might have happened because there was a delay in the supply by the ITI. So, when the units placed orders on the Directorate, the Directorate, on the basis of that, consolidated their indents and, after necessary scrutiny, placed the orders on the ITI. The earlier indents placed by these units on the ITI might not have been taken into consideration by the Directorate. The earlier orders were executed by the ITI. Later indents placed by the Directorate were also executed. "There was thus a surplus of the supplies compared to the current needs."

1.22. To a question how it was that not only orders continued to be placed for unpressurised coils for all the 6 years from 1972 to 1978 but the orders were so big that the stock accumulated to the extent of Rs. 1.16 crores the witness replied:

"The decision to go in for pressurization of underground cables and, therefore, use of pressurized loading coils to the extent available, along with unpressurized cables, was taken in principle. Even at present, our decision is that pressurization of junction cables and primary cables will be undertaken only in telephone districts, that is, the telephone systems in big cities, and not all over the country. That is why, we are still using, in fact we are forced to use, for cost and other considerations, unpressurized loading cables in other areas."

1.23. In a subsequent note, the Ministry of Communications, have stated:

"Though the Department took decision to introduce pressurisation of cables in Telephone Districts in 1972, certain steps had to be taken on the supply of required items of equipment for implementation of the decision. Action had to be taken to locate suitable source of supply and arrange indigenous supply of pressurisation equipment wherever possible. Some progress was possible in this direction and a modest programme of pressurisation was initiated by 1974-75. Even at this stage use of non-pressurised coils had to be continued in the telephone districts as well as telecom. circles. Upto 1975 there was no indigenous production of either pressurised or unpressurised loading coil assembly of over 200 pair size. Development of large size loading coils of pressurised type was taken up by TRC and ITI



from 1971 onwards but development work took considerable time. Pending development of large size pressurised loading coil, the department had to undertake procurement of loading coils of old design for meeting the requirement with whatever was available. It was in this context that orders were continued to be placed for loading coils of non-pressurised type in smaller size even upto 1976."

1.24. The Ministry of Communications have listed the following two main reasons for accumulation of the huge stocks:

- "(i) With the intensification and expansion programme particularly in the major Telephone Districts the requirements shifted to large size loading coils. With the intensified use of the available space on the roads, it became more and more difficult to use a number of smaller sized loading coils to lay the larger sized cables.
- (ii) There were slippages in the receipt of loading coils and in the interest of timely utilisation of asset already created, some of the cables were initially commissioned without loading coils which no doubt resulted in degradation of speech. However, when loading coils did become available there has been reluctance in introducing the loading coils on working cables due to interruptions to service on a larger scale and resultant public complaints."

1.25. The stock of unpressurised loading coils in various store depots and with field units upto 30th September, 1980 based on physical verification as intimated by the Ministry of Communications, is given below:

Size	Stock now available in store depots		Total (Nos.)
		Field Officers (Nos.)	
50 prs.	843	232	1075
75 "	234	4	238
100 "	729	156	885
150 "	10	15	25
200 "	329	145	474
TOTAL	2,145	552	2,697

The value of coils in stock with the Department as on 30th September, 1980 came to Rs. 130.21 lakhs.



1.26. Referring to an earlier statement of the Ministry of Communications that accumulation of unpressurised loading coils was partly due to lesser requirement of small size coils, the Committee wanted to know when the process of shifting to large size coils started and why steps were not taken to reduce placement of orders for smaller size loading coils when the Department knew that the requirement of major Telephone Districts had shifted to large size loading coils. The Ministry have, in a note, stated:

"During 1969, the need for higher sizes of loading coils was felt. The process of shifting to larger sizes started when such coils of suitable design became available in 1973 by import and from 1977 on a regular basis when indigenous supplies became available. In the absence of loading coils of larger sizes, the order for smaller sizes had to be continued."

1.27. Asked how the stock was proposed to be utilised in future. The Ministry have stated:

"The stocks available in the Department fall in two categories:

- (i) stocks held in field units;
- (ii) stocks held in store depots.

The stocks of unpressurised loading coils with field units are against particular estimates. These coils will be used while carrying out sanctioned works against which these coils were received. The stocks of unpressurised loading coils available with the store depots would be utilised in certain types of long distance circuits using cables without pressurisation and also in various Telecommunication circles where pressurisation is not to be resorted to in the near future. There will also be requirements for rent and guarantee long distance circuits. These loading coils will be issued to meet these demands."

1.28. Yet in another note furnished on 8th October, 1980, the Ministry have stated:

"The observation is that during the period February 1979 to June 1980 about 80 lakh worth of unpressurised loading coils have already been utilised. Substantial quantities are expected to be cleared in about two or three years time."



1.29. Referring to the placing of orders on the ITI direct by the units and the position prevailing at that time at the headquarters in New Delhi, the Committee pointed out that because of lack of proper coordination, a situation had reached where ultimately the P&T Department had got stock of unpressurised coils of various sizes to the tune of Rs. 1.16 crores—much more than the current need. So a decision was taken to convert the unpressurised coils into pressurised ones. The Committee, therefore, wanted to know what action the department had taken to ensure that such a thing did not happen again. The Secretary, Communications, deposed in evidence:

“There is lack of as thorough a scrutiny as one would like. More than 11000 items are to be procured in small and large quantities. Administrative Staff College came into the picture for advice on inventory control. But it is not possible to do with everything necessary in inventory control on the basis of manual working, as large items were there. You have different types of inventories, some are with actual units; some are in divisions. Some are in store depots. Data have to be available with the Directorate when they place indents. But on the basis of actual working we have found that it is not possible to do it effectively manually. So we have taken the decision that we must computerise these operations. Otherwise the type of functioning which you rightly advise should be there, is not possible.”

1.30. Referring to the above statement, the Committee enquired what sort of advice was given by the consultants. The witness stated:

“We had an Indian Consultant also. The Administrative Staff College, Hyderabad, had to go in detail into the facts and figures and analysis and their recommendation had to be considered and the foreign consultants gave us their final views. The British firm was M/s. Peet Marwick and Mitchel & Co., London.”

1.31. To a question when the department wrote to them for advice, the Member (TD) P & T Board replied:

“The Department did not write. It arose due to a World Bank appraisal. We are talking in terms of foreign exchange loans and credits over some years. There are 7 credits totalling 488 million dollars. As part of those arrangements consultants were appointed by the Indian Government on World Bank's advice.”



The Secretary, Communications added:

"The inventory control part of this study called for detailed examination. That was assigned to the Administrative Staff College at the instance of the British firm and when the Staff College gave the recommendations, these were, after scrutiny, endorsed by the British firm to the department. Subject to correction these reports were given in 1970-71 and in the light of the recommendations, certain steps had been taken to improve our accounting system. For example, prior to 1972, the field units were directly placing their indents on the ITI for most of the items. As a result of this report, we centralised the indenting to a considerable extent in the Directorate. Various other steps were also taken."

1.32. Asked when the decision to computerise the inventory control system was taken and what progress had been made in that direction. The Ministry, in a note, have stated:

"The need for computerisation of inventory control was being felt for a very long time. In addition to inventory control there was also need for computerisation of various operations of the P & T Department such as telephone billing, telephone directory compilation, cable records, etc. and accordingly a decision was taken by P & T Board in October 1978 for establishment of computers at Bombay, Delhi, Calcutta and Madras to provide for these facilities. The plan is to use these computers for inventory control purposes also on a phased manner. For implementation of this proposal, a memo for consideration of the Public Investment Board was prepared and submitted on 31st March, 1980. Clearance of the Public Investment Board is awaited. Meanwhile the specification for the computers have been finalised in consultation with the Department of Electronics. As per the Government of India Regulations, the procurement of computers is to be done through the Department of Electronics and arrangements for initiating procurement action will be made immediately after the project is cleared by the Public Investment Board."

1.33. The Committee were informed in another note that there was a centralised inventory control system in the P & T Department



which was functioning in the office of the GMTS, Calcutta. The figures of inventory during 1977-78 to 1979-80 were as under:

"Inventory	Rupees in Crores.		
	1977-78	1978-79	1979-80
Value of stores in suspense . . . . .	39.01	54.22	58.58
Stores in transit and advances paid to contractors etc. . . . .	56.33	54.80	55.28
TOTAL . . . . .	95.34	109.02	113.86

1.34. Asked what were the terms of consultancy of the British firm, what advice was given by them and during which period. The following information has been furnished by the Ministry in this regard:

"The consultants were appointed for the purpose of having a review of the accounting procedure of the telecome. operations of the Indian P & T Department to be carried out in accordance with the terms of reference of review as given in annexure 4. Some specific additional terms of reference were incorporated in the terms of reference during early stages of the assignment. These are given in Annexure 5. The consultants were appointed under P & T Board letter No. 9-4/63 B dated 23-7-1964 and the report was given by them on 24-8-1965. The firm gave extensive recommendations covering the entire range of terms of reference pertaining to Accounting Methods, Stores, Workshops and Revenue Billing and Accounting. The details are given in the book printed by the P & T Department entitled "Review of the Accounting procedure of the Telecommunications Operations, 1965."

Amount paid to consultants as fees, air fare, living allowances and other contingent expenses	Rs. 4,49,553.00
Other expenditure incurred i.e. pay and allowances of officers and staff of P & T attached to the consultants."	Rs. 82,018.00

1.35. In another note the Ministry of Communications have highlighted the following improvements made in various fields particularly in the inventory system on the basis of the recommendations made by the foreign consultants:

- (i) The accounts were departmentalised by integrating with the Department in phases from 1-4-1960.



- (ii) Internal check system was introduced.
- (iii) Commercial system of Accounts was introduced in the Telecom. Wing.
- (iv) Improvements on items like telephone billing and accounting, and control of inventory have been made.

1.36. Asked when the necessity for introduction of pressurised loading coils was first felt, the Ministry of Communications have stated:

"The necessity for development of loading coils for use in pressurised cables was realised by the TRC during 1969. After the decision was taken by the P & T Board to introduce pressurisation in Telephone Districts in 1972 it became necessary to introduce pressurised type loading coils. When source of supply for such coils became available Engineering Instruction on use of such Loading Coils were issued on 23-11-1977."

1.37. At the instance of the Committee, the Ministry have furnished copies of Minutes of meetings of P & T Board held in 1971 and 1972 and Memo prepared in April 1972 leading to the decision taken regarding pressurisation of underground cables. The relevant extracts are reproduced below:

- A. "Minutes of the Meeting of the P & T Board held on 18th February, 1971 to decide upon the use of (i) Cable Ducts and (ii) Cable pressurisation in the Indian Posts and Telegraph Department."

## CABLE PRESSURISATION

### POLICY

Pressurisation of cables by dry air or nitrogen is a very common feature in all the advanced countries. The advantages of cable pressurisation are as follows:

- (1) Gas pressurisation prevents the entry of moisture and resists entry of water during cable break downs, i.e. when the sheath is punctured.
- (2) The life of the cable increases since it is kept in a healthy condition.
- (3) As the moisture inside the cable is removed, insulation, capacitance, etc. and the impulsing and crosstalk performance of the circuits are improved.



After detailed discussions regarding the advantages of pressurising the underground cables, it was decided that initially all new junction cables and primary cables will be pressurised in all the Telephone Districts. Till proper pressurising equipment is made available pressurisation will be carried out by using gas cylinders for feeding. Attempts will be made to pressurise all the existing junction and primary cables progressively.

### ISSUE OF TECHNICAL INSTRUCTIONS

It was decided that the T.R.C. should give technical advice on cable pressurisation and issue necessary technical instructions from time to time.

### COMPRESSORS AND ACCESSORIES

The compressors required for cable pressurisation are manufactured under very stringent specifications. Hence, at this stage, we may have to import compressors and some accessories for gas pressurisation.

#### *P & T Board Approval*

Board Memos will be submitted for consideration and approval of ducting and cable pressurisation.

#### *Progress:*

It was decided that the progress made on both ducting and cable pressurisation will be reviewed after six months."

#### *B. P & T Board Memo (April 1972)*

Pressurisation is normally carried out on the following cables:

- (a) All junction cables.
- (b) All primary cables.
- (c) All secondary cables.

In our network it is proposed to pressurise all new junction and primary cables in all telephone districts and also to make efforts to pressurise the existing junction and primary cables."



## Financial Implication of Cable Pressurisation

### (a) New Cables

Cost of pressurisation of 20 cables for a length of 8 kilometers is as follows:—

Cost of equipment	. . Rs. 24000/-	{	Cost of compressor air dryer	Rs. 20000/-
Other cost (Approx)	. . Rs. 5000/-		Cost of alarm equipment	Rs. 2000/-
TOTAL	. . <u>Rs. 29000/-</u>		Cost of installation	Rs. 2000/-
			Cost of pressure sentinels & pipe	Rs. 2000/-
			Cost of installation and pressure sentinels	Rs. 3000/-
			<u>Rs. 29000/-</u>	

$$\text{Cost per 100 meters/cable} = \frac{29000 \times 100}{20 \times 8000} = \text{Rs. 18/-}$$

### (b) Savings due to increased life of cables:

The life of an underground cable is of the order of about 30 to 40 years (This depends on corrosion, damage suffered during life etc.)

With the cable pressurisation, the cable life increased to about 40 to 50 years—an increase of about 10 years.

Cost of 100 meters of cable—Rs. 100×100—Rs. 10000/-

(Cost per meter on an average is Rs. 100. This is based on actual of payment to HCL on various sizes of cables).

The saving, because of the increase in cable life shall be the interest on capital cost of the cable viz. @7 per cent interest, the savings shall be as follows:—

$$\frac{10000 \times (107) 10}{(100)} 10000 = \text{Rs. 9390/-}$$

(Simple interest will be Rs. 7000).

i.e. many more times than the cost of pressurisation (Rs. 18/-). Even if we get an increase in life by even one year the savings will be of the order of Rs. 700/- against an expenditure of Rs. 18/- per 100 meters. No additional staff is required for this work where new cables are concerned as this work will be done at the installation stage.

### (c) Old Cables:

Additional staff required for making old cables leak proofs say at Bombay 1 D.E. and 4 A.Es for about 2 years, cost of these 5 officials—1,20,000 Rs.



Total cables to be worked upon about 400 with average length of 2 Kms-800 kms. length.

$$\text{Cost per 100 meters due to extra staff} = \frac{1,20,000}{800 \times 1000} \times 100 = \text{Rs. 15 per 100 meter.}$$

$$\text{Cost of gas Pressurisation of old cable} = 18 + 15 = \text{Rs. 33 per 100 meters.}$$

Against this the saving will be of that order of Rs. 9380 per 100 meters of cable."

C. Extracts from the draft minutes of meeting No. 2 of 1972-73 of the P & T Board held on 15-5-1972 which have been approved by the Chairman and Members are sent to PHM Section for information and necessary action. The minutes have to be finally confirmed at the next meeting of the Board. They may, however, be treated as final unless any amendment is received.

2. Monthly progress report of the action taken to implement the decision may please be furnished in accordance with Office order No. 7 dated the 6th February, 1963. A copy of the orders issued and implementation of the decisions may also be supplied to the undersigned.

15. 11-9/70-PHM Pt. I Use of ducts for laying underground cables and pressurisation by gas of underground cables.

The Board further decided that the planning Branch of the Directorate should issue engineering guidelines on the subject and supervise programming of work in the field. It should also assess experience in executing the work, and give necessary priority to the import of equipments needed for pressurisation of cables."

1.38. When the Committee pointed out that in addition to pressurisation of all new junction cables and primary cables in all the Telephone Districts initially the P & T Board had also decided in 1972 that 'attempts would be made to pressurise all the existing junctions and primary cables progressively', the Secretary, Communications, explained in evidence:

"I would like to clarify that in the telephone system there are different types of cables as has been already mentioned one is the junction cable, second is the primary cable and the third one is what goes to the subscribers' premises known as the 'distribution cables'. Now we are going in for the



jelly filled types of distribution cables. Pressurised cables enable us to quickly locate the damage caused due to various reasons and to rectify the damage quickly. At the present moment, we do not foresee a situation having regard to the cost benefit angle, when we would go in for pressurisation of the entire cables system including the junction and primary cables throughout the country. As I said earlier excepting in the eighteen districts, in most of the smaller towns etc. where there are single exchange units, the junction cables are not there—between one exchange and another. We are keeping the cost benefit angle in view. We therefore think it is essential to go in for pressurisation of junction cables and primary cables in the telephone districts. We have to keep cost considerations in view."

1.39. To a question whether cost factor was not taken into consideration when the decision to go in for pressurisation of cables was taken, the witness stated:

"The decision was to pressurise new junction and primary cables in all the telephone districts. This was decided upon because of the problems faced in big cities. Underground cables and pipes are there for water supply, electricity and various other things. Directions were issued in 1977 in the matter."

1.40. Asked further whether the decision taken in 1971 or 1972 in this regard still persisted, the witness replied:

"One point is this. There is a shortage of pressurised cables. We do not get these as much as we need. So, we have to make a do with what we get. Therefore, in allocating the pressurised cables to various units, we comply with the directive which had been followed by us so far, namely, that the new junction and primary cables in the telephone districts must be pressurised."

1.41. The Committee enquired what action was taken by the P&T Department to apprise the circles and districts of the desirability of placing their demands for the pressurised type loading coils. The Ministry of Communications have stated:

"The decision to introduce pressurisation of all new junctions and primary cables in all Telephone Districts to be laid in future and to make attempts to pressurise all existing



junction and primary cables was taken by the P&T Board in the P&T meeting held on 15-5-1972, after which steps were taken to arrange supply of required items of equipment to implement the decision. Dependent upon the availability of items required for introduction of pressurisation, it became possible to introduce a modest programme of pressurisation by 1974-75.

Detailed instructions on pressurisation of cables were issued to Circles/Districts under letter No. 7-3/74 PHM dated 30-4-1974 forwarding TRC Memorandum No. TRC-WM0008. In the absence of a suitable design of pressurised type of loading coil at that time, the instructions provided for use on non-pressurised loading coils with gas seals at the inlet and the outlet to prevent the loading coils from being type loading coil was finalised and on completion of development work, Engineering Instruction (G3002) for provision of loading coil suitable for use on pressurised cables was issued in November 1977."

1.42. The Audit Para points out that Telecommunication Research Centre had apprehended in January 1977 that the pressurised cables would be damaged if used with unpressurised loading coils. The Committee wanted to know how the field units were still asked in July 1978 to utilise these loading coils. In a note, the Ministry of Communications have stated:

"In the Technical Memorandum No. TRC/WM-0008 of January 1974 it was stated that "in the case where non-pressurised PCM repeaters or loading coils are installed along with pressurised cables gas seals are necessary at the inlet and outlet to the repeaters to prevent the repeater housing or the loading coils pot from being subject to gas pressure." The instructions issued in July 1978 by the Department were in conformity with the directions given by TRC in 1974. Apprehension of TRC expressed in January 1977 was about the possibilities of leakage of gas by the use of non-pressurised loading coils with gas seals which would cause operation of pressurised cables less effective. This did not imply that the cables would get damaged by use or non-pressurised type of loading coils with pressurised

1.43. The Committee enquired what action was taken on the letter of February 1979 of G.M. Telecommunications, Bangalore to the



DGPT pointing out that the use of unpressurised loading coils with pressurised cables led to serious difficulties and would "amount to ruining of lakhs worth of cables for the sake of a few thousands worth of loading coils." The Ministry have stated:

"The use of unpressurised loading coils with pressurised cables would have only made the operation of pressurisation less effective. Cable damage as such because of use of such loading coils was not involved. Further protection which could be had by use of pressurised cables would not be available to the same extent in case of development of leaks in the gas seals which are to be provided with such pressurised loading coils. However, the proposal for conversion of existing stock of unpressurised loading coils to pressurised loading coils was initiated considering the apprehensions expressed by the field unit."

1.44. Asked whether any survey had been conducted to assess the damage to pressurised cables because of their use with unpressurised loading coils. The Ministry have replied:

"No specific survey was carried out, but in the letter of February 1979 from G.M. Telecommunications, Bangalore, it was indicated that they had faced certain difficulties. There has been no other report from the field units of the difficulties faced due to such an arrangement."

1.45. The Committee enquired in how many cables the department had loaded the pressurised cables with unpressurised coils. The Ministry have stated:

"In the initial stages of pressurisation introduced in some Telephone Districts certain cables which were having unpressurised type of loading coils were pressurised. The number of such cases is given below:

Name of District	No. of unpressurised loading coils used in pressurised cables with	
	Gas	Barrier
1	2	
Bangalore . . . . .	4	
Bombay . . . . .	820	
Calcutta . . . . .	19	
Coimbatore . . . . .	25	



1	2
Delhi . . . . .	167
Ernakulam . . . . .	19
Hyderabad . . . . .	75
Jaipur . . . . .	15
Kanpur . . . . .	7
Lucknow . . . . .	4
Madras . . . . .	239
Nagpur . . . . .	5
Pune . . . . .	54"

On the Committee enquiring as to what was the extent of damage in terms of money caused both to cables and coils because of mixing of unpressurised coils with pressurised cables, the Ministry have stated:

"There had been no report of actual damage. Some apprehensions were expressed by Bangalore District and on enquiry they have now reported that they had used four such loading coils. Leakage of gas was detected at some places which were attended to and there were no damage."

1.46. Asked how it was that in spite of the advice of the technical organisation viz. TRC to the contrary, the DGP&T insisted on the utilisation of the unpressurised coils so that large stocks valued at Rs. 1.16 crores then in stock with the P&T Department could be utilised. The Secretary, Communications stated in evidence:

"Though the letter in question was issued from TRC, and later by the same officer when he went to the Bangalore District as General Manager, this observation was not accepted by the P&T Directorate as a technically proven conclusion-viz. that unpressurised loading coils if used with pressurised cables, will damage the cables substantially."

The Members (TD) P&T Board added:

"There are two letters referred to here by the audit: one is from TRC and one from General Manager, Telephones, Bangalore. TRC does not state an apprehension of damage. It is the General Manager, Telephones, Bangalore who had



come up with such an apprehension. This was the view of one officer: we have found no support from any other for his view."

The Secretary, Communication clarified:

"Unfortunately in one of our replies to audit, a wrong statement was made that TRC apprehends this; this is not borne out by documents. We should have corrected it there."

To a question as to why the units were not then coming forward to use the unpressurised coils, the witness explained:

"The size of the coils which were being used was less and in crowded areas like Bombay, the space problem is very difficult. The second point is that the cable should be available at the proper time so that it could be spliced at intervals and the whole thing can be properly tested and put into service. Supply of cables is at times, mismatched. Once it is commissioned, to insert fresh coils is a problem; it has to be carefully done and it requires much more effort. If cables has been laid and traffic is proceeding on that road, the field unit would be reluctant to cut it up to use the new cable."

According to Audit Para, the TRC held discussions in May 1979 with firm 'A' (M/s Electrohms (P) Ltd., Bangalore) for conversion of unpressurised loading coils into the pressurised type to come over the problem of accumulation of earlier type of coils. The firm quoted their rates in May 1979 for doing this job. The P&T Department thereupon placed an experimental order on this firm for converting a part of the unpressurised loading coils into 23 loading coils of 400 pairs of pressurised type at a cost of Rs. 1.90 lakhs. Giving results of sample conversion as revealed by field tests, the Ministry of Communications, in a note furnished to the Committee in October 1980 have stated:

"The following stocks of non-pressurised loading coils were made over for conversion to 23 Nos. of 400 pair of loading coils of pressurised type on an experimental basis:

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50 Pairs	20 Nos.
100 Pairs	32 Nos.
200 Pairs	27 Nos.

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The cost of conversion was Rs. 1,97,588. So far 15 Nos. of 400 pairs coils have been supplied. Out of this 15, ten have been given to Bangalore Telephone District. The balance is being sent to Bombay Telephone District. These loading coils have been supplied in the recent months. Converted loading coils have undergone all the tests prescribed for the pressurised loading coils. Report on performance is awaited."

1.49. Giving reasons for not inviting tenders for bulk conversion of the unpressurised coils, the Ministry of Communications, in a note, have stated:

"Tenders have not yet been invited for bulk conversions. The work of conversion was taken up on experimental basis. The question of bulk conversion will be decided after ascertaining the result of conversion."

1.50. In a subsequent note dated 9 February, the Ministry have stated:

"Two of the converted loading coils have been installed by Bangalore Telephone District. GMT Bangalore has reported that the loading coils after installation are working satisfactorily."

To a question whether the P&T Department still considered it worthwhile spending money on conversion when pressurised coils had become available, the Ministry have replied:

"Department will make all efforts to utilise the available stock of unpressurised loading coils. Conversion of additional quantities to pressurisation type is not contemplated at this stage."

1.51. In this connection, the Secretary Communications stated in evidence:

"In about 4 years time, we will use it up for purposes where such use is authorised. They are not lying with us unutilised for many years."

1.52. Asked whether the Department was thereafter using unpressurised coils in places where they were being used. A representative of the P&T Board stated in evidence:

"There are 3 types of areas for the use of coils. One is the pressurised in cables, or cables to be pressurised in the



telephone districts. In all other places where cables are not, and will not be pressurized, those unpressurized coils will be used; and this stock will be drawn upon. Even in the area of pressurized cable. Specific model or prototype of a pressurized type of loading coils was not available till 1975 or 1976. Before that, the unpressurized type of coil was used with modification. Quite a large number of such coils are in service today in the pressurised area."

1.53. When the Committee pointed out that the decision of the P&T Department to convert the unpressurised coils into pressurised type seemed to have stemmed from their apprehensions that the huge stock of unpressurised coils which had accumulated within the Department, was of no use to them, the Secretary, Communications explained in evidence:

"It is not correct to say that unpressurized cables which were normally being used, were not of any use. As has been mentioned by an officer of the circle, if in place of pressurised cables, unpressurized loading coils are used, full advantage of the pressurization of cables for improving the telephone system etc. will not be available to the department. We are even now using unpressurized cables and unpressurized loading coils in our system. We mean to use them.

The issue of stocks available is a separate one. The stocks now available in the country will be used up. Last year also, Rs. 30 lakhs worth of these stocks were used, not in violation of our principles. These were used in places where we feel that they might be used without damage to the telephone system. The possibility of conversion from unpressurised to pressurised cable coils was explored with the firm which made the offer. But orders were not placed for the conversion of the entire amount."

## *II-Procurement of pressurised loading coils*

1.54. The Audit Para points out that the ITI developed a prototype of 400 pair pressurised type loading coil based on the technical specifications jointly arrived at by the TRC (Telecommunications Research Centre) and the ITI in March 1972 and sent the same to the TRC in March 1976, which cleared it in October 1977.



1.55. The Committee enquired why the ITI did not develop the prototype early and independently when this item was required by the P&T Department. The Chairman, ITI said in evidence:

"The design has two parts; one is the electronic part, which is the actual inductance which has to be designed and made into coils and the other is the mechanical packaging which enables it to be put underground and the electronics part is ITI's design part.... We discussed this specification with TRC on 3-5-1971; we had the design finalised on 17-7-1971 this was approved by TRC on 25-10-1971 and within about 3 months the electronics part was ready for utilisation. The other was the mechanical portion, how to make it waterproof, withstand pressure, etc.. That is not a technology that is normally developed by ITI. It is time-consuming and labour-consuming technology. Customarily we have to depend on subcontractors. ITI has been getting similar types of equipment from a number of people. So we approached them for assistance in this."

1.56. Explaining the reasons for a delay of  $1\frac{1}{2}$  years (March 1976 to October 1977) on the part of TRC in clearing the prototype submitted by the ITI, the Ministry have stated:

"The prototype offered had to be modified as there were defects in the prototype. There were different stages of testing and a prototype meeting the requirements was finally tested in August 1977 and prototype approval was given on 1-10-1977."

1.57. On being pointed out that even after approval of the prototype it took the ITI more than two years to supply 39 pieces in March 1979 against the department's order of January 1976 for 250 loading coils reduced to 175 in November, 1976, the Ministry, in a note, have intimated:

"After the approval of the prototype in October 1977, M/s. ITI have completed the supplies of 39 pieces against the department order of 250 loading coils by March 1979. The difficulty was particularly with regard to galvanising the pots and the lids as well as the fabrication of the heavy items. For this purpose M/s. ITI have to depend on other supplies. The programme of work was also upset due to unprecedented floods in Allahabad during September 1978."



1.58. To a question as to why the order on ITI in January 1976 was reduced from 259 to 175 loading coils in November 1976, the Ministry have intimated:

"A review made in March 1976 indicated that with the supplies anticipated against the order for 200 nos. with M/s. Electrohoms, Bangalore, an additional quantity of 100 nos. would be sufficient to meet the demands upto and of 1976-77. Hence the order on M/s. ITI was reduced from 250 nos. to 100 nos. in April 1976. However, this order of 100 was modified to 175 in November 1976 as M/s. ITI intimated that they have already procured material for fabrication of this quantity and it was found that this quantity could also be absorbed by the Department."

1.59. In another note furnished by the Ministry of Communications, the Committee have been informed that after March 1979, M/s. ITI have supplied the following 400 pair loading coils.

1979-80—————54

1980-81 (Scheduled supply) 50

1.60. On the Committee enquiring what were the precise difficulties faced by the ITI in undertaking mass production of pressurised loading coils, now that it had been able to develop the technique of this item and had in fact supplied a good number of the same to the department, the Ministry have stated:

"ITI being a light engineering industry is having no facility for manufacture of pots, lids, bends etc. required for the fabrication of loading coils. For these heavy engineering items, ITI has to depend on outside suppliers. There have been failures in the past on the part of outside suppliers in not adhering to the delivery schedules. These have contributed to delays in mass production of these coils by ITI."

1.61. Asked what was the cost per loading coil supplied by the ITI and how this rate compared with that of M/s. Electrohms (P) Ltd. Bangalore. In a note, the Ministry have stated:

"The price of the coils supplied by ITI was Rs. 30,000 per loading coil of 400 pairs. The price of the loading coils



of 400 pairs supplied M/s. Electrohms against each order is as given below:

Order	Quantity	Rate
C 402/P-3/5012 dated 3-4-74	200	Rs. 16,727.12
C 402/P-3/5012/A dated 15-7-78	50	Rs. 16,727.12*
C 402/P-III/5012/AI dated 9-8-78	50	Rs. 16,727.12*
C 402/P-III/5012/A2 dated 8-1-79	100	Rs. 17,750.00

\* Less 2% discount."

1.62. During evidence, the Chairman, Indian Telephone Industries explained the reasons for wide variation in prices of coils obtained from M/s. Electrohms and those supplied by ITI:

"Cost of material, skilled labour etc. are there. Skilled labour involved in testing is substantial. Unit price in ITI is high for skilled labour."

1.63. Based on the technical guidance given by the TRC to ITI, firm 'A' fabricated a prototype of 400 pair pressurised type loading coil in April-May 1973 itself while the ITI developed the same only in March 1976 as brought out in the preceding paragraphs. The reasons listed for delay in fabricating the prototype on the part of ITI, are given below:

"The development of prototype by firm 'A' was based on the discussions held by TRC with this firm based on the advice given by DGTD in October 1972. The advice given by the TRC to this firm was on the specifications pertaining to pressurised loading coil. On 10-4-1973 firm 'A' informed that they had completed loading coil assembly except stub cable portion. This will indicate that the coil development by ITI was finalised by October 1971. The first complete assembly of coil was carried out by ITI by April 1975. The prototype including stub cable was fabricated by ITI in April 1976. The offer of Electrohms for complete pressurised loading coil with stub cable was approved during July 1975."

1.64. Since the know-how given by the TRC to the ITI was made use of by firm 'A' for developing the prototype, the Committee enquired on what considerations technical know-how was passed on by ITI to a private firm and that too to firm 'A' only. The Ministry have replied:

"There were discussions between TRC and firm 'A' pertaining to specification for pressurised type loading coil



based on the advice given by DGTD in October 1972. TRC was not in a position to offer know-how for production or manufacture. As per information given by ITI, ITI also did not give the know-how for pressurised loading coil to firm 'A'. It will, however, be seen... that this firm was already supplying loading coil assemblies to ITI as a sub-contractor."

1.65. Asked whether it was a fact that it was on the advice of TRC that this particular firm at Bangalore developed the prototype, the Member (TD), P&T Board said in evidence:

"It is partly correct. The firm approached TRC for advice on the specification and to that extent TRC gave that advice on technical specification."

1.66. The Committee enquired what was the system for making public the tentative and final specifications, prototypes or other material articles drawn and produced by TRC. In a note, the Ministry have stated:

"The items developed by TRC for production and use in P&T fall under two categories:

- (a) Those to be manufactured exclusively by ITI, HTL and HCL; and
- (b) Those that are to be manufactured by agencies other than ITI, HTL and HCL.

In the case of categories falling under (a) discussions are held with the concerned Undertaking for taking up the production according to specification/design.

In the case of categories falling under (b) Vendor development is undertaken by inviting tenders for development-cum-supply of the concerned product. The specifications are supplied to all intending tenderers. Discussions are held with the successful tenderers, if desired by them, on the specification prototype testing etc."

1.67. The Audit para points out that on receipt of the offer of firm 'A' in April-May 1973 to supply 400 pairs of pressurised loading coils at a price of Rs. 14,600 per coil, the department issued a tender enquiry for supply of 200 loading coils of this type to TRC's specification. It was, *inter alia*, stipulated that, simultaneous with the submission of tender, the tenderer should submit a prototype of the loading coil to the TRC for evaluation. Out of 13 firms which submitted their tenders, only firm 'A' whose rate of Rs. 15,940 per



loading coil was the sixth lowest, had submitted the prototype. Having found the prototype of firm 'A' to be satisfactory, the Department placed on it in April 1974 an order for supply of 200 loading coils of 400 pairs each at the tendered rate. The final prototype received from firm 'A' in July 1975 was approved by the P&T Department on 7 January, 1976 though formal approval was issued in March 1976. After admitting during evidence that when the department invited tenders in September 1973, this was the only firm in Bangalore which was manufacturing pressurised coils, the Member (TD), P&T Board explained the logic behind inviting open tenders alongwith a prototype of the required loading coil and not having direct negotiations with firm 'A' which had by then fabricated a prototype of 400 pairs loading coils.

"This was the only firm which took interest in 1973 to undertake manufacture of pressurised coils to our specification. Of course they finally succeeded in meeting the technical requirements only in 1975-76. The next question is why we should invite tenders when we knew that only this firm had the competence. At that time this was one of the views taken that we need not invite tenders. But I think, as a matter of abundant caution, to make sure that this was the only firm. tenders were invited."

The Member Finance, P&T Board, further clarified:

"It would not be strictly correct to say that in 1973 this firm had the expertise to produce or was producing pressurised coils. If that were so, they would have provided us with pressurised coils in 1973 itself. In 1973 they gave only the prototype and that had to be tested by the TRC. Clearance was given only in 1976. Therefore, it would not be correct to proceed on the assumption that this firm had the expertise to manufacture pressurised coils. In 1973 this firm indicated they had the expertise and they would produce the coils. If I may go back a little, in 1972 the department wanted to import pressurised loading coils. At that time, DGS&D said, there is a firm in the country manufacturing loading coils and they gave the address of this firm. That is how PaT was placed directly in touch with this firm A."

He added:

"We floated tender with a view to find out the capacity of others. We were interested in trying to develop other sources."



1.68. Asked why then only firm 'A' was invited for discussion with TRC and not other firms for developing this prototype, the Secretary, Communications, said in evidence:

"This firm was particularly mentioned by the DGT&D with a view to attaining the objective of self reliance. They are supposed to keep themselves informed of firms which are engaged in the field of import substitution and things like that. That was one firm in this line and this particular firm was mentioned to us by DGT&D."

Another representative of the P&T Board stated:

"The other firms did also respond. We did give them an opportunity to participate in the sense that we placed educational orders. We gave a developmental order to one of the firms and we exhausted all possibilities to see whether they can develop the prototype. The prototype of this particular firm was cleared three years later. Had any other firm developed another prototype within a reasonable period, say even three years, we would have certainly taken their case into consideration."

The Secretary, Communications added:

"We did not know that they had a prototype which will be readily approved. We knew that this firm was in the line. We need a lot of facilities, apart from expertise, like testing facilities, etc. to meet the specification properly. Going around, in our opinion, would not have been very helpful. Still it was for this purpose that the open tender was issued. In such cases it is our normal practice that if any firm says we do it in other fields of production give us an educational order, we will take a little more time, we will execute that order, then you test our thing and then give us a regular order; we did it in this case and do it as a matter of regular course."

1.69. Both firm 'A' and the ITI had taken quite some time to make a prototype. The Committee, therefore, enquired how far it was realistic of the department to ask the intending tenderers to give a prototype with the tender, after the issue of invitation of tenders in September 1973, by 20 December 1973. In a note, the Ministry have stated:

"The condition of supply of prototype was stipulated in tender offer to ensure capacity of the firm to deliver the required



items of satisfactory design and quality. Though such a stipulation was made in the tender, offers received from other firms without prototype were also considered to develop broader base of supply. Based on this evaluation, it was decided to place educational orders on four other firms also. Accordingly an order for 20 assemblies was placed on M/s. BDS Electronics, Bangalore, in view of the information that they had been supplying loading coils to the ITI under sub-contract. Educational orders for one assembly each were proposed for three other firms whose quotations were lower than firm 'A'. Apart from these, M/s. Excison had also made two alternative offers one based on import of complete loading coils assembly and the second based on the import of assembly of components to old design, both of which were not acceptable.

The proposal to place educational order on M/s. BDS Electronics, Bangalore for 20 numbers had to be dropped as the firm sought assistance for issue of import licence. Out of the remaining three, two did not respond and the third one subsequently intimated that they were unable to develop this item. The above will show that even though the prototype was sought for, this was not insisted upon in placing the orders."

The Member (Finance), P&T Board stated in evidence:

"Even the Department was not aware in 1972 as to which was the firm which was capable of having prototype of the pressurised type. There could have been one firm or many firms. At the instance of the DGT&D, we were directed to this firm. There could be a possibility that there were other firms also. We wanted to know whether actually there were other firms, whether there would be response from other sources also. So, we floated the tender."

1.70. The Committee wanted to know the reasons for delay of 8 months (from July 1975 to March 1976) in submission of the final prototype by firm 'A' and its approval by the Department. The Ministry have stated:

"The sequence of events pertaining to the prototype approval is given below:

1. The prototype testing of the loading coil and the assembly commence on 14-8-1975 at the works of firm 'A' and factory testing was completed by October 1975.



2. The factory testing was followed by field trial of 5 loading coil pots in Bangalore Telephone District.
3. Formal prototype approval based on the factory tests and field trial tests was Communicated by T&D Circle to the firm 'A' in March, 1976."

1.71. Since according to Audit Para it took time in approving the final prototype received from firm 'A' in July 1975, the date of delivery of the coils against the supply order of 200 numbers of 400 pairs each placed in April 1974 on this firm was first extended to 31 May, 1976 and then to December 1976. The number of loading coils was also reduced to 150 but was later on restored in November 1977 with the date of delivery as December 1977, later further extended to April 1978 when the supply was completed. Explaining the considerations leading to reduction of the order placed on firm 'A' from 200 to 150 coils and its subsequent restoration in November 1977, the Ministry in a note, have stated:

"Though the initial order placed in April 1974 was for 200 numbers this was reduced to 150 in July 1976 because another order was pending with ITI, Naini and it was expected the supplies would be coming from Naini unit also. A review in September 1977 indicated that there would be delays in supplies from ITI resulting in delays in commissioning of telephone exchanges. The original order for 200 Nos. on firm 'A' was therefore restored in November 1977."

1.72. As regard successive increases in rates per coil from Rs. 15,940 to Rs. 16,215 in April 1975 and again to Rs. 16,727 in June 1977 against the first supply order of April 1974 and from Rs. 16,727 to Rs. 17,750 for further order of 200 coils placed on this firm from July 1978 to January 1979, asked for by the supplier on one count or the other and agreed to by the department, the Committee wanted to know whether there existed any provision for escalation in cost in the agreement entered into with the firm. The Ministry of Communications, in a note, have explained the position as under:

"There was no provision for escalation clause in the purchase order. The various amendments to purchase order incorporating change in price were effected on the following consideration.

1. Amendment to purchase order issued on 4-4-1975 to enable the supplier to incorporate the modification suggested by TRC for better corrosion resistance.



2. Modification in price issued on 7-6-1977 consequent to the variation in the price between imported and indigenous stub cable purchased from HCL as per stipulation contained in the purchase order.
3. Amendment issued on 15-6-1979 because of a representation received from firm 'A' for revision of price for orders placed in January, 1979 for 100 numbers of loading coils because of increase in price of raw materials. This change in price was agreed to after negotiations with the firm after considering the justification for increase in price.
4. Amendment issued on 18-9-1979 deleting 2 per cent discount in price because the firm represented that the discount of 2 per cent offered by them on 7-2-1978 was limited to supply of 50 more loading coils at that time because they were already having certain components for manufacture of that quantity of loading coils at that time."

1.73. To a question, why the department did not continue to pay the same rate of Rs. 15,940 settled initially with this firm under the contract agreement for supplies made therefor, the Member (Finance) P&T Board explained:

"During that period, we had to make two changes. These were necessitated by certain technical considerations. In the first case, the TRC said that those loading coils are to be buried under the earth and they should be free from corrosion and, therefore, the casing should be galvanised. The requirement of galvanizing was not there in the tender. It was a departure because we wanted an improvement. So, we had to consider the request of the party to give additional amount. It was about Rs. 275 for carrying out this galvanizing. Secondly, in the tender this party had indicated that they would use the stub cable imported from abroad. For technical considerations, we told them, they should use the stub cable manufactured by the Hindustan Cables Ltd.

So, this was other modification. We wanted them to use the stub cable manufactured by the Hindustan Cables Ltd. This difference was ascertained, and this was also given about Rs. 570 or something like that. Both these modifications were not indicated in the tender; they were post-tender changes."



1.74. Referring to the amendment to purchase order issued on 4-4-1975, the Committee enquired which was the authority who verified the increase to be correct, proper and justifiable. The Secretary, Communications said in evidence:

"That was advised by the TRC. Whether the cost of galvanising would justify that price, that is a different issue."

1.75. On being asked whether any record of the increase in rate was there or it was just an ad hoc decision, the witness deposed:

"This point attracted our attention. We have been trying to find out who authorised it and on what basis."

The Member (Finance) P&T Board, added:

"Actually there were two modifications, as I mentioned: one about galvanising as suggested by the TRC, and the other, about the use of stub cable manufactured by the Hindustan Cables Ltd. in place of the imported one. So far as the stub cable portion is concerned, we had asked the G.M., Telecom stores, in Calcutta who is handling this matter. An assessment was made by the Internal Financial Adviser on the spot, taking into account the cost of the cable the rate at which imported cable was being procured etc. He found certain discrepancies and it was set right; a certain price was fixed. In the other case, we have not been able to get the file concerned."

1.76. Explaining the basis for the 3rd increase of June 1979 (from Rs. 16,727 to Rs. 17,750), the witness said:

"This was done on the advice of the negotiations conducted by our officers also it went up to 17,750. There was a committee which went into it. We negotiated the price, we also held negotiations with the other offer made by this company for coils of different sizes, that is, fifty pair and hundred pair and things like that."

1.77. The Committee pointed out that the department could not visualise their requirement for the loading coils even for one year as was evident from the fact that subsequent orders continued to be placed on firm 'A' one after the other in short intervals viz. July 1978, August 1978 and January, 1979 for a total of 200 coils for delivery by December 1978 and June 1979. Asked whether this had given a lever in the hands of the supplier who took full advantage



of the situation and went on demanding higher price every time, the witness said:

"No, we have not given any higher price for the reasons which are not justified. Because of technical requirements as stated by us which were not in the tender, we have given that on the basis of the further negotiated price. At the time when the proposal for getting there from the party instead of by tender came up, we considered question of negotiations."

1.78 Asked why a comprehensive order even for a small quantity of 200 coils was not placed in July 1978 itself and whether this was indicated of the fact that there was something wrong or lapse in the system itself. The Secretary Communications intervened to say:

"He admits lapse. He wants to clarify the point".

The Member (TD) P&T Board deposed:

"There were two sources for the department. An order had been placed for one set on this firm and the other was on the ITT to whom separately orders had been placed. They had also come up with the prototype which had been approved. As you rightly observed, the supplies from the other source were behind schedule."

1.79 In addition to continued supply of pressurised coils of 400 pairs each, firm 'A' had also completed by April 1978 prototype samples of smaller size coils each of 50, 100 and 200 pairs suitable for pressurised cable. The Audit para points out that while recording in file that a tender enquiry would be floated before placement of bulk order in future, the department placed order on firm 'A' in August 1978 an order for supply of 6 coils each of 50, 100, 200 and 800 pairs. However, in September, 1979, the department decided to negotiate the rates for bulk order with firm 'A' instead of inviting the tenders on a variety of considerations and accordingly placed an order on this firm in October 1979 for 480 loading coils of various sizes costing Rs. 59.39 lakhs. Thus, in all, orders worth Rs. 1.30 crores were placed on firm 'A' partly on the basis of its tender and partly on negotiations without inviting tenders.

1.80 While furnishing particulars of firm 'A' [M/s. Electrohms (P) Ltd., Bangalore] the Ministry have stated that it is a private



limited company with the Board of Directors consisting of four members. Other particulars are as under:

1. Capital Investment . . . . .	Rs. 3.84 lakhs
2. Annual turnover . . . . .	Rs. 38.82 lakhs
3. Capacity and capability to manufacture various items. . . . .	The present capacity is :
	Coil 70,000 per annum
	Coke 51,000 Do.
	Transformers 53,000 Do.

This firm commenced regular production since April 1970. This company has been supplying various items pertaining to Telecommunication equipment to Indian Railways, Indian Posts & Telegraphs Department and Indian Telephone Industries.

1.81 The Committee pointed out that according to the department, it was decided to call for tenders in September 1973 in the interest of developing a wider base. However, on the subsequent occasions when further purchases were to be made, the department resorted to negotiations only with firm 'A' on the reported consideration that firm 'A' was the only established source of proved capability to supply loading coils according to specifications. The Committee, therefore, wanted to know whether there were other firms in this field of production and if so, whether they were contacted for the purpose. The Ministry have stated:—

"It was observed that tender formalities would only have resulted in placing educational orders on a few other firms while involving a risk on the possibility of established supplier trying to push up the price."

1.82 The Ministry of Communications have reported the present assessment of the requirement of pressurised loading coils for the next five years from 1979-80 onwards as under:

*Forecast Requirement of Loading Coils/POK.*

Years	50 pairs	100 pairs	200 pairs	400 pairs	800 pairs
1979-80 . . . . .	160	100	120	50	50
1980-81 . . . . .	170	100	130	50	50
1981-82 . . . . .	200	130	180	60	60
1982-83 . . . . .	250	150	180	70	70
1983-84 . . . . .	170	200	200	80	80



The Committee enquired how in view of the department's dependence upon firm 'A' how they have planned for development of alternative sources for supply of pressurised loading coils in future. The Ministry have stated:

"For development of alternative sources for supply of pressurised loading coils in future a tender has been floated for development-cum-supply of various sizes of pressurised type of loading coils. The tender was floated on 23-8-1980 with closing date as 2-12-1980."

1.84 On being asked when the proposal for development of alternative sources for future supply of pressurised loading coils was initiated and what development took place thereafter leading to floating of tender enquiry on 23 August, 1980, for development-cum-supply of various sizes of this type of coils and what was the outcome of this tender enquiry, the Ministry in a note, have stated:

"For development of alternative sources for supply for future supplies of various sizes of loading coils GMTS Calcutta was addressed on 29-11-197 to float a tender for 50 pairs, 100 pairs, 200 pairs and 80 pairs coils to meet assessed requirement of 1980-81. Such a tender was floated on 15-3-1980. On 8-4-1980 TRC issued specification for loading coil assembly of pressurised type, including manhole type of loading coil to be used with cables to be laid in ducts and also loading coil assembly with building our capacity. (The earlier specification was limited to the coils of directly buried type). Consequently on 21-4-1980 GMTS Calcutta was addressed to cancel the tender enquiry as it was decided to float an enquiry from the Directorate for vender development of the new types of loading coils. On 1-5-1980, the tender floated by GMTS Calcutta was cancelled. Subsequently on 23-8-1980 P&T Directorate issued a notice inviting tenders for indigenous-cum-supply of loading coils of different types and capacities. This notice was given wide publicity by publication in Indian Trade Journal and important newspapers and also different firms on the mailing list. The DGTD was also addressed on 25-9-1980 for giving wide publicity to suitable firms in this field, who are considered to be able to manufacture this item.

The tenders were opened on 23-12-1980. Three offers were received, one of which was for imported loading coils of the



Manhole type which was not acceptable. The other two were from M/s. Electrohms Ltd., Bangalore and M/s. Unitron Ltd., Faridabad. The prices of M/s. Unitron were almost 10 times those of M/s. Electrohms. M/s. Unitron, however, sent a letter subsequently stating that the rates quoted by them were for 10 units instead of per unit, as a post tender modification to the offer. This firm also asked for 5 per cent extra charges for development of the item and 50 per cent of the value of the order as advance payment. The offers are under consideration."

1.85 To remove distortion and attenuation of speech, loading coils are inserted by the P&T Department, in their underground cables at regular intervals. Earlier these loading coils were of unpressurised type and were procured by the Director General, Posts and Telegraphs (DGP&T) from the Indian Telephone Industries (ITI), Bangalore. To prevent entry of moisture into the cables and help locate the cable breakdowns speedily, the Department decided in 1970 and 1972 on pressurisation of underground cables, implying thereby that the unpressurised loading coils in use till then would gradually be replaced by pressurised loading coils for which the Telecommunication Research Centre (TRC) had also finalised a tentative design in consultation with ITI in 1971-72. However, notwithstanding the aforesaid developments, based on the manufacturing capacity of the ITI and the demands forecast by the Circles and the Districts, the DGP&T continued to place orders on the ITI for supply of unpressurised type loading coils. By July 1978 large stocks of unpressurised loading coils valued at Rs. 1.16 crores had accumulated in the store depots of the P&T Department. By September 1980 the value of the coils in stock had risen to Rs. 1.30 crores.

1.86. As regards reasons for overstocking, the Secretary, Ministry of Communications explained during evidence that "orders were placed earlier by the various circles and districts directly on the ITI orders were also placed from the Directorate. It seems, there was some amount, though not very much, of excess ordering compared to what was actually needed on an annual basis or on one or two year basis".

1.78. In the view of the Committee, one of the reasons for overstocking was that due to decentralisation in procurement, various P&T circles and districts were placing orders on ITI direct for supply of unpressurised loading coils. At the same time, even at the Central level orders were placed by the DGPT. Thus, there was utter lack of



coordination between the Directorate and its various circles and districts in the matter of procurement of this item of stores. The consequence is that a large stock of unpressurised coils has accumulated. With the introduction of pressurised coils, the rate of normal consumption of unpressurised coils already in stock will go down. This is a matter of concern. The Committee would, therefore, like to know as to how, when and where the balance stock of unpressurised coils valuing Rs. 1.30 crores is proposed to be utilised by the Department.

1.88 The Committee have been informed that the value of the inventory including the unpressurised loading coils in the P&T Department as at the end of 1979-80 was Rs. 113.86 crores and that these consisted of more than eleven thousand items procured by the Department. The Administrative Staff College, Hyderabad had examined the inventory control and accounting system of the Department and submitted its recommendations in 1972. The Ministry have informed the Committee that on the basis of these recommendations, several steps had been taken to make improvements. A proposal to computerise the inventory control system as also other operations of the Department is presently under consideration of the Government. The Committee would like to be informed of the progress made in this direction.

1.89. The Telecommunication Research Centre had apprehended in January 1977 that the pressurised cables would be damaged if used with unpressurised loading coils. However, in July 1978 the DGP&T instructed the field units to utilise unpressurised loading coils so that the large stocks that had accumulated in the store depots, could be exhausted. The General Manager, Telecommunications, Bangalore had also pointed out in February 1979 to the DGP&T that the use of unpressurised loading coils with pressurised cables led to serious difficulties and would amount to ruining of lakhs worth of cables for the sake of a few thousands worth of loading coils. The Ministry have, however, explained that "the use of unpressurised coils with pressurised cables would have only made operation of pressurisation less effective. Cable damage as such because of use of such loading coils was not involved". The Ministry have further stated that "no specific survey was carried out.....there has been no other report from the field units of the difficulties faced due to such an arrangement.....leakage of gas was detected at some places which was attended and there were no damages". As regards the view expressed by the TRC regarding the likelihood of damage to pressurised cables when used with unpressurised coils, the Secretary, Communications states in evidence "unfortunately in one of



our replies to Audit, a wrong statement was made that TRC apprehends this; this is not borne out by documents. We should have corrected it there." In view of the apprehensions expressed by the TRC and the General Manager, Telecommunications, Bangalore regarding the likelihood of damage to the pressurised cables when used with unpressurised coils, the Committee consider the reply of the Ministry that there had been no report of actual damage, as unsatisfactory. In fact the Ministry had themselves admitted that no specific survey had been carried out and also that leakage of gas had been detected at some places where unpressurised coils had been used with pressurised cables. The Committee are inclined to think that the main anxiety of the Department was to somehow utilise unpressurised loading coils of which large stocks had accumulated due to over-indenting, and as such the question of damage to cables was overlooked. The Committee would, therefore, recommend that a thorough investigation should be made by a team of technical experts before unpressurised coils are put to use with pressurised cables hereafter.

The Committee also require an explanation as to how the stock of unpressurised coils was allowed to accumulate upto a value of Rs. 1.30 crores, in the light of the apprehensions expressed by the actual users.

1.90. Faced with the problem of accumulation of unpressurised loading coils, the Department negotiated with M/s. Electrohms, Bangalore, for conversion of unpressurised coils into the pressurised type. An experimental order was placed on the firm in September 1979 for converting 23 loading coils of 400 pairs into pressurised type at a cost of Rs. 1.90 lakhs. So far, 15 Nos. of such coils have been supplied by the aforesaid firm to Bangalore and Bombay Telephone Districts and full report on their performance is awaited. The Ministry have stated that "conversion of additional quantities of pressurised type is not contemplated at this stage". The Committee find that the cost of conversion to pressurised type coil involved an expenditure of over Rs. 8,000 per piece whereas the cost of a new pressurised coil manufactured by the same firm ranged between Rs. 15,940/- to Rs. 17,750/-. The Committee recommend that the Technical Team of Experts should go into the matter and advise on the following aspects:

1. Performance of the converted coils and how this compares with the performance of the new pressurised coils.



2. Desirability or otherwise of further conversion of the unpressurised coils into pressurised coils on technical and financial considerations.

3. If conversion is not expedient, how best the accumulated stocks of unpressurised coils can be utilised.

The Committee may be apprised of the findings of the Technical Team within 6 months of the presentation of this Report.

1.91. The decision to develop pressurised type loading coils was taken in 1970 and a tentative design was finalised by the TRC in 1971-72. M/s. Electrohms, Bangalore fabricated a prototype of 400 pair loading coil and offered in April 1973 to supply at a price of Rs. 14,650 per coil. On receipt of this offer, the department issued a tender enquiry in 1972-73 for supply of 200 loading coils of 400 pairs each. Out of 13 firms which submitted their tenders, only M/s. Electrohms whose rate was Rs. 15,940 per loading coil had submitted the prototype as required under the tender conditions. In April 1974, the department placed on it an order for supply of 200 loading coils of 400 pairs each valued at Rs. 31.88 lakhs at the tendered rate. The Ministry have informed the Committee that other firms did not respond although the department tried to see whether they could develop a prototype.

1.92. The Committee find that the department agreed to successive increases in rates per coil from Rs. 15,940 to Rs. 16,215 in April 1975, to Rs. 16,727 in June 1977 and to Rs. 17,750 in June 1979 in respect of the orders placed on M/s. Electrohms. The Ministry have explained that the increases were agreed to partly due to escalation in the Construction of material and partly due to modifications in design. In all, orders worth Rs. 1.30 crores had been placed on this firm for supply of pressurised coils of different sizes. The Department have stated that this is the only firm in the private sector which is manufacturing pressurised type loading coils. The supply of such coils by ITI, a public sector undertaking, has been meagre all along. No wonder, M/s. Electrohms took advantage of this situation and demanded increase in their rates of such coils from time to time and succeeded in getting the approval of the department. The Committee are now informed that the Department have floated a fresh tender enquiry in August 1980 for supply of pressurised coils of different sizes. As pressurised coils will be required in large quantities for use with pressurised cables to be laid on the tele-communication network all over the country as also for the gradual replacement of the existing



unpressurised coils already laid underground, the Committee expect that the Department will endeavour to develop on urgent basis alternate sources of supply of pressurised coils so as to obviate total dependence on one monopoly supplier from the trade as has been the case hitherto.

1.93. It is surprising that ITI which gave technical know-how to M/s. Electrohms have themselves done precious little to enhance the production of this item in their own factory all these years.



## II

### OVER-STOCKING OF BARRETTOR LAMPS

#### *Audit Para*

2.1. In accordance with the prescribed procedure, telecommunication circles and divisions are to place their indents for requirements of essential spares on the Director General, Posts and Telegraphs (DGPT) who places indents on the suppliers and coordinates and controls the supply of such essential items. For non-essential spares, all field units place direct orders on the suppliers, keeping in view the actual requirements and after observing the prescribed formalities for indenting of stores.

2.2 In April 1976, the DGPT informed all heads of telecommunication circles and telephone districts that "barrettor lamps" required for maintenance of exchanges had been deleted from the list of essential spares with effect from 1st April, 1976 and that all field units could place direct orders on Indian Telephone Industries (ITI) for this item. In April 1977, however, the DGPT asked the ITI to supply 2.68 lakh barrettor lamps costing Rs. 20.01 lakhs to 18 field units, indicating the number of lamps to be sent to each unit. The heads of telephone districts were simultaneously informed that no request for cancellation of allotment of the item would be entertained.

2.3. Regarding the consolidated order placed on ITI, the department stated (December 1978) that "ITI informed the P&T Directorate that in accordance with the forecasts given by the Directorate in 1973, procurement action for meeting the requirements of 1976-77 had also been taken by them and they were having about 2.68 lakhs of the barrettors in stock, for which a centralised order was solicited. This request of ITI was considered in the meeting held on 10th February, 1977". There was however, nothing on record to show that the position of stock and supplies awaited against direct orders for this item in field units was ascertained before placing order therefor with the ITI in April 1977. The Department stated (December 1978) that "as the total availability with the ITI was limited to 2.68 lakhs and the order placed by the Directorate was for about 2.45 lakhs only, there was no necessity to check up about the procurement of this item directly by the field units from the ITI at the time of placing of the centralised order in 1976-77".



2.4. The Consolidated order placed in April 1977, *inter alia*, included supply of 30,000 lamps to Bombay Telephone District. It was observed by Audit that Bombay Telephone District had 1,64,461 barrettor lamps in stock on 1st April 1977. Average consumption of lamps per year was 13,400, based on the consumption of this item during three years immediately preceding 1978-79. Thus, the existing stock on 1st April 1977 would have lasted for 12 years. With the supply of 65,654 barrettor lamps against the allotment of 80,000 during April 1977 to August 1978, the stock as on 1st September, 1978 increased to 2,18,865 (value: Rs. 17.16 lakhs) which would be sufficient to meet the requirement of Bombay Telephone District for about 16 years (based on the present rate of consumption per year). The department stated (December 1978) that "80,000 lamps were taken as the requirement for four years for consumption in the telex exchange at Bombay. The existing stock of Bombay was assumed to be required for the existing telephone exchanges". The department added that "based on the consumption from April 1974 to March 1977, the annual consumption comes to about 15,100..... Thus, the stock available is not of such quantity as to last for such a very long period as assumed....." It may be mentioned that on the average annual consumption indicated by the department, the stock would last for about 14 years.

2.5. The stock position of the item in the remaining 20 circles/districts (except Patna and Cuttack Circles) showed that 6.36 lakh barrettor lamps valued at about Rs. 55.29 lakhs were lying stock as on 30th September, 1978 and that these would last for periods ranging from 3 months to 1603 months based on the respective average consumption per month during the period from April to September 1978 in the circles/districts concerned. The department stated (December 1978) that "as it has been observed that with the improvements made in the circuits, the annual consumption of barrettor lamps has come down, a re-assessment of the quantity of lamps to be stocked is being made consistent with the availability of this item in different Telephone/Telex exchanges. A re-distribution of the available stock in the different exchanges is now contemplated even out the stock in different exchanges". Even if re-distribution of the lamps in stock in various districts/circles is made, the stock of 6.36 lakhs lamps would be sufficient for 88 months on the basis of average consumption of 7212 lamps per month in all the concerned circles/districts.

2.6. Thus, the stock of lamps in 21 circles/districts (including Bombay District) was 8.54 lakhs (September 1978) valued Rs. 72 lakhs.



[Paragraph 18 of the Report of the Comptroller and Auditor General of India for the year 1977-78, Union Government (Posts and Telegraphs)]

2.7. Barrettor lamp is a device introduced in electrical circuits to keep the current at a constant level. It is constructed like an electric bulb, but has a special type of filament with varying resistance which enables feeding a constant current within certain limits of variation in supply voltage and other circuit parameters such as length of telephone lines connected in such circuits. This device is incorporated in the selector switches in telephone exchanges and telex exchanges of the Strowger type and in Auto-to-Auto relay sets.

*Import and indigenous manufacture of barrettor lamps*

2.8. The Committee wanted to know whether barrettor lamps were earlier being imported and when indigenous manufacture began. In this connection, the Chairman, ITI stated in evidence:

"ITI started manufacturing this equipment (Strowger exchange equipment) and supplying it to the P&T in 1948. Since 1948 there have been two types of requirements in ITI for the P&T. One is the strowger direct line exchanges and the other is telex in which the barrettor lamp is part of the total circuit.....To the best of my knowledge, till about 1972, we had not been successful in indigenous manufacture of barrettor lamps."

2.9. In a note furnished to the Committee later in December, 1980 explaining the position regarding imports of these lamps, the P&T Department have stated:

"Barrettor lamps were in use in Strowger Type telephone exchanges commencing from periods prior to Independence (1947) when complete exchanges were being imported with barrettor lamps both fitted in the exchanges and as spares.....ITI has reported that as per history cards of barrettor lamps as maintained in their stock control department, two orders were placed on Associated Electrical Industries of United Kingdom during February 1965 and one order in May 1966.....As per observation of ITI, imports of barrettor lamps was stopped after 1966-67."

2.10. As regards indigenous manufacture of barrettor lamps, the P&T Department have stated:

"Perusal of records of ITI indicates that orders were placed on indigenous manufacturers from 1961-62 onwards."



2.11. The quantity of barrettor lamps received by the P&T Department through ITI and the price per piece are as follows:

Year	Quantity (Nos.)	Price per piece (Rs.)
1972-73	1,21,608	10.67
1973-74	1,95,302	10.09
1974-75	4,96,216	10.09
1975-76	6,56,930	8.22
1976-77	1,13,311	7.84
1977-78	2,44,980	7.55 and 7.39
1978-79	26,830	7.39

2.12. The Committee desired to know how the performance of indigenous lamps compared with that of the imported ones. In reply, the Member (TD), P&T Board stated in evidence:

"There was difficulty with indigenously produced lamps..... from the life point of view, it was not as good as international standard."

*Centralisation of procurement of barrettor lamps*

2.13. The procurement of barrettor lamps was centralised by DGPT in the year 1972. Asked for the reasons, the Secretary, Ministry of Communications, explained in evidence:

"Previously it was a non-centralised purchase item when operating units used to indent on the ITI directly. Then due to the critical supply situation in 1972-73, it was taken over Centrally.....usually there are several items which from time to time are centrally purchased. These are usually the critical items and those which are in short supply. This prevents the units from placing indents for larger quantities than they actually consume."

2.14. When asked whether there were any complaints from the units or the circles that the ITI was not in a position to supply them barrettor lamps according to requirements and in time, the Chairman, ITI stated in evidence:

"Partly yes, Sir. Because the indent used to come after a long time. The indent was being submitted only when the need for the barrettors was felt and ITI had to accumulate these small size orders before they could entrust any other supplier with the order and, therefore, the normal procurement would have been delayed. With the centralising of indenting, the demands add up and they become substantial and then indigenous manufacturers were asked to take up manufacture of these barrettors. So, there could have been delays in the earlier period."



2.15. Asked whether any complaints had actually been received by the ITI from the units, the Chairman, ITI stated:

"From my personal knowledge, I am not able to answer. I expect that there would not have been."

2.16. The Secretary, Ministry of Communications, in this context observed:

"The centralisation decision was taken as a result of complaints persistently received from different operating units in the country that some spares are not being supplied in adequate quantities for them to meet their needs. It was felt that if the item of procurement was centralised, then the position would be manageable because we have the data relating to genuine needs of the various operating units and we would be able to even the shortage if there is a national shortage and in any case we will be able to assess the genuine needs of the various operating units more accurately. In this case also, apparently that was the situation. As is proved by the fact when a relatively easy situation developed, again the item was decentralised."

2.17. The Committee enquired whether the decision to centralise this item in the year 1972 and again to decentralise it in April 1976 indicated that the decision on centralisation was wrong. In this context, the Secretary, Ministry of Communications clarified:

"Soon after centralisation, two factors intervened—modification of the circuit design and greater supply of cross-bar exchanges which do not need this lamp. If these two factors had not intervened, if their capacity had not been built up during these years, the situation might not have developed. Till then the shortage situation might have continued. I would not say that the decision of centralisation was wrong."

The witness added:

"It is true that in 1974-75 and 1975-76 the system did not function properly. I absolutely agree with you."

2.18. Explaining the background of the decision to centralise this item of spares, the Deputy Director General (MM), P&T observed during evidence:

"What happened was, at that time our Minister for Communication during 1972 was visiting Bombay, Calcutta and all other places and when he was asking what was happening to the service, they said, a large number of switches



were to be kept out because of want of barrettor lamps. Then the Minister himself on visit to ITI ordered the Chairman, ITI had a talk with the Secretary, Ministry of Communications and mentioned about this. The situation that had arisen in 1972 was because of the highest importance given to this specific item of spares at the Minister's level."

2.19. The Secretary, Ministry of Communications, however, clarified as under:

"The situation was as they told the Minister, may be orally, when he visited, but all the time during that period they were complaining to the Directorate that barrettor lamps were not available."

2.20. The Committee wanted to know the stocks of barrettor lamps at the time of centralising the purchase of lamps. In reply, the Department have stated that this information was not obtained from the various, user units at that time.

#### *Over-stocking of barrettor lamps*

2.21. The Audit para points out that the position in 20 Circles/Districts (except Patna, Cuttack and Bombay) showed that 6.36 lakh barrettor lamps valued at about Rs. 55.29 lakhs were lying in stock as on 30 September, 1978 and that these would last for periods ranging from 3 months to 1603 months based on the respective average consumption per month during the period from April to September 1978 in the Circles/Districts concerned.

2.22. The Committee wanted to have information regarding the forecast requirement of barrettor lamps and the quantity indented on ITI during the years 1973-74 to 1975-76. To this, the Department stated in a note:

"Centralised forecast requirement of barrettor lamps for the year 1973-74 was given to ITI on 3-3-1973. Centralised forecast requirement of such spares during the three years period 1974-75, 1975-76 and 1976-77 was given to ITI on 15-1-1974 for taking advance procurement action. The forecast requirements were worked out centrally based on the life expectancy of barrettors and the number of barrettors in use in Telephone/Telex exchanges. The details of projected requirements and quantities actually in stock in various circles were not obtained at that time.



The figures of projected requirements of barrettor lamps and actual orders placed on ITT, from 1973 upto July 1975 are given below:

Year	Forecast	Quantity ordered on ITT
1973-74	3,60,000 (3-3-73)	4,59,196 (4-7-73)
1974-75	3,96,000 (15-1-74)	5,00,000 (29-4-74)
1975-76	4,35,600 (15-1-74)	4,35,600 (16-7-75).

2.23. The P&T Department had informed Audit in December, 1978 that with the improvements made in the circuits, the annual consumption of barrettor lamps had come down. The Committee wanted to know whether the Departments had reviewed the requirements of barrettor lamps for the years 1974, 1975 and 1976 in view of the improvements in circuit designs and modifications in circuits. In reply, the Department in a note have stated:

"Efforts for the modification of the circuits in the stronger system for the elimination of the barrettor lamps commenced from 1973, but the use of these lamps continued in the strowger exchanges in production till 1975, when it was finally decided that their use could be done away with from the equipment to be produced thereafter. In the exchanges already installed in the country, these lamps were still in use and were required as maintenance spares. No review could be done before 1975, till it was finally decided that the use of these lamps could be done away with from the future production. However, requirements for the year 1976 continued to exist for the exchanges already installed in the country."

2.24. The Committee desired to know why orders were placed for large quantities of lamps when there were already large stocks with the field units. The Secretary, Ministry of Communications, conceded during evidence:

"Panic had gripped us. I was not in the department. The panicky situation had forced this decision on the Directorate and also made the Directorate—on the basis no doubt of indents received from the field units to place orders which in retrospect certainly seem too large. For example, we gave a forecast in respect of 1973-74 at 3.16 lakh whereas the actual order placed was about 4.59 lakh....in the next year, it was 3.96 lakh whereas the actual order placed was 5 lakh."

In the same context, he added:



"There had been over-indenting on the ITI. I cannot possibly deny that."

2.25. With effect from 1 April, 1976, "barrettor lamps" was deleted from the list of essential spares and the various telecommunication districts and circles were informed by the DGPT *vide* letter dated 22-4-1976 as under:

"It has been decided to delete Barrettor Lamps (BL-94104) used for maintenance of Exchanges, from the list of essential spares controlled by the P&T Directorate with effect from 1-4-76. Henceforth, all field units are required to place direct orders for this item on I.T.I. as per the usual procedure for non-essential spares keeping in view the actual requirements and after observing the Departmental formalities."

2. 26. As to the reasons for decentralisation of this item of spares, the Department had informed Audit as under:

"Simultaneous with the measures taken to augment with the supplies of barrettor lamps, improvements in circuit design were also taken up to eliminate the necessity of barrettors in strowger telephone exchanges in future supplies from ITI. Certain circuit modifications were also effected to increase the life of the barrettor. With the efforts made, it became possible to effect these changes by the end of 1975-76. With these measures and with the improved supply position of barrettor lamps, it was observed that centralised ordering of spares of this item was no longer necessary and accordingly this item was removed from the list of essential items of spare ordered from the Directorate. Accordingly, from 1st April, 1976, the field units were directed to procure this item directly from ITI according to the consumption pattern."

2.27. Although purchase of barrettor lamps was decentralised in April, 1976, the Department placed an order on I.T.I. on 29 April, 1977 to supply 2.68 lakh lamps costing Rs. 20.01 lakhs to 18 field units as per details given below:

1. Ahmedabad District . . . . .	6,400
2. Amritsar . . . . .	1,600
3. Bangalore . . . . .	9,600
4. Bombay . . . . .	80,000
5. Calcutta . . . . .	40,000
6. Coimbatore . . . . .	3,200
7. Delhi . . . . .	46,720



8. Ernakulam	6,400
9. Hyderabad	6,400
10. Indore	3,200
11. Jaipur	3,200
12. Kanpur	4,480
13. Lucknow	1,600
14. Madras	19,200
15. Nagpur	3,200
16. Patna	3,200
17. Poona	4,800
18. Surat	1,600
	<hr/>
	2,44,800
	23,200
	<hr/>
Total	2,68,000

(Distribution was to be intimated later on)

Asked about the reasons for DGPT placing the above order on ITI even after decentralisation, the Secretary, Ministry of Communications, explained in evidence:

"After that one purchase was made in 1976-77 but that was not an order placed in the normal course.... It now appears in retrospect that we had given them (ITI) a wrong forecast that in 1976-77 our probable purchase would be 4.79 lakhs. Out of that we purchased from them only 2.68 lakhs. Having given that forecast, we had a moral responsibility to bail them out."

2.29. In the same context, the Deputy Director General (ITI), P&T observed:

"Then the situation came that ITI had gone ahead with the procurement action against our original forecast given during 1973 for 1976-77. The ITI came to us and said that they had already placed orders against that requirement and they were having in stock about 2.6 lakh of lamps, and this was to be taken by the P&T. To relieve the stock which had already been procured, we obtained part of that and distributed to the various exchanges. This is how the over-stocking situation had arisen."

2.30. The Committee wanted to know whether the Department enquired from the field units their requirements of this item before asking the ITI in April 1977 to supply 2.68 lakh lamps. The Department in a note have stated:

"The P&T knew that the field units had no requirements of this item immediately."

2.31. The Committee desired to know when action for procurement of barrettor lamps for meeting the requirements for 1976-77 was initiated by the P&T Department and during what period, the



stock of 2.68 lakh nos. of this item was built up by the ITI. In this connection the Department have in a note explained:

"When ITI brought to the notice of the P&T the accumulated stock of barrettors and want of indents from P&T, discussions were held with ITI to ascertain particulars of orders pending. ITI informed that orders for 3.5 lakh nos. were placed on 19-5-1975 on M/s. ASPA, Bangalore which was amended subsequently on 20-9-1975 to provide for supply of 4.5 lakh numbers. In the meeting held with ITI on 10-2-1977, it was noticed that ITI was having a stock of 2.68 lakhs of barrettors. In addition, supplies against old orders were also pending. These orders were got cancelled in 1976-77. Stock of 2.68 lakh barrettors was received against purchase order of 4.5 lakhs indicated above."

The Department have added:

"All outstanding orders for which supplies were pending were cancelled by ITI. The outside suppliers were (i) M/s. ASPA Bangalore; (ii) M/s. Bangalore Lamps; (iii) M/s. Light & Co. Allahabad."

2.32. Asked whether it was obligatory on the P&T Department to procure these 2.68 lakh lamps from the ITI, the Department in a note stated:

"So long as regular purchase order had not been placed on ITI for the supply of the quantity, it was not obligatory on the part of the P&T to procure them. However, ITI made a representation to P&T about the accumulated inventory stock of this item for want of orders from P&T. This was considered by P&T and it was decided to procure this item because this item was still in use in P&T Department in Telex Exchange and Auto to Auto relay sets."

2.33. The Committee find that while placing the order on ITI in April 1977, the heads of telephone districts were simultaneously informed that no request for cancellation of allotment of the item would be entertained. Relevant extract from DGP&T's order dated 29-4-1977 is reproduced below:

"All heads of Telephone Districts—Requests for cancellation of allotments will not be entertained which may please be noted. The units are advised that they should not



send piecemeal indents for this item and instead they should send indent for four years requirements at the rate of 4 Barrettors for equipped line per year for zonal and district centre exchanges."

2.34. The Committee enquired why the Department wrote to all heads of Telephone Districts that "requests for cancellation of allotments will not be entertained" The Secretary, Communications, explained in evidence:

"Actually, the cancellation was not favoured because the indents had actually been placed on the ITI on the basis of earlier indents placed by them. We consolidate the indents and place the order."

*Over-stocking in Bombay Telephone District*

2.35. The Audit para points out that the consolidated order placed in April 1977 by DGP&T on ITI *inter-alia* included supply of 80,000 lamps to Bombay Telephone District. As on 1-4-1977, Bombay Telephone District had 1,64,461 lamps in stock. Average consumption of lamps per year was 13,400 based on the consumption of this item during three years immediately preceding 1978-79. Thus, the existing stock on 1-4-1977 would have lasted for 12 years. During April 1977 to August 1978, the Bombay Telephone District received 65,654 lamps against the allotment of 80,000. On the basis of average rate of consumption, the total stock would thus have lasted for 16 years.

2.36. The Department had informed Audit in December 1978 that "80,000 lamps were taken as the requirement for four years for consumption in the telex exchange at Bombay. The existing stock of Bombay was assumed to be required for the existing telephone exchanges." The Committee wanted to know how the requirement of telex exchange at Bombay was worked out. In reply, the DGP&T have stated that with 5000 Telex lines working in Bombay Telephone District and on the basis of an annual consumption of 4 barrettors per line for year, the requirement was assessed at 20,000 nos. i.e., 30,000 nos. for four years.

2.37. The Committee enquired how the requirements of Bombay Telephone District were assumed by the P&T Department and why the stock position and rate of consumption of barrettor lamps was not verified. The Department in a note stated:

"The modification of circuitry in the existing strowger exchange was yet being carried out in 1976-77 and keeping



in view the installed capacity of strowger Telephone Exchange in Bombay it was considered that the existing stock would be required as maintenance spares in the District."

2.38. The annual consumption of barrettor lamps and the closing balance in the Bombay Telephone District as at the end of the following years was as follows:—

<i>Year</i>	<i>Consumption during the years</i>	<i>Closing balance</i>
1974-75 . . . . .	12,385	51,768
1975-76 . . . . .	18,860	1,00,401
1976-77 . . . . .	14,010	1,64,461
1977-78 . . . . .	7,330	1,81,117
1978-79 . . . . .	9,826	2,12,959
1979-80 . . . . .	8,667	2,04,292

#### Utilisation of accumulated stocks

2.39. As regards the utilisation of accumulated stock of this item of spares the Department had informed Audit in December 1978 as under:

"....as it has been observed that with the improvements made in the circuits, the annual consumption of barrettor lamps has come down, a re-assessment of the quantity of lamps to be stocked is being made consistent with the availability of this item in different telephone/telex exchanges. A re-distribution of the available stock in the different exchanges is now contemplated to even out the stock in different exchanges."

2.40. In a note furnished to the Committee in August 1979, the Department stated:

"On a re-assessment of the stock position, the total stock in different exchanges is found to be about 8,00,000. The



annual consumption is estimated at 1,00,000 nos. per year at present....As additional 10,000 lines of telex exchanges are scheduled to be commissioned in the current plan, the consumption of barrettors will be of higher rate than in 1978-79 and the existing stock can be expected to be cleared in about 6 years or so."

2.41. As on 31-7-1980, the stock was 9.19 lakh lamps. When the matter was discussed during evidence in November, 1980, the Secretary, Ministry of Communications deposed:

"In my opinion, we have mentioned a slightly wrong figure when we say we have six years' requirement. Actual consumption of the last few years projected against the present stocks would indicate that we have about 7½ years to 8 years consumption."

He further added:

"No doubt, we have lost money in storage charges and interest charges due to over-stocking, but, within these limitations, I have no doubt that they will be properly utilised in the course of the next few years for the purpose for which they were procured....We will try to shift barrettor lamps from one centre to another."

The Secretary, Communications also observed:

"The situation for which we are very much criticised is spread over a 5-year period because since 1977-78, we have not bought even a single barrettor lamps and we do not propose to purchase it in the foreseeable future."

2.42. Asked how long barrettor lamps will continue to be used in exchanges the Department stated that these lamps will continue to be used in the strowger exchanges supplied earlier by ITI with barrettors in circuit till strowger exchanges are phased out, which may be over a period of 20-25 years.

2.43. A statement showing the annual consumption of barrettor lamps in various circles and Districts during the years 1974-75 to 1979-80 and another statement showing the closing balance at the end of these years are at Appendices I and II. The extent to which



this item of spares was over-stocked at the end of 1979-80 can be seen from a few cases cited below:

<i>Circle/District</i>	<i>Annual consumption during 1979-80</i>	<i>Closing balance at the end of 1979-80</i>
<i>Circles</i>		
Andhra Pradesh . . . . .	988	17,100
Gujarat . . . . .	3,712	56,999
Madhya Pradesh . . . . .	2,056	30,633
North Western . . . . .	440	54,278
<i>Districts</i>		
Ahmedabad . . . . .	2,236	26,512
Amritsar . . . . .	529	6,875
Calcutta . . . . .	11,025	114,854
Coimbatore . . . . .	892	17,033
Chandigarh . . . . .	139	2,459
Indore . . . . .	552	18,016
Jaipur . . . . .	747	14,178
Rajkot . . . . .	260	3,058
Surat . . . . .	243	2,268

2.44. The Department have stated that besides the stocks already with the user units, a stock of 71,921 lamps valued at Rs. 3.95 lakhs approximately is lying with ITI as on 24-11-1980. This includes some quantities out of an order placed on ITI on 1-2-1978 for 18524 Nos. against demand projected by field units and some quantities obtained by ITI against possible future consumption in ITI.

2.45. Asked whether Government have considered the possibility of exporting barrettor lamps, the Secretary, Ministry of Communications, observed:

"Yes, Sir. Because they are controlled by the small scale sector and the P&T has associated Director of Industries about their export to countries which use this particular type of strowger exchanges, like Holland, Jordan etc..... They (ITI) will make enquiries from more countries and find out the prospects."



2.46. The Committee have been informed that the Department stocks 11,000 and odd items. The value of annual purchase is nearly Rs. 250 crores out of which spares constitute about Rs. 3 crores. Regarding the control exercised on inventory, the Secretary, Communications, explained during evidence:

"We keep a track of the spares—critical items—in the field and the annual requirement and then make consolidated demands. Non-critical items being very large in number, it is impossible to keep track of them. We had left it to the Circles to do physical verification and place the demands directly on ITI and get those items."

As regards inventory control system in the P&T Department, the Secretary, Communications observing that there is a Material Management organisation in the P&T Department, explained:

"Physical verification is required to be done annually. Assessment of procurement is done....but a thorough analysis as has been done in this case of glaring nature, has not been done in regard to all these items."

2.47. The Committee wanted to know whether there was any perspective plan for replacing the existing system of tele-communication where these lamps are used. To this, the Secretary, Ministry of Communications, replied:

"Yes, Sir. Firstly, where our indigenous production of tele-communication switching equipment is now available for both strowger and Cross-bar exchanges, we propose replacing them....We are modernising our practice and we have drawn up a perspective plan to introduce electronic exchanges in this country and towards the second half of this decade electronic exchanges will be coming to this country in a fairly big way. First we will import and we have now drawn up plans for indigenous production of electronic tele-communication equipment. So, these exchanges will have no need for barrettor lamps. We propose to issue global tenders for the first electronic exchange equipment by the end of February, 1981."

#### **Pricing of Barrettor Lamps**

2.48. The purchases of tele-communication equipment, power plants and other associated equipment by the P&T Department from the ITI is governed by an agreement between the Department



and the ITI. A copy of the Agreement effective from 1 April, 1976 has been supplied to the Committee. Article 7.4 of the Agreement which provides for the basis for fixation of price for the spares supplied by ITI to the Department, reads as under:

"7.4 Spares manufactured (and also procured) by the contractor:—

"7.4 Spares manufactured (and also procured) by the contractor and supplied to the purchaser shall be arrived at by marking up the cost of sales worked out as prescribed in article 7.2 above by 15 per cent. However, the maintenance spares listed in (i) contractors engineering specifications for switching equipment and (ii) contractor's main stock list for transmission equipment shall not attract the mark up, referred to above, and only the profit margin of 10 per cent vide article 7.2.6 shall be allowed.

"7.4.2 for items which are manufactured by the contractor and also procured by him for supply to the purchaser as spares or as components, the weighted average of the two prices, i.e. (i) the price applicable to manufactured item (as per article 7.4.1.) and (ii) the price applicable for supplies vide article 7.1 will be payable by the purchaser to the contractor."

2.49. Article 7.1 referred to in the preceding para provides as follows:

"7.1. Items imported or procured indigenously by the contractor and supplied to the purchaser:

7.1.1. The price payable by the purchaser to the contractor for items imported or procured indigenously and supplied directly to the purchaser shall be the total of (i) net basis price (F.O.B. in case of imported items) arrived at after deducting the discount, if any, (ii) a commission of 8 per cent on the net price arrived at above where testing for acceptance is carried out and certified by the contractor and 6 per cent in other cases and (iii) the other actual expenditure incurred by the contractor such as freight, insurance, custom duty, handling charges, sales tax and other government levies. The contractor shall take all necessary steps to ensure the correctness of the customs duty



levied. For the purpose of billing the customs duty shall be reckoned on an assumed figure of 75 per cent which shall be adjusted subsequently on the basis of actuals.

7.1.2. In respect of items procured, stocked and later supplied out of stocks held by the contractor the price payable by the purchaser shall be the weighted average of the prices payable as per article 7.1.1 for the preceding quarter (commencing April, July, October and January)."

2.50. The Committee have been informed that the ITI procured these lamps from the trade at Rs. 6.90 per lamp plus taxes and sold them to P&T Deptt. The selling prices during 1977-78 were Rs. 7.55 and Rs. 7.39 per piece. Asked about the justification for paying 65 paise per lamp to ITI only for procuring it from the local manufacturers, the Member (Finance), P&T Board stated:

"This flows from the provisions of the pricing agreement, namely, that in respect of items which are bought, stocked and supplied to the P&T, the department pays the purchase price less discount, if any, plus commission of 8 per cent plus taxes... The purchase price is in a way notional. They (ITI) are making the purchases progressively. We do not pay different rates for each lot of purchase. We weigh the purchase price with the quantities purchased and this weighted average is changed every quarter."

The Dy. Director General (MM), P&T added:

"There is a cost check unit of the P&T in ITI. They verify the purchase price and on that basis, the bills are paid."

2.51. Explaining the rationale of making purchases through the ITI, the Secretary, Communications, stated:

"We assigned this task to them because in cases where production and development of indigenous item is involved, ITI's technical expertise is being made use of by the Department in the task of procurement and supplies."

2.52. Asked whether purchases could have been made through DGS&D instead of ITI, the witness observed:

"In regard to procurement of many essential items like air-conditioning equipment etc., our experience of DGS&D



has not been very happy. There have been inordinate delays."

2.53. The ITI is not manufacturing barrettor lamps. Asked why it became necessary to make ITI an agent for procurement of this item, the witness added:

"It was an item which was previously imported. Now it is indigenised. Indigenous suppliers had to be developed. The quality of their product had to be improved when developmental activity had to be done for which ITI quite often renders service to this Department. Secondly, as the Chairman, ITI stated, the barettor is purchased by ITI for use in exchange equipment supplied by them complete to the Department. So we thought, alongwith that, let them purchase these lamps also which the Department needs."

2.54. Asked whether there were other items which were supplied to P&T Department but were not manufactured by I.T.I., the Deputy Director General (MM) P&T stated:

"There are a large number of items—batteries, power plants, components, switch board lamps."

2.55. From the information furnished to the Committee, it is noticed that the decision to centralise the purchase of barrettor lamps was taken from 1972-73 following a visit by the Minister in-charge to some telephone districts and some discussions held between the Secretary, Ministry of Communications and the Chairman, ITI. No evidence has ben placed before the Committee to indicate whether the proposal to centralise this item of spares was examined on the basis of stock position and the projected requirements. In fact, the Department have themselves admitted that "the details of projected requirements and quantities actually in stock in various Circles were not obtained at that time." This information was of a vital nature and the Committee see no reason why the same was not called for before taking the decision to centralise this item of spares.

2.56. The Committee find that on 3 March, 1973, the Department estimated a requirement of 3.60 lakh barrettor lamps for 1973-74. Against this requirement, the quantity ordered on ITI on 4th July, 1973 was 4.59 lakhs (i.e. one lakh more). For the years 1971 and 1975, the forecast of requirement made on 15th January, 1974 was 3.96 lakh and 4.36 lakh numbers respectively. Against these requirements, the order placed on ITI on 29th April, 1974 was 5.00lakh numbers for 1974-75 and on 16th July, 1975 for 4.36 lakh numbers for 1975-76. Thus against the forecast requirement of 11.92 lakh numbers



for the years 1973-74, 1974-75 and 1975-76, the actual orders placed on ITI were for 13.95 lakh numbers. Against these orders, the supplies received by the Department were 13.48 lakh lamps (1.95 lakhs during 1973-74, 4.96 lakhs during 1974-75 and 6.57 lakhs during 1975-76). As on 31st July, 1980, the stock of this item with the user units was 9.19 lakh numbers. Viewed from the fact that the average consumption of lamps was around one lakh pieces in a year, the placement of orders for 13.95 lakh pieces for three years was far in excess of actual requirements. The explanation given by the Secretary, Communications during evidence was: "Panic had gripped us . . . . The panicky situation had forced this decision on the Directorate . . . . to place orders which in retrospect certainly seem too large . . . . There had been over-indenting on the ITI. I cannot possibly deny that . . . . It is true that in 1974-75 and 1975-76 the system did not function properly."

2.57. When the decision to centralise this item of spares was taken, it was felt, according to the Secretary, Communications, that "the position would be manageable because we have the data relating to genuine needs of the various operating units and we would be able to even the shortage if there is a national shortage". As later events showed, this expectation was totally belied in as much as neither the forecast requirement for the years 1973-74 to 1975-76 (11.92 lakh pieces) nor the orders placed on ITI (13.95 lakh pieces) for supply during this period was related to the annual consumption of barrettor lamps which was only around one lakh annually. The Committee cannot but conclude that there was a failure of inventory control system and orders had been placed on the ITI without proper assessment of requirements as per consumption. Also there was utter lack of coordination between the DGP&T and the ITI in the matter of placement of indents and effecting supplies. The Committee desire that an investigation be made to find out how such grossly exaggerated forecasts were made and even orders placed on ITI were for quantities higher than those estimated. Responsibility should be fixed on the officers at different levels who placed orders in large quantities totally unrelated to actual requirements thereby resulting in over-stocking of these lamps.

2.58. The Committee expect that after the sad experience of over-stocking of barrettor lamps, the DGP&T will pay greater attention to the functioning of its material management department so that such instances are not repeated.

2.59. With effect from 1 April 1976, "barrettor lamps" was deleted from the list of essential spares and accordingly all field units could thereafter place orders on ITI direct for this item. Yet, on



29-4-1977, the DGP&T placed an order on ITI for supply of 2.68 lakh lamps to 18 field units. The reason given by the Secretary, Communications during evidence, for the DGP&T placing direct orders on ITI even after decentralisation of this item was: "It now appears in retrospect that we had given them a wrong forecast that in 1976-77 our probable purchase would be 4.79 lakhs. Out of that we purchased from them only 2.68 lakhs, Having given that forecast, we had a moral responsibility to bail them out."

2.60. The Committee regret to observe that the DGP&T had to place orders on ITI for supply of 2.68 lakh numbers of barrettor lamps only to honour its commitment to ITI, although the Department knew that "the field units had no requirements of this item immediately".

2.61. As on 1-4-1977, Bombay Telephone District had a stock of 1,64,461 barrettor lamps. The consumption during the preceding year 1976-77 was 14,010 numbers. In April 1977, the consolidated order placed by DGP&T inter alia included supply of 18,000 lamps to Bombay Telephone District. The Department has explained that "80,000 lamps were taken as the requirement for four years for consumption in the Telex exchange at Bombay. The existing stock of Bombay was assumed to be required for the existing telephone exchanges".

2.62. The Committee consider the above reply of the Department as unsatisfactory in as much as order for supply of 80,000 lamps was placed by the Department on incorrect assumptions and without consulting the Bombay Telephone District authorities about the stock position and their future requirements. This is regrettable. From the figures now furnished, it is seen that the stock of barrettor lamps in the Bombay Telephone District at the end of the years 1977-78, 1978-79 and 1979-80 was 1,81,117, 2,12,959 and 2,04,292 respectively whereas the annual consumption in those years was 7,330; 9,826 and 8,667 only. The stocks were thus far in excess of actual requirements. This indicates a clear case of bad planning in the system of procurement and distribution of stores. The Committee expect that the distribution machinery in the Department will be revamped to ensure that supplies are made methodically and according to actual requirements.

2.63. The Committee were informed by the Secretary, Communications during evidence that based on actual past consumption, the existing stock of barrettor lamps would be consumed in  $7\frac{1}{2}$  to 8 years. The information furnished to the Committee indicates that a number of Districts and Circles were carrying heavy stocks as compared to



their annual consumption. The Committee, therefore, desire that the stock position of this item with various Circles/Districts should be reviewed afresh and redistribution of lamps done according to the actual needs of the user units.

2.64. The ITI is not manufacturing barrettor lamps. It purchases the lamps from the trade on the basis of indents placed by the P&T Department and charges a commission of 8 per cent on the purchase price, for the supplies made to the Department. As regards P&T's need for having an intermediary for such supplies, the Secretary, Ministry of Communications has explained that "the quality of their (private suppliers) product had to be improved when developmental activity had to be done for which ITI quite often renders service to this Department. Secondly, the barrettor is purchased by ITI for use in exchange equipment supplied by them complete to the Department. So we thought, alongwith them, let them purchase these lamps also which the Department needs". The Committee are informed that there are several other items which are purchased by the ITI from trade and supplied to the P&T Department.

2.65. It is rather surprising that the P&T Department purchases from ITI several items which the ITI itself does not manufacture. The Committee feel that the Department which has its own purchase organisation as also technical staff should in most cases be able to make purchases direct from the manufacturers. They recommend that the Department should review each item of stores which is supplied by the ITI but not manufactured by it, identify those items which could be purchased direct from the manufacturers and gear up its organisation to effect such purchases.

NEW DELHI;

April 25, 1981

Vaisakha 5, 1903 (Saka)

CHANDRAJIT YADAV,

Chairman,

Public Accounts Committee.



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## APPENDICES

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# APPENDIX I

(Vide para 2.43.

## Annual Consumption of Barretter Lamps.

Sl. No.	Name of Circles/ Districts	Annual Consumption during					
		1974-75	1975-76	1976-77	1977-78	1978-79	1979-80
1	2	3	4	5	6	7	8
<i>Circles:</i>							
1.	Andhra . .	1,231	1,288	3,863	1,640	1,277	988
2.	Bihar . .	..	..	..	..	..	..
3.	Gujarat . .	1,150	2,065	5,016	2,100	1,612	3,719
4.	J & K . .	2,113	775	955	10	15	475
5.	Kerala . .	91,451	14,271	Nil	1,389	Nil	80
6.	Karnataka . .	220	216	335	806	517	343
7.	Maharashtra . .	885	1,033	1,148	1,757	2,691	4,426
8.	M.P. . .	1,515	1,783	1,872	1,906	1,931	2,054
9.	North Easter	not available	530	130	14	2,333	1,546
10.	North Western . .	83	94	364	186	394	440
11.	Orissa . .	1,800	Nil	Nil	560	2,006	200
12.	Rajasthan . .	30	1,241	3,389	5,381	3,800	281
13.	Tamil Nadu . .	124	159	1,823	526	573	140
14.	U.P.. . .	3,460	3,913	838	4,770	5,105	7,855
15.	W. Bengal . .	185	160	342	579	595	587
<i>Districts:</i>							
1.	Ahmedabad . .	1,825	3,538	4,657	370	1,610	2,236
2.	Amritsar . .	234	775	421	497	622	529
3.	Agra . . .	109	336	246	270	Nil	296
4.	Bombay . .	12,385	18,860	14,010	7,330	9,826	8,667
5.	Bangalore . .	N.A.	1,674	2,072	4,821	6,014	6,015



1	2	3	4	5	6	7	8
6.	Baroda . .	800	1,344	1,320	1,330	1,700	1,750
7.	Calcutta . .	4,447	11,339	8,191	9,384	20,277	11,025
8.	Coimbatore . .	193	181	207	191	881	892
9.	Chandigarh . .	118	417	113	1,651	92	139
10.	Delhi . .	N.A.	21,740	24,405	38,400	28,700	30,490
11.	Ernakulam . .	271	580	152	3,000	2,438	4292
12.	Gauhati . .	320	348	380	385	475	375
13.	Hyderabad . .	Nil	7,000	Nil	Nil	1,800	Nil
14.	Indore	Not avail- able.	1,045	1,121	461	623	552
15.	Jaipur . .	3,372	755	982	676	375	747
16.	Jullundur . .	214	287	301	411	536	889
17.	Kanpur . .	135	1,916	1,385	1,297	2,710	2,138
18.	Lucknow . .	500	422	620	429	253	300
19.	Ludhiana . .	49	129	158	330	545	297
20.	Madras . .	15,343	11,450	13,190	2,000	2,000	6,300
21.	Madurai . .	650	780	720	780	330	255
22.	Nagpur . .	1,248	1,686	1,590	1,669	1,746	1,362
23.	Patna . .	Not avail- able.	1,700	1,411	4,000	3,000	1,362
24.	Pune . .	1,035	1,275	4,168	897	1,970	1,025
25.	Rajkot . .	18	129	212	96	149	260
26.	Surat . .	325	90	135	87	2,250	243
27.	Trivandrum . .	250	281	335	336	175	245
28.	Vijayawada . .	270	780	660	730	510	400

(File No. 63-1/78—MMC/Vol. III)



## APPENDIX II

(Vide para 2.43)

### Closing Balance of Barretter Lamps

Sl. No.	Name of Circle/ Districts	Closing Balance at the end of					
		1974-75	1975-76	1976-77	1977-78	1978-79	1979-80
1	2	3	4	5	6	7	8
<i>Circles:</i>							
1.	Andhra . . .	15,094	24,884	23,596	19,728	18,088	17,100
2.	Bihar . . .	5,750	7,355	24,076	24,351	24,736	24,879
3.	Gujarat . . .	26,316	61,892	66,523	64,423	62,811	56,999
4.	J. & K. . .	2,535	6,496	8,414	8,314	9,954	9,479
5.	Kerala . . .	624	7,702	13,691	12,302	12,302	10,722
6.	Karnataka . . .	16,416	37,555	38,341	35,981	34,019	35,131
7.	Mahrashtra . . .	6,291	6,028	11,576	23,347	26,802	25,604
8.	M.P. . . .	14,789	35,007	41,568	38,931	33,779	30,633
9.	N.E. . . .	5,145	4,615	4,485	6,811	4,478	10,918
10.	N.W. . . .	27,455	46,375	55,781	55,502	55,595	54,278
11.	Orissa . . .	5,570	14,960	16,192	16,552	14,552	14,352
12.	Rajasthan . . .	13,039	24,290	28,580	23,199	19,749	19,468
13.	Tamil Nadu . . .	4,895	10,573	8,892	12,902	13,216	13,076
14.	U.P. . . .	26,223	30,840	36,707	31,937	26,832	18,977
15.	W. Bengal . . .	840	680	4,304	3,465	3,755	3,211
<i>Districts:</i>							
1.	Ahmedabad . . .	11,575	23,803	22,746	28,835	28,748	26,512
2.	Amritsar . . .	2,874	3,884	6,823	7,441	7,040	6,875
3.	Agra . . . .	884	530	266	Nil	Nil	753
4.	Bombay . . .	51,768	100,401	164,461	181,117	212,959	204,292
5.	Bangalore . . .	1,526	5,142	22,099	27,129	24,675	22,165



1	2	3	4	5	6	7	8
6.	Baroda . .	494	600	1,005	925	450	1,700
7.	Calcutta . .	30,266	31,527	120,583	148,754	125,889	114,854
8.	Coimbatore . .	8,041	14,732	16,085	18,963	17,925	17,033
9.	Chandigarh . .	4,891	4,474	4,341	2,690	2,598	2,459
10.	Delhi . .	45,885	64,540	97,248	1,33,328	1,25,835	92,908
11.	Ernakulam . .	2,148	1,623	4,284	6,150	8,481	4,189
12.	Gauhati . .	20	75	165	450	390	475
13.	Hyderabad . .	Nil	2,863	12,607	18,751	18,051	18,051
14.	Indore . .	9,978	12,987	14,666	17,191	18,568	18,016
15.	Jaipur . .	4,460	5,305	9,979	10,803	14,925	14,178
16.	Jullundur . .	3,059	2,859	2,646	2,252	1,946	1,508
17.	Kanpur . .	13,828	16,315	19,090	17,793	19,470	18,299
18.	Lucknow . .	N.A.	2,292	2,620	3,150	4,885	4,646
19.	Ludhiana . .	126	84	284	179	160	163
20.	Madras . .	8,970	17,482	20,712	34,681	40,475	34,175
21.	Madurai . .	1,890	4,819	4,019	3,310	2,980	2,795
22.	Nagpur . .	3,222	7,032	10,423	11,708	9,822	11,665
23.	Patna . .	5,770	7,570	8,079	6,759	4,257	3,257
24.	Pune . .	7,439	13,922	11,954	15,715	13,535	12,510
25.	Rajkot . .	375	250	945	949	2,493	3,058
26.	Surat . .	125	185	300	430	3,226	2,286
27.	Trivandrum . .	2,013	1,732	1,397	1,061	1,593	1,348
28.	Vijayawada . .	3,130	2,350	1,690	960	450	2,000

(File No. 63-1/78—MMC/Vol. III)



# APPENDIX III

## Statement of Conclusions and Recommendations

S. No.	Para No.	Ministry/ Department	Conclusion/recommendation
	2	3	4
1	1.85	Ministry of Communications (P. & T. Board)	To remove distortion and attenuation of speech, loading coils are inserted by the P&T Department, in their underground cables at regular intervals. Earlier these loading coils were of unpressurised type and were procured by the Director General, Posts and Telegraphs (DGP&T) from the Indian Telephone Industries (ITI), Bangalore. To prevent entry of moisture into the cables and help locate the cable breakdowns speedily, the Department decided in 1970 and 1972 on pressurisation of underground cables, implying thereby that the unpressurised loading coils in use till then would gradually be replaced by pressurised loading coils for which the Telecommunication Research Centre (TRC) had also finalised a tentative design in consultation with ITI in 1971-72. However, notwithstanding the aforesaid developments, based on the manufacturing capacity of the ITI and the demands forecast by the Circles and the Districts, the DGP&T continued to place orders on the ITI for supply of unpressurised type loading coils. By July 1978 large stocks of unpressurised type loading coils valued at Rs. 1.16 crores had accumulated in the store depots of the P&T Department. By



September 1980 the value of the coils in stock had risen to Rs. 1.30 crores.

2      1.86      -do-

As regards reasons for overstocking, the Secretary, Ministry of Communications explained during evidence that "orders were placed earlier by the various circles and districts directly on the ITI, orders were also placed from the Directorate. It seems, there was some amount, though not very much, of excess ordering compared to what was actually needed on an annual basis or on one or two year basis".

3      1.87      -do-

In the view of the Committee, one of the reasons for overstocking was that due to decentralisation in procurement, various P&T circles and districts were placing orders on ITI direct for supply of unpressurised loading coils. At the same time, even at the Central level orders were placed by the DGPT. Thus, there was utter lack of coordination between the Directorate and its various circles and districts in the matter of procurement of this item of stores. The consequence is that a large stock of unpressurised coils has accumulated. With the introduction of pressurised coils, the rate of normal consumption of unpressurised coils already in stock will go down. This is a matter of concern. The Committee would, therefore, like to know as to how, when and where the balance stock of unpressurised coils valuing Rs. 1.30 crores is proposed to be utilised by the Department.

4      1.88      -do-

The Committee have been informed that the value of the inventory including the unpressurised loading coils in the P&T Depart-



ment as at the end of 1979-80 was Rs. 113.86 crores and that these consisted of more than eleven thousand items procured by the Department. The Administrative Staff College, Hyderabad had examined the inventory control and accounting systems of the Department and submitted its recommendations in 1972. The Ministry have informed the Committee that on the basis of these recommendations, several steps had been taken to make improvements. A proposal to computerise the inventory control system as also other operations of the Department is presently under consideration of the Government. The Committee would like to be informed of the progress made in this direction.

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1.89. The Telecommunication Research Centre had apprehended in January 1977 that the pressurised cables would be damaged if used with unpressurised loading coils. However, in July 1978 the DGP&T instructed the field units to utilise unpressurised loading coils so that the large stocks that had accumulated in the store depots, could be exhausted. The General Manager, Telecommunications, Bangalore had also pointed out in February 1979 to the DGP&T that the use of unpressurised loading coils with pressurised cables led to serious difficulties and would amount to ruining of lakhs work of cables for the sake of a few thousands worth of loading coils. The Ministry have, however, explained that "the use of unpressurised



coils with pressurised cables would have only made operation of pressurisation less effective. Cable damage as such because of use of such loading coils was not involved". The Ministry have further stated that "no specific survey was carried out.....there has been no other report from the field units of the difficulties faced due to such an arrangement.....leakage of gas was detected at some places which was attended and there were no damages". As regards the view expressed by the TRC regarding the likelihood of damage to pressurised cables when used with unpressurised coils, the Secretary, Communications stated in evidence "unfortunately in one of our replies to Audit, a wrong statement was made that TRC apprehends this; this is not borne out by documents. We should have corrected it there." In view of the apprehensions expressed by the TRC and the General Manager, Telecommunications, Bangalore regarding the likelihood of damage to the pressurised cables when used with unpressurised coils, the Committee consider the reply of the Ministry that there had been no report of actual damage, as unsatisfactory. In fact the Ministry had themselves admitted that no specific survey had been carried out and also that leakage of gas had been detected at some places where unpressurised coils had been used with pressurised cables. The Committee are inclined to think that the main anxiety of the Department was to somehow utilise unpressurised loading coils of which large stocks had accumulated due to over-indenting, and as such the question of damage to cables was overlooked. The Committee would, therefore, recommend that

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a thorough investigation should be made by a team of technical experts before unpressurised coils are put to use with pressurised cables hereafter.

The Committee also require an explanation as to how the stock of unpressurised coils was allowed to accumulate upto a value of Rs. 1.30 crores, in the light of the apprehensions expressed by the actual users.

1.90. Faced with the problem of accumulation of unpressurised loading coils, the Department negotiated with M/s. Electrohms, Bangalore, for conversion of unpressurised coils, into the pressurised type. An experimental order was placed on the firm in September 1970 for converting 23 loading coils of 400 pairs into pressurised type at a cost of Rs. 1.90 lakhs. So far, 15 Nos. of such coils have been supplied by the aforesaid firm to Bangalore and Bombay Telephone Districts and full report on their performance is awaited. The Ministry have stated that "conversion of additional quantities of pressurised type is not contemplated at this stage". The Committee find that the cost of conversion to pressurised type coil involved an expenditure of over Rs. 8,000 per piece whereas the cost of a new pressurised coil manufactured by the same firm ranged between Rs. 15910/- to Rs. 17,750/-. The Committee recommend that the



Technical Team of Experts should go into the matter and advise on the following aspects:

1. Performance of the converted coils and how this compares with the performance of the new pressurised coils.
2. Desirability or otherwise of further conversion of the unpressurised coils into pressurised coils on technical and financial considerations.
3. If conversion is not expedient, how best the accumulated stocks of unpressurised coils can be utilised.

The Committee may be apprised of the findings of the Technical Team within 6 months of the presentation of this Report.

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1.91

-do-

1.91. The decision to develop pressurised type loading coils was taken in 1970 and a tentative design was finalised by the TRC in 1971-72. M/s. Electrohms, Bangalore fabricated a prototype of 400 pair loading coil and offered in April 1973 to supply at a price of Rs. 14,650 per coil. On receipt of this offer, the department issued a tender enquiry in 1972-73 for supply of 200 loading coils of 400 pairs each. Out of 13 firms which submitted their tenders, only M/s. Electrohms whose rate was Rs. 15,940 per loading coil had submitted the prototype as required under the tender conditions. In April 1974, the department placed on it an order for supply of 200 loading coils of 400 pairs each valued at Rs. 31.88 lakhs at the tendered rate.



The Ministry have informed the Committee that other firms did not respond although the department tried to see whether they could develop a prototype.

.. The Committee gnd that the department agreed to successive increases in rates per coil from Rs. 15,940 to Rs. 16,215 in April 1975, to Rs. 16,727 in June 1977 and to Rs. 17,750 in June 1979 in respect of the orders placed on M/s. Electrohms. The Ministry have explained that the increases were agreed to partly due to escalation in the cost of material and partly due to modifications in design. In all, orders worth Rs. 1.30 crores had been placed on this firm for supply of pressurised coils of different sizes. The Department have stated that this is the only firm in the private sector which is manufacturing pressurised type loading coils. The supply of such coils by ITI, a public sector undertaking, has been meagre all along. No wonder, M/s. Electrohms took advantage of this situation and demanded increase in their rates of such coils from time to time and succeeded in getting the approval of the department. The Committee are now informed that the Department have floated a fresh tender enquiry in August 1980 for supply of pressurised coils of different sizes. As pressurised coils will be required in large quantities for use with pressurised cables to be laid in the tele-communication network all over the country as also for the gradual replacement of the existing



unpressurised coils already laid underground, the Committee expect that the Department will endeavour to develop on urgent basis alternate sources of supply of pressurised coils so as to obviate total dependence on one monopoly supplier from the trade as has been the case hitherto.

9 1.93 do

It is surprising that ITI which gave technical know-how to M/s. Electrohms have themselves done precious little to enhance the production of this item in their own factory all these years.

10 2.55 do.

From the information furnished to the Committee, it is noticed that the decision to centralise the purchase of barrettor lamps was taken from 1972-73 following a visit by the Minister in-charge to some telephone districts and some discussions held between the Secretary, Ministry of Communications and the Chairman, ITI. No evidence has been placed before the Committee to indicate whether the proposal to centralise this item of spares was examined on the basis of stock position and the projected requirements. In fact, the Department have themselves admitted that "the details of projected requirements and quantities actually in stock in various circles were not obtained at that time." This information was of a vital nature and the Committee see no reason why the same was not called for before taking the decision to centralise this item of spares.

11 2.56 do.

The Committee find that on 3rd March, 1973, the Department estimated a requirement of 3.60 lakh barrettor lamps for 1973-74. Against this requirement, the quantity ordered on ITI on 4th July, 1973 was 4.59 lakhs (i.e. one lakh more). For the years 1974 and



1975, the forecast of requirement made on 15th January, 1974 was 3.96 lakhs and 4.36 lakh Nos. respectively. Against these requirements, the order placed on ITI on 29-4-1974 was 5.00 lakh Nos. for 1974-75 and on 16th July, 1975 for 4.36 lakh Nos. for 1975-76. Thus, against the forecast requirement of 11.92 lakh Nos. for the years 1973-74, 1974-75 and 1975-76, the actual orders placed on ITI were for 13.95 lakh numbers. Against these orders, the supplies received by the Department were 13.48 lakh lamps (1.95 lakhs during 1973-74, 4.96 lakhs during 1974-75 and 6.57 lakhs during 1975-76). As on 31st July, 1980, the stock of this item with the user units was 9.19 lakh numbers. Viewed from the fact that the average consumption of lamps was around one lakh pieces in a year, the placement of orders for 13.95 lakh pieces for three years was far in excess of actual requirements. The explanation given by the Secretary, Communications during evidence was: "Panic had gripped us.... The panicky situation had forced this decision on the Directorate to place orders which in retrospect certainly seem too large.... There had been over-indenting on the ITI. I cannot possibly deny that.... It is true that in 1974-75 and 1975-76 the system did not function properly."

When the decision to centralise this item of spares was taken, it was felt, according to the Secretary, Communications, that "the position would be manageable because we have the data relating to genuine needs of the various operating units and we would be able



to even the shortage if there is a national shortage". As later events showed, this expectation was totally belied inasmuch as neither the forecast requirement for the years 1973-74 to 1975-76 (11.92 lakh pieces) nor the orders placed on ITI (13.96 lakh pieces) for supply during this period was related to the annual consumption of barrettor lamps which was only around one lakh annually. The Committee cannot but conclude that there was a failure of inventory control system and orders had been placed on the ITI without proper assessment of requirements as per consumption. Also there was utter lack of coordination between the DGPT and the ITI in the matter of placement of indents and effecting supplies. The Committee desire that an investigation be made to find out how such grossly exaggerated forecasts were made and even orders placed on ITI were for quantities higher than those estimated. Responsibility should be fixed on the officers at different levels who placed orders in large quantities totally unrelated to actual requirements thereby resulting in over-stocking of these lamps.

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13      2.58      do.

The Committee expect that after the sad experience of over-stocking of barrettor lamps, the DGP&T will pay greater attention to the functioning of its material management department so that such instances are not repeated.

14      2.59      do.

With effect from 1 April, 1976, "barrettor lamps" was deleted from the list of essential spares and accordingly all field units could thereafter place orders on ITI direct for this item. Yet, on 29-4-1977, the DGP&T placed an order on ITI for supply of 2.68 lakh lamps to 18 field units. The reason given by the Secretary, Commu-



1	2	3	4
			<p>nications during evidence, for the DGP&amp;T placing direct orders on ITI even after decentralisation of this item was: "It now appears in retrospect that we had given them a wrong forecast that in 1976-77 our probable purchase would be 4.79 lakhs. Out of that we purchased from them only 2.68 lakhs. Having given that forecast, we had a moral responsibility to bail them out."</p>
15	2.60	Ministry of Communications (P. & T. Board)	<p>The Committee regret to observe that the DGP&amp;T had to place orders on ITI for supply of 2.68 lakh numbers of barrettor lamps only to honour its commitment to ITI, although the Department knew that "the field units had no requirements of this item immediately".</p>
16	2.61	do	<p>As on 1-4-1977, Bombay Telephone District had a stock of 1,64,461 barrettor lamps. The consumption during the preceding year 1976-77 was 14,010 numbers. In April 1977, the consolidated order placed by DGP&amp;T <i>inter alia</i> included supply of 80,000 lamps to Bombay Telephone District. The Department has explained that "80,000 lamps were taken as the requirement for four years for consumption in the Telex exchange at Bombay. The existing stock of Bombay was assumed to be required for the existing telephone exchanges".</p>
17	2.62	do	<p>The Committee consider the above reply of the Department as unsatisfactory in as much as order for supply of 80,000 lamps was placed by the Department on incorrect assumptions and without con-</p>



sulting the Bombay Telephone District authorities about the stock position and their future requirements. This is regrettable. From the figures now furnished, it is seen that the stock of barrettor lamps in the Bombay Telephone District at the end of the years 1977-78, 1978-79 and 1979-80 was 1,81,117, 2,12,959 and 2,04,292 respectively whereas the annual consumption in those years was 7,33,09,826 and 8,667 only. The stocks were thus far in excess of actual requirements. This indicates a clear case of bad planning in the system of procurement and distribution of stores. The Committee expect that the distribution machinery in the Department will be revamped to ensure that supplies are made methodically and according to actual requirements.

18            2.63            do

The Committee were informed by the Secretary, Communications during evidence that based on actual past consumption, the existing stock of barrettor lamps would be consumed in  $7\frac{1}{2}$  to 8 years. The information furnished to the Committee indicates that a number of Districts and Circles were carrying heavy stocks as compared to their annual consumption. The Committee, therefore, desire that the stock position of this items with various Circles/Districts should be reviewed afresh and redistribution of lamps done according to actual needs of the user units.

19            2.64            do

The ITI is not manufacturing barrettor lamps. It purchases the lamps from the trade on the basis of indents placed by the P&T Department and charges a commission of 8 per cent on the purchase price, for the supplies made to the Department. As regards P&T's need for having an intermediary for such supplies, the Secretary,



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Ministry of Communications  
(P. & T. Board)

Ministry of Communications has explained that "The quality of their private supplies) product had to be improved when developmental activity had to be done for which ITI quite often renders service to this Department. Secondly, the barrettor is purchased by ITI for use in exchange equipment supplied by them complete to the Department. So we thought, alongwith them, let them purchase these lamps also which the Department needs". The Committee are informed that there are several other items which are purchased by the ITI from trade and supplied to the P&T Department.

It is rather surprising that the P&T Department purchases from ITI several items which the ITI itself does not manufacture. The Committee feel that the Department which has its own purchase organisation as also technical staff should in most cases be able to make purchases direct from the manufacturers. They recommend that the Department should review each items of stores which is supplied by the ITI but not manufactured by it, identify those items which could be purchased direct from the manufacturers and gear up its organisation to effect such purchases.

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20. Atma Ram & Sons,  
Kashmere Gate,  
Delhi-6.
21. J. M. Jaina & Brothers,  
Mori Gate, Delhi.
22. The English Book Store,  
7-L, Connaught Circus,  
New Delhi.
23. Bahree Brothers,  
188, Lajpatrai Market,  
Delhi-6.
24. Oxford Book & Stationery  
Company, Scindia House,  
Connaught Place,  
New Delhi-1.
25. Bookwell,  
4, Sant Narankari Colony,  
Kingsway Camp,  
Delhi-9.
26. The Central News Agency,  
23/90, Connaught Place,  
New Delhi.
27. M/s. D. K. Book Organisations,  
74-D, Anand Nagar (Inder Lok),  
P.B. No. 2141,  
Delhi-110035.
28. M/s. Rajendra Book Agency,  
IV-D/50, Lajpat Nagar,  
Old Double Storey,  
Delhi-110024.
29. M/s. Ashoka Book Agency,  
2/27, Roop Nagar,  
Delhi.
30. Books India Corporation,  
B-967, Shastri Nagar,  
New Delhi.



**P.A. C. No. 806**

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