



**REPORT OF THE
COMPTROLLER AND AUDITOR GENERAL
OF INDIA**

UNION GOVERNMENT
NO. 8 (COMMERCIAL) OF 1992

HINDUSTAN TELEPRINTERS LIMITED



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COMPTROLLER AND AUDITOR GENERAL
OF INDIA

FOR THE YEAR
1953-54

NEW DELHI: GOVERNMENT OF INDIA, 1954

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PREFACE

Audit Boards are set up under the supervision and control of the Comptroller and Auditor General of India (CAG) to undertake comprehensive appraisal of the performance of the Companies and Corporations subject to audit by CAG.

2 The report on **HINDUSTAN TELEPRINTERS LIMITED** was finalised by an Audit Board consisting of the following members :-

Shri N.Sivasubramanian	Deputy Comptroller and Auditor General-cum-Chairman, Audit Board.
Shri K.P.Lakshmana Rao	Principal Director of Commercial Audit & Ex-Officio Member, Audit Board, MADRAS.
Shri.V.Srikantan	Principal Director of Audit (Food), New Delhi.
Shri K.S.Menon	Principal Director (Commercial) and Member-Secretary, Audit Board.
Shri M.K.Jain	Deputy Director General (Finance) (Retd), Department of Telecommunication -Part time member.
Shri.K.K.Ramaswamy	Formerly Chief General Manager, Madras Telephones, & Chairman Madras Metropolitan Telecom Board, -Part time member.

The part time members are appointed by the Government of India (in the respective Ministry or

Department controlling the company or corporation) with the concurrence of the Comptroller and Auditor General of India.

3. Audit Board held discussions with the representative of the **Ministry of Communication, Department of Telecommunications.**

4. The Comptroller and Auditor General of India wishes to place on record his appreciation of the work done by the Audit Board.

OVERVIEW

I. The Hindustan Teleprinters Limited (HTL) was incorporated in 1960 for manufacture of electro-mechanical teleprinters required by the Post & Telecommunications, Railways and Defence. The electro-mechanical teleprinters were replaced by electronic teleprinters the world over and HTL went in production of 8000 electronic teleprinters per annum under foreign collaboration. It started with assembly production in 1986-87 and reached full production of 8000 units in 1990-91. By then the trend in the world was towards FAX. Phased manufacturing programme of electronic teleprinters was affected due to delay in receipt of technical documentation from the collaborator, delays in obtaining import licences and placing purchase orders. As a result of delay the backlog of orders from 1989-90 stood at 11768 units at the end of March 1992.

(Paragraphs 1, 5.4 (vi), 6.3(iii) and 7.2)

II. In response to the notice inviting tenders for collaboration for the manufacture of Electronic Teleprinters, the collaborator had indicated that a commission at 2.5% of the value of the order was payable to his Indian Agent which was included in the price. Though there was no need for HTL to have the collaborator engage an Indian Agent, provision for it was made in the notice inviting tenders for collaboration. The total cost of the project was Rs.641 lakhs out of which Rs.8.47 lakhs was spent towards agency commission (Rs.5.41 lakhs being commission on technical know how fees). A further commission of Rs.56.35 lakhs was also paid to the agent

against value of supply of components, etc. and this expenditure was charged to manufacturing cost.

(Paragraph 5.4)

III. The production of electro-mechanical teleprinters is beginning to get phased out from April 1990, production of spares for such teleprinters has been increased in the recent years. Production of spares may not continue for long and utilisation of spare capacities and manpower due to stoppage of the major production line is a major problem pending solution by HTL and it may affect its health, if not solved.

(Paragraphs 9.1 and 9.6)

IV. Diversification plans for manufacture of electric typewriters did not succeed due to competition from other manufacturers which HTL could not face. A stock of 619 electric typewriters lay unsold with HTL in March 1992. Production of data modems, a product developed by HTL is likely to utilise a small portion of the unutilised capacity and surplus manpower.

(Paragraphs 5.1, 6.4 and 8.1)

V. HTL'S main production line for electronic teleprinters needs only 300 employees. It is, thus, carrying a surplus of 1500 employees. According to the Management, diversification into production of distribution frames, power plants, FAX, products for electronic equipment and personal computers could absorb the surplus employees. But many diversification efforts of HTL, in the past, were not fruitful and only

the project for electronic teleprinters came to fruition. The need for urgency to diversify cannot be over-emphasised.

(Paragraphs 5.2., 9.1 and 9.6)

VI. The financial performance of the Company over the years have been satisfactory. While the share capital has gone up from Rs.7.42 crores in 1987-88 to Rs.12 crores in 1991-92, the net worth of the Company went up from Rs.15.90 crores to Rs.32.71 crores. Net profit which was Rs.3.21 crores in 1987-88 went up to Rs.14.65 crores in 1991-92.

(Para 6.1)

VII. HTL has hitherto enjoyed a captive market mostly in the Government. In the changing economic environment, HTL would not get price preference for its products being manufactured or proposed to be manufactured and its marketing strategy and structure needs revision.

The Ministry was of the view that as HTL will no longer enjoy any price preference, there was a need for HTL to develop a good marketing set up and a good costing set up to enable them to face the competition in the market. The company is hopeful of doing so and market its future range of new products profitably.

(Paragraph 7.3.)

CHAPTER I

INTRODUCTION

The Hindustan Teleprinters Limited (HTL), Madras a wholly owned Central Government company, was incorporated in December 1960 for manufacture of electro-mechanical teleprinters and ancillary equipment. The electro-mechanical teleprinters became obsolescent all over the world on the coming in of electronic teleprinters (ETP). HTL belatedly took up manufacture of electronic teleprinters from 1986-87 reaching full capacity only in 1990-91. As a diversification measure, manufacture of electric typewriters was taken up in 1987 but the production was stopped in 1989 due to inability of HTL to compete in the market. Manufacture of other products like data modems, main distribution frame (MDF) and switching equipments have been taken up in recent years.

CHAPTER-II

OBJECTIVES

The objectives of the Company are given below :-

- To compete in the production and supply of telecommunication equipments.
- To supply quality products backed by effective after sales service to customer satisfaction.
- To specialise in the field of printed text communication in different languages, including Hindi.
- To provide for Research and Development to modify and improve existing technologies and adapt new technologies to new products.
- To earn fair monetary return on investments.
- To foster and maintain a skilled work force.
- To partake in the social and economic growth of the locality of operations.
- To grow continuously and meet the demands both within and outside the country.

CHAPTER-III

MANAGEMENT

HTL is managed by a Chairman-cum-Managing Director and a part time Government Director. They are assisted by General Managers and Deputy General Managers.

The performance of the company was last reported in Comptroller & Auditor General's Report, Union Government (Commercial) 1975.

CHAPTER-IV

CAPITAL STRUCTURE

The company was registered with an authorised capital of Rs.300 lakhs which had gone up to Rs.2000 lakhs as on 31st March 1992, when paid up capital was Rs.1200 lakhs. Company had issued bonus shares to Government for Rs.82 lakhs during 1973-74 and 1982-83. As on 31st March 1992 loans from Government of India amounted to Rs.621.90 lakhs.

CHAPTER-V

PROJECTS

5.1 The following projects, as product diversification, were undertaken by HTL over the years.

Sl. No.	Name of the project	Year	Remarks
1.	Manufacture of power plants for Telex and Telephone Exchanges.	1969	Dropped after some production in 1972-73 and 1973-74. Now proposed to be taken up again during 1992-97.
2.	Manufacture of electro-mechanical calculating machines.	1969	In March 1972 this scheme was dropped and manufacture of peripheral equipments for computers taken up.
3.	Manufacture of peripherals for computers	1972	Dropped after 1975 without taking up manufacture.
4.	Manufacture of Electric type-writer	1973-74	Production to company's own design started in 1971 but was abandoned in 1979 as not cost effective.
		1979-89	Taken up in 1979 based on know-how supplied by Olivetti of Italy and production commenced in 1987. Due to market resistance the project was closed in March 1989.

5.	Manufacture of electronic teleprinter	1981	The project sanctioned by Government in 1981 taken up with collaboration from Sagem of France in 1984 and reached full capacity production of 8000 units per annum in 1990-91.
6	Manufacture of communicator Terminals	1987	Project abandoned in 1989 on inability of collaborator to assure transfer of technology fully.

5.2 During the years 1985-90, the expenditure incurred on projects are given below :-

Sl. No.	Name of Project	Outlay proposed	Actual Expenditure (Rs. in lakhs)	Remarks
(1)	(2)	(3)	(4)	(5)
1.	Modernisation of existing facilities	350	260.16	
2.	a. Factory Building	250		
	b. Housing & Welfare	421		
3.	Research & Development	250	21.79	
4.	Electric typewriter Project	75	59.35	Project abandoned in March 1989.
5.	Electronic teleprinter and data modems	536	536.18	
6.	Digital facsimile machines	490	51.73	
7.	Computer Peripherals and Accessories	50	Nil	
		2422	929.21	

Of the various efforts at diversification made by HTL the Electronics Teleprinters Project turned out to be the only fruitful one and the company's health depends largely on it.

5.3 The demand for electronic teleprinters is expected to decline in the next few years. The Eighth Five Year Plan (1992-1997) of HTL covers the following products for diversification.

Sl. No.	Product	Project period	Capital outlay (Rs. in lakhs)	Remarks
1.	Main Distribution Frame/Power Plant/Line Jacks/DP Boxes	1992-97	245	128 P and 512 P MDFs productionised 2000 line Digital MDFs are under development. Power plants 25 Amps and 50 Amps are under production.
2	C-Dot switching exchanges (upto 1400 lines)	1992-95	255	
3	Transmission equipments	1992-94 & 1995-97	142	
4.	FAX and messaging products	1992-96	460	
5.	Pay phones & Chip cards	1992-95	340	
6.	Personal computers (CIS DOT project) & Formatted terminals	1992-93	30	
7.	Data, ISDN & INT-Network	1993-97	90	
			1562	

5.4 ELECTRONIC TELEPRINTERS PROJECT

(i) For production of electronic teleprinters (ETP) a feasibility report was prepared by HTL in November 1980. Government of India sanctioned, in March 1981, the project for production of 8000 units per annum by HTL with an outlay of Rs.500 lakhs (including foreign exchange component of Rs.236 lakhs).

(ii) Global tenders were called for in May 1981. Six firms quoted. Three firms were shortlisted and after visiting their works and evaluation of technical specification and financial terms, offer of a Collaborator was approved by Government in April 1984. Collaboration Agreement was signed in July 1984 (amended in April 1985) and taken on record by Government of India in May 1985.

(iii) Tenders which were invited (May 1981) for collaboration referred to field proven equipment currently under regular production of not less than 10000 units per year. Original offer was for production of TX-20 type. An improved TX-30 model (which was later accepted) was offered in February 1982 though not under regular production. Tender committee incorrectly reported (February, 1983) that 10500 ETPs of TX-30 type were manufactured in 1981 and 17000 ETPs in 1982. Earlier in May 1982 it was stated that the equipment was not in regular production and not field proven. Ministry stated (November, 1992) that in retrospect the TX-30 had proved itself.

(iv) For in-house manufacture of printed circuit boards (PCB) for ETPs to be set up at Hosur, 15 acres of land valued at Rs.2.41 lakhs was acquired in 1980-81 at Hosur and expenditure of Rs.50.96 lakhs was incurred upto 31st March 1992. The Management stated (June 1990) that Government of India approved (April 1988) the proposal to set up PCB manufacture

at Madras instead of at Hosur and construction was limited to completing building instead of stopping work midstream. In July 1988, the Board of Directors decided to dispose of the land and building at Hosur but in June 1989 they decided to retain it for a new project. Management stated (November 1991) that proposals for diversification were on the anvil and it was very likely that HTL would be able to use the facility at Hosur.

(v) The expenditure on ETP project upto March 1992 was Rs.640.52 lakhs (FE Rs.442 lakhs) against revised estimate of Rs.550 lakhs (FE Rs.383 lakhs). The revised estimates (1986) were prepared after the company entered into agreement for collaboration and it provided for variations in exchange rate, reduction in requirement of machinery and purchase of PCB from other sources instead of making them in-house in view of the capacities built up in the country in many places for the PCB.

(vi) Manufacturing of ETPs commenced in 1986-87 and reached full capacity of 8000 units per annum in 1990-91. It was behind schedule by one year. The level of indigenisation as contemplated in the collaboration agreement was achieved fully in 1991-92 only.

(vii) While inviting offers for collaboration from manufacturers directly, the tenderers were specifically asked to indicate whether they had any agent in India and his remuneration included in the price quoted for collaboration. The Collaborator who was engaged had indicated that he had an Indian Agent who was paid commission at 2.5% of the value of the order for following services:

i) to promote and sell the equipment and defend Collaborator's interest.

ii) to keep Collaborator regularly informed and provide information on activities of competitors.

iii) to link between the wishes of the customer and Collaborator.

The Collaboration agreement of July 1984 did not specifically refer to commission of 2.5% but only to Indian Agent's commission to be paid in Indian Rupees. The agreement was taken on record by Government of India in May 1985. The Indian Agent had little role to play on orders for supplies from HTL and no service was received by HTL from the Agent, who was appointed by the Collaborator for advancing his own interest. The total cost of the project was Rs.641 lakhs out of which Rs.8.47 lakhs was spent towards agency commission (Rs.5.41 lakhs being commission on technical knowhow fees). A further commission of Rs.56.35 lakhs was also paid to the agent against value of supply of components, etc. and this expenditure was charged to manufacturing cost. The Management stated (November 1990) that reference by it to engagement of agent in the invitation for tender of bids for collaboration was only to avoid having to pay in foreign exchange any commission which collaborator may pay to an Indian agent he may employ.

5.5 PROJECT FOR COMMUNICATOR TERMINALS

As part of its diversification plans, HTL decided (November 1987) to take up the manufacture of communicator terminals in collaboration with a Collaborator. Production of 3000 terminals per annum with a capital investment of Rs.40 lakhs was envisaged. It was decided to entrust the distribution of the product to another Company in India. For market evaluation and technical evaluation, 25 terminals were imported by June 1988.

In January 1989, HTL learnt that while the communicators appeared to be good, financially Collaborator was not in good condition. The company had not supplied their audited balance sheet and profit and loss account. One of the major partners of the foreign collaborator had left the firm thereby raising doubt about their technical competence to pass on the necessary technical data for productionisation. The 25 terminals received (cost Rs.5.86 lakhs) in June 1988 were lying unutilised (November 1991). Though the requirements of terminals for import was reduced from 30 to 25 in March 1988, no intimation of reduction in quantity was sent to the Bankers on whom Letter of Credit had already been opened for 30 terminals. The foreign firm billed for 30 terminals though supply was only of 25 terminals. The Bankers paid in full resulting in overpayment of Rs.1.14 lakhs which was written off by HTL in September 1989. On the 25 terminals lying unutilised, the Management stated (November 1991) that for modernisation of the Telegraph Network, the Rural Messaging Terminal developed by their R&D was similar to imported terminal and that the 25 terminals can be utilised along with the terminals to be manufactured.

CHAPTER-VI

PERFORMANCE

6.1 Financial Performance

<u>Assets & Liabilities</u>	(Rs. in lakhs)				
	<u>1987-88</u>	<u>1988-89</u>	<u>1989-90</u>	<u>1990-91</u>	<u>1991-92</u>
<u>Liabilities</u>					
(a) Share Capital					
i) Paid up Capital	742	800	800	800	1200
ii) Advance for share capital	-	-	-	400	300
(b) Reserves & Surplus	911	1009	1013	1199	1771
(c) Borrowings					
i) From Govt. of India	455	359	359	422	415
ii) Interest accrued and due	30	26	80	140	207
(d) Current liabilities and provisions	2074	2939	2900	2859	3345
	----	-----	-----	-----	-----
Total	4212	5133	5152	5820	7238
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<u>Assets</u>					
(e) Gross Block	1618	1681	1714	1897	2081
(f) Less: Cumulative Depreciation	833	973	1105	1247	1398
	----	-----	-----	-----	-----
(g) Net block	785	708	609	650	683
(h) Capital work-in-progress	54	57	76	103	124
(i) Investments	-	-	-	100	-
(j) Current assets	3310	4256	4393	4941	6431
(k) Capitalised expenditure	63	112	74	26	-
	----	-----	-----	-----	-----
	4212	5133	5152	5820	7238
	----	-----	-----	-----	-----
(l) Capital employed (g+j-c(ii)+d)	1991	1999	2022	2592	3562
(m) Net worth (a(i)+(ii)+b-k)	1590	1697	1739	2373	3271

Working Results

(Rs. in lakhs)

	1987-88	1988-89	1989-90	1990-91	1991-92
<u>Income</u>					
i) Sales	1926	2756	3430	4582	6670
ii) Other Receipts	47	45	51	39	39
iii) Other Income	24	39	167	85	310
Total	1997	2840	3648	4706	7019
<u>Expenditure</u>					
i) Cost of raw materials, components, stores & tools	1620	1598	1571	3027	3539
ii) Employees remuneration & benefits	649	740	859	958	1075
iii) Operating, selling and distribution expenses	182	172	149	207	337
iv) Other expenses	68	122	125	362	804
v) Prior period adjustments (net)	(223)	(101)	(124)	(676)	(662)
vi) Stock difference	(776)	(194)	704	(180)	277
	1520	2337	3284	3698	5370
Less: Transfers to Assets account	9	10	7	9	14
Total	1511	2327	3277	3689	5356
Gross Profit	486	513	371	1017	1663
Less: Depreciation	157	163	155	162	172
Less: Capitalised expenditure written off	8	49	37	188	26
<u>Net Profit</u>	321	301	179	667	1465
i) Provision to tax	137	158	124	461	801
ii) Profit after tax	184	143	55	206	664
iii) Dividend paid	45	45	48	24	91
iv) Percentage of profit before tax					
a) To sales	16	11	5	14	22
b) To capital employed	16	15	9	26	41

Increase in profit in 1991-92 was accounted for by ETPs and some of the new products like MDF and Power Plants.

6.2 PRODUCTION OF ELECTRO-MECHANICAL TELEPRINTERS

(i) Production is carried out mainly in three shops, viz. foundry, workshop and assembly shop. The capacity in 1961 was for 1326 Electro-mechanical Teleprinters (EMTP) per annum to be progressively achieved by 1964. It was increased to 5400 per annum on single shift and 8500 on double shift, in 1970-71. The production vis-a-vis capacity in recent years is given below:

Year	Capacity	Target	Production	Percentage of production to	
				capacity	Target
1985-86	8500	8000	8622	101	108
1986-87	8500	8000	8654	102	108
1987-88	8500	6300	6510	77	103
1988-89	8500	4500	4141	49	92
1989-90	8500	1715	2112	25	123

(ii) The orders from Department of Telecommunications, the major purchaser, came down as the purchaser decided to switch over to electronic teleprinters from electro-mechanical teleprinters. In HTL, there was no production of Electro mechanical teleprinters after 1989-90. The break up

of inhouse production achieved, indigenous bought outs and imported components are given below:

Percentage of	1986-87	1987-88	1988-89	1989-90
Imported components	2.2	1.9	0.4	6.4
Bought out indigenous	7.2	6.2	7.5	5.4
In-house manufactured	90.6	91.9	92.1	88.2

(iii) Machine capacity utilisation has been coming down in recent years.

	(in lakh hours)			
	1988-89	1989-90	1990-91	1991-92
Available	8.51	7.07	4.88	5.27
utilised	7.07	5.46	2.41	3.25
Utilisation (Percent)	83	77	49	62
Idling (Percent)	17	23	51	38
<u>Cause of idling (Percent)</u>				
Machine breakdown	5.3	5.9	5.9	4.7
Lack of material	4.9	11.9	22.4	30.9
Want of operator	4.8	4.2	3.9	2.1
Lack of compressed air	1.2	-	-	-
Tools breakdown	0.5	0.6	-	0.3
Power failure/awaiting inspection/lack of order	0.3	0.2	18.4	0.3

6.3 PRODUCTION OF ELECTRONIC TELEPRINTERS (ETPS)

(i) As per feasibility report (November 1980) full production of 8000 ETPs per annum was to be reached starting with 1000 in 1982-83 from SKD kits and going upto 8000 by 1985-86. In March 1985 Government approved a phased manufacturing programme which envisaged production of 3500 numbers from imported SKD kits in the first year, from sub-assemblies in the second year and from components level in the third year. However, as the collaboration agreement was taken on record only in May 1985 and the industrial licence for manufacture of ETPs was issued in August 1985 there was

delay in the import of SKD kits. The first lot was received only during March 1986. As a result the manufacturing programme was revised and the first year of phased manufacturing programme could start only from 1986-87 against 1985-86 envisaged. The actual production vis-a-vis the projected schedule are given in the Table 1 opposite.

Table 1

Year	Approved production programme				Actual production			
	From SKD kits		From CKD Kits		From SKD Kits		From CKD kits	
	Nos.	%	Nos.	%	Nos.	%	Nos.	%
1986-87								
Roman	3000	96	-	-	3000	96	-	-
Bilingual	500	96	-	-	-	-	-	-
1987-88								
Roman	-	-	2000	77	-	-	1460	77
Bilingual	-	-	2000	85	500	96	240	85
Roman	-	-	3400	54	-	-	-	-
Bilingual	-	-	600	57	-	-	-	-
1988-89								
Roman	-	-	6500	43	-	-	540	77
Roman	-	-	-	-	-	-	1418	54
Bilingual	-	-	1500	50	-	-	1760	85
Bilingual	-	-	-	-	-	-	548	57
1989-90								
Roman	-	-	8000	28	-	-	1982	54
Bilingual	-	-	-	-	-	-	3811	43
							14	57
1990-91								
Roman	-	-	8000	-	-	-	2700	43
							4000	28
							800	22
Bilingual							1500	50
1991-92								
Roman	-	-	3500	-	-	-	4149	18
Bilingual	-	-	6500	-	-	-	6351	23.6

Note: (i) Figures under % indicate import content.
(ii) Bilingual: Roman and Devanagari

(ii) Against 27500 ETPs to be produced in the first four years upto 1989-90, the actual production was only 15273 ETPs. As against the import content of 28% envisaged by 1989-90, the import content was 43 to 57%.

(iii) The collaborator had to supply technical documentation within six months from the effective date of agreement or 4 months of the payment of the first installment of know how fees, etc. i.e. before February 1986. But the documents were received fully by December 1988, after about three years. According to Management this affected the phased production programme. The company did not, however, penalise the collaborator for the alleged delay by him by levying liquidated damages provided for in the agreement. On the other hand, HTL paid liquidated damages for Rs.2.02 crores to Department of Telecommunications towards delay in supplies by it as a result of slippage in phased manufacturing programme. The Management stated (November 1991) that demand of liquidated damages from Collaborator at that point of time, would have affected flow of supplies for the major productline in HTL. HTL is still dependent on Collaborator for proprietary components.

(iv) The shortfall in production was attributed by management (September 1992) to the following factors:-

(a) For issue of import licence as well as OGL attestation by DGTD, the provisional industrial licence issued for manufacture of Electronic Teleprinters at Madras plant had to be revalidated from time to time. The procedure involved time and consequent to this, the placement of orders was delayed.

(b) The global shortage of important imported components such as Integrated Circuits, Diodes and Transistors during the middle of 1988.

The project reached its full capacity of 8000 units per annum only in 1990-91 and was behind schedule by one year. However, production of 9000 ETPs in 1990-91 and 1991-92 exceeded the capacity. The level of indigenisation visualised was fully achieved in 1991-92 only.

6.4 PRODUCTION OF DATA MODEMS

(i) Production of modems is done in batches on the basis of orders received. Production and sale of modems in recent years was as follows:

Year	Nos. produced	Nos. sold
1987-88	346	468*
1988-89	91	51
1989-90	16	4
1990-91	5	25*
1991-92	-	5*

* Includes sales from previous years' production also.

(ii) The Management stated (November 1991) that manufacture of Data modem was not taken up in a big way because the data network in the country had not been established till October 1991. There will now be increase in Data modems production.

6.5 PRODUCTION OF DIGITAL FACSIMILE MACHINE (FAX)

(i) Defence Headquarters asked HTL in January 1986 for four digital facsimile machines for field trial and evaluation on no cost and no commitment basis. HTL imported six machines from USA, four for Defence and two for their own R&D, in March 1989 at a cost of Rs.51.73 lakhs. In November 1985, a foreign supplier indicated price for their

Fax machines which was cheaper than the price paid for the imported machines. HTL did not obtain quotation before ordering the import.

Management stated (June 1990) that the lower price was for a commercial version and not a ruggedised one required by Defence. The HTL failed to get orders for ruggedised machines from Defence. Management further stated (September, 1992) that efforts were on to persuade Army to place orders after field trials were over.

On the company's proposal to take up manufacture of FAX machines with foreign collaboration, the Ministry stated (August 1992) that foreign collaboration was not always of advantage nor enough in remaining competitive in the market. Own R&D was very much desirable. Possibility of joint venture with foreign manufacturer could improve competitiveness but depended on modalities of joint ventures.

6.6 RESEARCH AND DEVELOPMENT PERFORMANCE

(i) The Manpower employed in R&D was as follows:

As at 31st March	No. of officers	No. of staff	Total
1988	13	22	35
1989	19	22	41
1990	18	17	35
1991	38	17	55
1992	50	23	73

(ii) The expenditure incurred on R&D (other than salaries) was as follows:

	Revenue expenditure	Capital expenditure
		(Rs. in lakhs)
1987-88	2.24	3.29
1988-89	17.54*	4.72
1989-90	6.51	0.48
1990-91	39.46	1.28
1991-92	76.46	56.42

* Includes expenditure of Rs.17.24 lakhs incurred on purchase of two digital facsimile machines.

(iii) The following R&D projects were undertaken during the years 1987 to 1992:

1987-88 - Modems SDM 2411, was developed. Development activity on SDM 1221, DOT Matrix Printers, Smart Card, Biscrptual Electronic Teleprinters were under progress.

1988-89 - Development of Modem SDM 2411, 1220, 1221 and 2412 and cost competitive low cost modems with OKM chip set. Development of DOT Matrix Printers, line drivers, smart card.

1989-90 - Development of line conditioning unit, digital line driver of SDM 2411 data modem 9600 BPS were taken up. Indigenisation of modem card for TX-30 machine was under progress. Development of X-25 Pad packet Assembler and Disassembler under Transfer of Technology from NCST, Bombay is also under progress.

1990-91 - Upgradation of ETP-TX 30, development of indigenous design for Audio Conferencing unit, prototypes of charge Indicators, Line Jack units multiplexer, Rural Messaging units GIST (Graphic Intelligence based Script Technology) Line conditioning units, Power plants of 25 Amps & 50 Amps and MDF 128p.

1991-92 - Development of Charge Indicator, (16 khz version), Line Jack and DP Boxes, 8 Port Stand Alone PAD, Power Plants of 25 Amps and 50 Amps, Electronic Keyboard and Concentrators, MDF (512 Port), Modems (V29, V22 Bis, Base Band and Line Driver) and Chip Cards.

Production Model for 128 P - Rural Automatic Exchange (RAX) for evaluation. Samples for Formatted terminal and RMTs (Rural Messaging Terminals) for TEC approval, integration of Gist Card in ETP for multilingual application, prototype for 10 channel UHF and supply of CISDOT equipment to about 50 LAN sites in Six Southern and Eastern States-installation and commissioning in progress.

(iv) Upto 1989-90, the R&D activity was on at very low key and no products could be developed to production stage successfully except Data modems.

(v) During 1990-91 measures to strengthen inhouse R&D were taken and substantial allocation was made for adaptation of new technologies to meet the immediate requirements in the country. As a result, the following items were productionised during 1990-91 and 1991-92:

- a) Main Distribution Frame (MDF) - 128 p and 512 p
- b) Power Plants of 25 Amps and 50 Amps

- c) Charge Indicators (16 khz Version)
- d) Modems (Line Driver, V 29, Base Band and V22 Bis.)
- e) Electronic Key Board and concentrators
- f) GIST Card
- g) 128 P RAX (Rural Automatic Exchange)
- h) Validation of Chip Cards for pay phones

(vi) Turnover of new products was Rs.9.80 crores in 1990-91 and Rs.15.30 crores in 1991-92.

(vii) A machine for measuring components and other materials three dimensionally, used in R&D, was imported in May 1984 at a cost of Rs.55.86 lakhs. The machine broke down in June 1986. The efforts of the company to set it right were not successful because component required for the machine was not available. The machine is lying unused.

CHAPTER-VII

MARKETING AND PRICING

7.1 The company marketed mainly the following products:

- i) Electro-mechanical teleprinters
- ii) Electronic teleprinters
- iii) Electric typewriters
- iv) Data modems
- v) Accessories & Special Devices
- vi) Spares & tool kits.
- vii) Main Distribution Frame

The value of sales made by HTL to different categories of customers during the years 1987-1992 are given below:

Category of customer	1987-88	1988-89	1989-90	1990-91	1991-92
	(Rs. in lakhs)				
i) Govt. Deptts.	1884.66	2658.00	3014.89	3721.48	5586.72
ii) Public Sector Undertakings	7.16	37.57	406.90	845.19	1064.08
iii) Others	34.39	60.16	7.94	15.41	19.83
	1926.21	2755.73	3429.73	4582.08	6670.63

Productwise sales, quantity and value are given in Table 2 opposite.

TABLE 2

Details of Sales Turnover

YEAR	(VALUE; RS. IN LAKHS)											
	ELECTRO-MECH. TELEPRINTERS & ACCESSORIES		ELECTRONIC TELEPRINTERS		ELECTRIC TYPEWRITERS		DATA MODEMS		MDF	OTHERS	TOTAL	
	QUANTITY	VALUE	QUANTITY	VALUE	QUANTITY	VALUE	QUANTITY	VALUE	QUANTITY	VALUE	VALUE	
1987-88	7008	1261.13	1495	559.76	291	18.31	468	5.66	-	-	-	1926.21
			* 823	81.35								
1988-89	5160	1012.11	4097	1680.76	353	19.00	51	3.46	-	-	-	2755.73
			* 387	40.40								
1989-90	2139	747.02	6835	2631.63	277	14.08	4	2.27	-	-	-	3429.73
			* 398	34.73								
1990-91	193	324.02	8311	3175.77	149	4.11	25	1.15	1636	981.60	-	4582.08
			*1062	95.43								
1991-92	4	84.60	11018	5014.58	26	1.24	5	0.16	1601	1092.36	444.85	6670.63
			*302	32.84								

* LP 3/5 attachment

7.2 For teleprinters, the Department of Telecommunications (DOT) was the major customer, followed by Railways, Defence, Overseas Communication Services, Government Undertakings, newspapers and private parties. Sales are made against orders received from the parties. Backlog of orders for electronic teleprinters has gone up as a result of delay in the phased manufacturing programme of electronic teleprinters. As on 31st March 1992 the number still to be supplied was 11768 with some orders pending from 1989-90. (Details are given in Table 3 opposite)

TABLE 3

Details of orders

ORDERS	1987-88		1988-89		1989-90		1990-91	1991-92
	EMTP	ETP	EMTP	ETP	EMTP	ETP	ETP	ETP
OPENING BALANCE	6875	8829	188	11491	2201	16368	22044	14356
ADDITIONS DURING THE YEAR	321	4157	7173	8975	56	12511	624	8430
DESPATCHES (INCLUDING INTERNAL TRANSFER)	7008	1495	5160	4098	2143	6835	8312	11018
CLOSING BALANCE	188	11491	2201	16368	114	22044	14356	11768

EMTP: ELECTRO-MECHANICAL TELEPRINTER

ETP : ELECTRONIC TELEPRINTER

7.3 In the new economic environment HTL is likely to face stiff competition in the market. HTL has been hitherto enjoying price preference on sales to Government. On some projects, HTL received price fixed on 'cost plus' formula. In the changed situation HTL will have to face price competition. The Ministry stated (August 1992) that in the liberalised environment HTL has to face competition from other sector units and would have to revise its marketing strategy. Government was likely to purchase many items produced by HTL but at competitive prices.

7.4 HTL produces spares also and sells them to customers through a network of service centres which maintain the teleprinters. HTL maintains seven service centres attached to its regional offices located in Madras, Bombay, Calcutta and New Delhi, and sub-regional offices in Chandigarh, Gauhati and Bangalore. These centres attend to the work of servicing machines in the respective regions. Annual service contracts are entered into with the customers desiring service on a regular basis. Details of machines under service contracts in the years 1987-1992 are given in the Table 4 opposite.

TABLE 4

DETAILS FOR EQUIPMENTS UNDER SERVICE CONTRACTS

YEAR	BOMBAY			NEW DELHI			CALCUTTA			MADRAS			TOTAL		
	MAIN M/C	A.T.	E.T.	MAIN M/C	A.T.	E.T.	MAIN M/C	A.T.	E.T.	MAIN M/C	A.T.	E.T.	MAIN M/C	A.T.	E.T.
1987-88	310	351	73	362	380	131	364	359	16	104	140	69	1140	1230	289
1988-89	280	341	111	331	303	143	375	349	24	109	101	52	1095	1094	330
1989-90	273	330	129	242	211	199	350	351	32	101	93	73	966	985	433
1990-91	192	228	127	199	145	294	315	299	26	71	67	42	777	739	489
1991-92	177	215	107	189	120	177	256	282	20	79	40	11	701	657	315

Note:

Main M/C - Main Machine (Teleprinters)

A.T. - Attachments

E.T. - Electric Typewriters

7.5 The number on Teleprinters under service contract came down from 1140 on 31st March 1988 to 701 on 31st March 1992. The Management stated (July 1990) that Civil Aviation, Air India and some others had moved over to data based circuits leading to reduction in number of equipments under HTL service contracts.

7.6 HTL imparts training for three months to customers' personnel on maintenance of teleprinters and allied equipment. During the years 1987-1992, HTL trained 369 persons in maintenance of electro-mechanical teleprinters and 276 persons in maintenance of electronic teleprinters.

7.7 In HTL material costs are computed with reference to bill of material and annual average cost of purchase. Labour costs are computed with reference to standard hours and wage rate obtaining in the previous year. Works overheads are computed with reference to standard labour hours and previous years' works overhead rate. Other overheads i.e. Administration selling and distribution are computed by reference to previous years' actuals. Cost of idle time, rejections and under-utilisation of installed capacity are not computed. Expenses are not segregated into fixed and variable expenses, product-wise, for better cost control. The system of pricing is oriented to the agreement on price with Department of Telecommunications which includes cost plus pricing.

The Management stated (July 1990) that they were diversifying into new products and would gradually introduce cost control necessary in a competitive market situation which they would be facing.

7.8 The prices for teleprinters sold to Department of Telecommunications upto 1985-86 were on cost plus basis. From 1st April 1986, a three year agreement was signed which was extended upto 31st March 1990. Thereunder prices are to be determined in advance based on cost of raw materials and components and direct labour as per HTL standards. Overheads are determined at 85% of capacity utilisation and HTL is allowed 15% post tax return on the net worth upto 31st March 1989 and 12% thereafter till 31st March 1990. Price variations are calculated as per formula specified on a monthly basis. Liquidated damages are charged at 1/2% per week on value of supplies delayed subject to a maximum of 5% of contract price. From 1st April 1990, the prices were fixed by Department of Telecommunications based on the recommendations of the costing cell of the department, which were higher than the selling prices as on 1st April 1986, by 16 per cent for ETP (Roman) and 9.5 per cent in the case of ETP (Bilingual). For supplies in 1991-92 the prices were maintained as in the previous year with 6 per cent escalation.

7.9 Against tenders floated by South Eastern Railways in July 1989 for electronic teleprinters, HTL's quote was higher than that of five parties, out of a total seven parties who responded.

The Management stated (November 1991) that HTL prices were not comparable with that of others as HTL's ETP was a heavy duty one for messaging while the PC based ETPs offered by others might be suitable for use as a low duty equipment or other uses.

7.10 Sundry Debts The sundry debts as at the end of the year as percentage of sales went up during the years 1986-1992 except in 1991-92 as given below:

(Rs. in lakhs)

Year	Total sales	Sundry debts	Percentage of sundry debts to sales
1987-88	1972.96	221.11	11
1988-89	2801.00	423.30	15
1989-90	3480.64	579.49	17
1990-91	4621.00	1871.01	40
1991-92	6709.38	2473.71	37

CHAPTER-VIII

INVENTORY CONTROL

8.1 INVENTORY HOLDING:

The inventory holdings in HTL at the end of recent years are given below:

	Inventory holdings				
	(Rupees in lakhs)				
	1987-88	1988-89	1989-90	1990-91	1991-92
	-----	-----	-----	-----	-----
i) Finished goods	441.64	554.14	118.02	337.83	210.65
ii) Work-in-progress	548.45	648.55	256.90	184.68	184.13
iii) Raw material	61.27	92.37	103.07	56.57	35.68
iv) Components & accessories	272.68	703.23	1111.63	920.80	788.94
v) Other stores	19.95	29.12	19.31	22.51	35.19
vi) Machinery spares	55.99	59.94	89.79	92.38	98.80
vii) Building materials	2.18	1.70	1.16	1.41	1.34
viii) Material in transit	1.96	36.89	239.95	3.06	4.15
ix) Material under inspection	441.98	234.82	204.00	133.62	186.89
x) Dies, jigs & fixtures	107.23	104.91	94.59	100.81	86.42
Total	1953.33	2465.67	2238.42	1853.67	1632.19
Sales during the year	1926.00	2756.00	3430.00	4582.00	6670.00

The finished goods in stock on 31st March 1992 is accounted for mainly by 345 electronic teleprinters (value Rs.114.85 lakhs) and 619 electric typewriters (value

Rs.28.94 lakhs), 53 MDFs (value: Rs.18.66 lakhs), 29 power plants (value: Rs.18.25 lakhs) and 125 LP 3/5 attachments (value : Rs.10.68 lakhs). Components and accessories include non-moving components of electric typewriters valued at Rs.14.38 lakhs. Cost of these components was Rs.48.44 lakhs.

8.2 Physical verification of stock conducted during the last five years showed the following position:

	(Rs. in lakhs)	
	<u>Excesses</u>	<u>Shortages</u>
1987-88	42.77	15.71
1988-89	27.85	28.85
1989-90	6.95	28.00
1990-91	29.81	36.38
1991-92	8.21	2.78

The discrepancies were adjusted in the accounts after setting off the shortages against the excesses noticed but reasons were not brought on record nor remedial steps initiated to prevent future shortages and excesses.

The Management stated (July 1990) that internal audit would be strengthened to improve coverage of stock verification in future.

CHAPTER-IX

MANPOWER

9.1 The number of employees in HTL in recent years is given below:

	As as 31st March				
	1988	1989	1990	1991	1992
i) Managerial	165	171	186	226	237
ii) Ministerial staff	194	192	180	166	162
iii) Technical staff	154	151	152	136	132
iv) Factory labour:					
a) Skilled	1034	1024	1006	998	990
b) Semi-skilled	90	88	86	85	82
v) Other supporting staff	211	207	201	197	193
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
	1848	1833	1811	1808	1796

Consequent on the closure of EMTP Division in the end of 1989-90 about 1500 persons were rendered surplus as other ongoing ETP Project was expected to absorb 300 persons only.

9.2 In EMTP Division, prior to its closure in 1989-90, the manpower deployed was surplus. On the basis of norms in Project Report, 135 to 274 direct labour and 359 to 577 indirect labour were redundant in that division as given below:

	<u>Direct Labour</u>				
	1985-86	1986-87	1987-88	1988-89	1989-90
<hr/>					
a) Manpower required for full capacity production					
i) Assembly	197	197	197	197	197
ii) Workshop	310	310	310	310	310
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
	507	507	507	507	507
<hr/>					
b) Manpower required for actual production					
i) Assembly	214	215	183	122	112
ii) Workshop	336	338	288	192	176
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
	550	553	471	314	288
<hr/>					
c) Manpower deployed					
i) Assembly	152	179	146	141	123
ii) Workshop	546	513	460	437	439
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
	698	692	606	578	562
<hr/>					
d) Excess or redundant Manpower					
i) Assembly	(-) 62	(-) 36	(-) 37	19	11
ii) Workshop	210	175	172	245	263
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
(e) Total excess Manpower	148	139	135	264	274
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Indirect Labour

	1985-86	1986-87	1987-88	1988-89	1989-90
a) Manpower reqd. on the basis of capacity	672	672	672	672	672
b) Manpower reqd. on the basis of actual production	729	732	623	417	381
c) Manpower deployed	1152	1091	1004	994	894
d) Excess or redundant manpower	423	359	381	577	513

9.3 Even as per current standards adopted by management for manpower requirement there was redundant or excess deployment of manpower as given below:

	1985-86	1986-87	1987-88	1988-89	1989-90
<u>Workshop</u>					
a) Actual hours utilised on jobs	557424	529056	448011	390069	287428
b) Standard manhours for the jobs done	274844	262152	225109	195754	137354
c) Excess of manhours utilised over std. hours (a-b)	282580	266904	222902	194315	150074
d) Excess manpower (No. of employees) calculated on the basis of 2000 hrs. per worker per annum	141	133	111	97	75

Assembly

a) Actual hours utilised on jobs	246890	240874	168784	151920	73959
b) Std. manhours for the jobs done	121479	116035	81717	73708	34415

c) Excess manhours utilised over std. hours (a-b)	125411	124839	87067	78212	39544
d) Excess manpower (No. of employees) calculated on the basis of 2000 hrs. per worker per annum	63	62	44	39	20
<hr/>					
Total excess manpower (No. of employees) in workshop and assembly	204	195	155	136	95

9.4 The labour idle time during the years 1985-1990 in the workshop is given below:

Year	Idle hours	% to total available hrs.
1985-86	20582	2.4
1986-87	16026	1.9
1987-88	23907	3.4
1988-89	23083	3.6
1989-90	19968	3.0

The idle hours arose mainly on account of breakdown of machines and tools and power failure. The idle labour hours in the assembly was negligible (around 1 per cent) during 1985-89, however, it rose to 13% during 1989-90.

9.5 LABOUR UTILISATION IN ETP DIVISION

No standards for labour utilisation have been fixed in respect of this division. Labour utilisation statements have also not been prepared. The management

stated (July 1990) that standards for labour utilisation could not be conclusively established pending stabilisation of manufacture.

9.6 SURPLUS MANPOWER

The surplus manpower was utilised to some extent for production of EMTP spares during 1990-91 but further production was discontinued during 1991-92. The management envisages diversification projects such as MDF, Power Plants, FAX, value addition products for electronic equipments, personal computers, etc., to absorb the surplus labour. But most of the products proposed for diversification are electronic which may not absorb so much surplus manpower. Also the market is highly competitive whereas surplus manpower costed around Rs.7 crores per annum. It was stated (August 1992) that the surplus manpower would be trained in the areas where manpower with new skills suited for the electronic culture and aggressive marketing were needed.

N. Sivasubramanian

New Delhi

(N.SIVASUBRAMANIAN)
Deputy Comptroller and Auditor General-
Cum-Chairman, Audit Board

24 FEB 1993

Countersigned

24 FEB 1993



New Delhi
The

(C.G.SOMIAN)
Comptroller and Auditor General of India

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