REPORT OF THE COMPTROLLER AND AUDITOR GENERAL OF INDIA

UNION GOVERNMENT
No. 17 (COMMERCIAL) OF 1991

HINDUSTAN PHOTO FILMS MANUFACTURING COMPANY LIMITED

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6.	Shri K.P.Lakshmana Rao	Principal Director of Commercial Audit & Ex-officio Member, Audit Board, Madras from 14th October 1991 till date.
7.	Shri B.M.Oza	Principal Director of Commercial Audit & Ex-officio Member, Audit Board-II, Bombay upto 16th March, 1990.
8.	Shri A.Krishna Rao	Principal Director of Commercial Audit & Ex-officio Member, Audit Board-II, Bombay from 16th April 1990 till date.
9.	Shri K.S.Menon	Principal Director(Commercial) and Member Secretary, Audit Board from 2nd July 1990 till date.
10.	Shri K.N.Ramaswamy	Retd. Deputy Director General (Engg.) DGTD-Part time Member.
11.	Dr. P.T. Manoharan	Professor of Chemistry and Head of Regional Sophisticated Instrumentation Centre, Indian Institute of Technology, Madras - Part time Member.

2. The Report was finalised by the Audit Board after taking into consideration the discussions held with the Ministry of Industry on 19th February, 1992.

3. The Comptroller and Auditor General of India wishes to place on record his appreciation of the work done by the Audit Board and particularly the contribution made by the part time members.

OVERVIEW

I. The Hindustan Photo Films Manufacturing Company Limited was set up in November 1960 with the objective of attaining self-sufficiency in the manufacture of photographic products.

(Paragraph 1.1)

II. The Company has at present integrated production capability of cine film positive (black and white), cine film sound, medical X-ray film, roll film and photographic paper.

(Paragraph 1.2)

III. The Company has a total installed capacity of 15.324 million Sqm. consisting of 7.673 million Sqm. for integrated production and 7.651 million Sqm. for jumbo roll conversion.

(Paragraph 6.3.1 to 6.4.1)

IV. A plant for manufacture of magnetic media with technical know-how from M/s. Magna Tontraget Productions GMBH, Berlin with a total installed capacity of 1500 million running metres of audio, computer and video tapes and magnetic sound recording films was approved by Government in July 1985 at a cost of Rs.925 lakhs. The project was commissioned in May 1989. The capacity of the plant is underutilised to a large extent.

(Paragraph 5.2.1 and 5.2.2)

V. A project with technical collaboration of M/s. Du Pont (USA) with a coating capacity of 12 million Sqm. for manufacturing medical X-ray film (9.5 million Sqm.), industrial X-ray film (0.5 million Sqm.), and graphic arts film (2.0 million Sqm.) was approved by Government in March 1986 to meet the growing demand. Capital investment of Rs.168.12 crores estimated on the project has been raised to RS.290.62 crores. The project was scheduled to be completed by October 1991. The work is in progress (February1992).

(Paragraphs 5.3.1 to 5.3.3)

VI. A proposal submitted to Government in September 1983 for setting up a plant for manufacture of cine colour

1. INTRODUCTION

1.1 The Hindustan Photo Films Manufacturing Company Limited, a wholly owned Government Company, was incorporated on 30th November 1960, with the objective of making India self- reliant in a wide range of sensitised photographic materials required for entertainment, public health, defence, amateur and applied photography etc.

1.2 The Company's main plant at Udhagamandalam set up in 1967, has facilities for integrated manufacture (**i.e.** manufacture in all stages beginning from production of base film onwards) of cellulose tri-acetate base X-ray, cine positive (black and white) and cine sound films. It has also facilities for conversion of imported jumbo film rolls into smaller sizes. Additional conversion facilities were also created at Ambattur near Madras in October 1979, for conversion of imported jumbo rolls. As a diversification project, a plant for manufacturing magnetic tapes was commissioned at Udhagamandalam in May 1989. One more project for manufacturing polyester base medical and industrial X-ray and graphic art films is currently under construction in the same place. The Company has a marketing division for marketing its products.

1.3 The working of the Company upto 1971-72 was reviewed in the Report of the Comptroller and Auditor General of India (Commercial) for the year 1970-71, Part IX, which was considered by the Committee on Public Undertakings (COPU) vide their Fifty-fifth Report 1973-74 (Fifth Lok Sabha). The action taken by Government on this report is available in COPU's Seventieth Report 1975-76 (Fifth Lok Sabha). Subsequently, in 1981-82, COPU reviewed the working of the Company upto 1980-81 vide their Forty-first Report 1981-82 (Seventh Lok Sabha). The action taken by Government on this report is available in COPU's Sixty-third report 1982-83 (Seventh Lok Sabha).

2. OBJECTIVES

2.1 Based on the recommendations made by the COPU in their Thirty-eighth Report (Sixth Lok Sabha) 1978-79, the Bureau of Public Enterprises requested (May 1979) all the Ministries to advise the Public Enterprises under their administrative control to spell out their micro objectives consistent with the broad objectives spelt out in the Industrial Policy Statement made by the Minister of Industry in Parliament in December 1977. Pursuant to this, the company prepared their micro objectives and got them approved by the Ministry of Industry in June 1982. The main micro objectives are:

i) manufacturing and marketing products of proven quality;

ii) maintaining full utilisation of capacity;

iii) diversifying into allied new products;

iv) maintaining a high standard of customer and product services;

v) adopting a rational pricing policy;

vi) developing indigenous Research and Development capability;

vii) achieving a 15 percent annual growth in sales with a minimum return of 10 percent on investment.

In succeeding paragraphs an attempt has been made to bring out the extent to which the Company has achieved these objectives.

2.2 The Company's long term plan for a period of ten years had expired in March 1989. No long term plan to guide its activities has been prepared subsequently. When this was pointed out, Management had agreed (December 1989) to formulate a long term plan. No plan has been drawn up so far (February 1992).

2.3 During the meeting of the Audit Board with the Ministry in February 1992 it was pointed out by Audit Board that the company had not drawn up any significant corporate plan. Ministry said that in view of the economic and industrial changes taking place in the country pursuant to the new industrial plicy of 1991 HPF could not expect any sizeable budgetary support from the Government and would have to explore other avenues for funding and expansion. Given the dim scenario on generation of profits and internal resources for funding any future expansion plan it might not be possible for HPF to project any significant corporate plan for expansion of its activities for the immediate future.

3. ORGANISATION STRUCTURE AND INTERNAL AUDIT:

3.1. Organisation Structure:

3.1.1 The company has the following nine functional divisions

i) Production & Engineering, Udhagamandalam

ii) Production, Ambattur

iii) Magnetic Tape Project

iv) Quality Assurance

v) Marketing

vi) Human Resources Development

vii) Purchase

viii) Finance

ix) Research & Development

3.1.2 Each division is headed by a General Manager/Chief Manager who report to the Chairman cum Managing Director. The organisation & structure of the company, as existing on 31st March 1991 is furnished in **Annexure V.**

3.1.3 The Board of Directors consists of eight Directors, besides the Chairman cum Managing Director. Three of the Directors are non-officials.

3.2. Internal Audit:

3.2.1 The internal audit department functions under the control of General Manager(Finance). The points noticed by internal audit are reported through the General Manager (Finance) to the Chairman cum Managing Director and also placed before the Board of Directors.

3.2.2 The internal Audit Manual prepared in 1969 has not been updated so far (November 1991). The audit of capital projects is outside the present scrutiny of internal audit. The Ministry stated (June 1991) that at present the capital projects were also taken up for scrutiny by internal audit.

3.2.3 The statutory auditors of the company in their report on the accounts for 1988-89, and 1989-90 have stated that system of internal audit in the company needs to be strengthened as regards the coverage and reporting to be commensurate with the size and nature of business. Management stated(October 1989) that they had noted the suggestion for future.

4. CAPITAL STRUCTURE

4.1 The Company was incorporated with an authorised capital of Rs.632 lakhs which was increased to Rs.1632 lakhs in April 1975 and further to Rs.10132 lakhs in September 1986 and Rs.20000 lakhs in August 1990.As against this, the paid-up capital stood at Rs.10553 lakhs as on 31st March, 1991. In addition, Rs.1400 lakhs received towards equity were pending allotment.

4.2. Loans

4.2.1 In addition to share capital, the Company has raised funds from Government of India by way of loans and from financial institutions and public by issue of bonds in 1987-88, the balances of which as on 31st March 1991 were Rs.212.66 lakhs and Rs.12,779.54 lakhs respectively.

4.2.2 Besides, the Company has got from the State Bank of India, Singapore, in April 1989, a foreign currency loan of US $ 4.912 million and DM 4.026 million (totalling Rs.1023.45 lakhs approx) for importing plant and machinery.

4.3. Debt-Equity ratio:

Debt equity ratio of the Company ranged from 0.30 : 1 to 2.20 : 1 during the last five years, as shown below:

As on 31st March	Ratio
1987	0.30 : 1
1988	2.20 : 1
1989	1.39 : 1
1990	1.01 : 1
1991	0.92 : 1

The change of the ratio in 1987-88 is attributable to comparatively higher loan capital availed of by way of bonds during that year.

4.4 Working Capital:

The Company has cash credit arrangements with nationalised banks for a maximum of Rs.10,500 lakhs. The cash credit availed as on 31st March 1991 amounted to Rs.10717.79 lakhs (including interest due). Besides, the Company is availing of short term intercorporate loans since April 1984, the balance of which amounted to Rs.3000 lakhs as on 31st March 1991.

5. EXPANSION AND DIVERSIFICATION

5.1. Additional Coating Plant:

5.1.1 The growing demand for photographic products warranted increased production. This was sought to be achieved by addition to coating capacity, which is a limiting factor in the existing production lines. The Company's proposal (March 1980) for an additional coating plant with a coating capacity of 1.806 million sq. m. of medical X-ray film and 0.325 million sq. m. of roll film, at an estimated cost of Rs.200 lakhs, including a foreign exchange component of Rs.16 lakhs, was approved by Government in July 1981. The additional coating plant was to be designed and fabricated within the country with the technology available with the Company.

5.1.2 As per schedule, from the time of approval by Government in July 1981, the erection of the additional plant was expected to be completed within about 21 months and a further period of 3 months was required for start up and stabilisation. The erection work was however completed in January 1985. The slippage of about 20 months was attributable mainly to delay in completion of civil works and time required for total indigenisation of the hardware.

5.1.3 The actual cost came to Rs.229.71 lakhs and the marginal increase of Rs.29.71 lakhs over the estimate of Rs.200 lakhs was mainly due to increased cost of machinery.

5.1.4 The plant was on trial production from January 1985 to August 1986, i.e. a period of nearly 20 months as against 3 months envisaged for trial runs in the proposal. During the trial run, the Company incurred an expenditure of about Rs.105.46 lakhs on materials scrapped, which was not envisaged originally. The plant commenced commercial production in September 1986. As per the original proposal, the plant was expected to reach a production level of 1.3 million sq. metres in the first year, 1.408 million sq. metres in the second year and the full capacity of 2.131 million sq. metres from the third year onwards. The actual production was however less; it amounted to 0.235 million sq. metres in the first year (i.e. from October 1986 to March 1987), 0.621 million sq. metres in the second year (1987-88) and 0.491 million sq. metres in third year (1988-89). Management stated (December 1989) that demand for medical x-ray was picking up and that roll film production had been stabilised and so the capacity utilisation of the plant would improve in future. During 1989-90 and 1990-91, the actual production increased marginally compared to that in 1988-89 and stood at 0.528 million sq. metres and 0.51 million sq.metres respectively.

5.2 Magnetic Tapes project

5.2.1 As a diversification project, a plant for manufacture of magnetic media with a total installed

capacity of 1500 million running metres. (MRM) of audio, computer and video tapes and magnetic sound recording film with technical know-how from M/s Magna Tontraget Productions, GMBH, Berlin, approved by the Government in July 1985, was taken up in November 1986 and completed in May 1989, as against the scheduled date of November 1988. The Company has incurred an expenditure of Rs.1100.56 lakhs on this project upto 31st March, 1991 as against the estimated cost of Rs.925 lakhs.

5.2.2 During 1989-90 and 1990-91 the production in the plant was 53.459 MRM and 87.104 MRM respectively indicating underutilisation of capacity to a large extent. Ministry mentioned during discussion (February 1992) with the Audit Board that the capacity utilisation was expected to improve in the coming years and with the present demand for pre-recorded cassettes the Company was making attempts for tie-up with leading music companies for supplying their requirement of pancakes.

5.3 <u>Polyester Base X-ray and graphic art films project:</u>

5.3.1 To meet the growing demand for medical and industrial x-ray and graphic art films the Company prepared a feasibility report in May, 1984/October 1984 for manufacturing polyster base products in the following quantities in technical collaboration with M/s.Du Pont of USA:

(in million sq. metres)

i)	Medical x-ray film	9.5
ii)	Industrial x-ray film	0.5
iii)	Graphic art films	2.0

A plant with this technology can coat not only polyester base but also cellulose triacetate(CTA) base film. A complete switch over from CTA base to polyester base was expected to take a longer time in the Indian conditions. The project was approved by Government in March, 1986.

5.3.2 The total cost of the project was estimated at Rs.168.12 crores with a foreign exchange component of Rs.84.30 crores. The cost was revised (September 1990) to Rs.290.62 crores to take into account exchange rate fluctuations, variations in statutory levies and escalation in costs.

5.3.3 The project was scheduled to be completed by October 1991. However, the work is still in progress and is expected to be completed by February 1992. Expenditure incurred upto 31st March 1991 amounted to Rs.205.16 crores.

5.3.4 In response to a query about the fuller utilisation of the existing capacity and the capacity to be commissioned by 1991 in respect of medical x-ray, it was stated during the meeting of the Audit Board in February 1992 that any

other unit making medical x-ray films may jeopardise their commercial interests. In this context, they mentioned that M/s Garware Plastics and Polyesters, Bombay had been issued a letter of intent by Government of India for production of 6 million sq. metres of x-ray film.

5.4 Photo Dispenser Booths Project:

5.4.1 The company decided in August 1984 to introduce photo dispenser products in India under technical collaboration with M/s Photo-Me International, U.K.(Photo-Me) in a phased manner. Accordingly a technical collaboration agreement was entered into with Photo-Me in November 1985 with the approval of Government for manufacture of photo dispenser systems, photographic reversal papers and developer chemicals which envisaged the following:

i) exclusive licence to the Company with right to sub-licence in India; to make, use and sell products in India.

ii) transfer of know-how for -

- assembly and fabrication and refurbishment in India of photographic studio;
- formulations and raw materials/test specifications for the manufacture of chemistry kits;
- emulsion formulation of coating for manufacture of reversal film(black and white)
- conversion of reversal film colour(slitting and packaging only).

iii) provision of training and consultancy services in India by the collaborator during the period of transfer of know-how for chemistry and equipment manufacture as also advise on marketing and servicing of the automatic photographic studios including training of Indian personnel.

5.4.2 For the above services, a lumpsum payment of £3,53,430 (Rs.55.17 lakhs approximately), subject to Indian taxes was payable to the collaborator in 3 equal instalments. In addition, royalty at the rate of 4.28 percent of the selling price of the products made in India subject to taxes for a period of five years after the start up of manufacture plus travelling and living costs in India for personnel deputed by the collaborator for training and consultancy services was payable to the collaborator. A total sum of Rs.64.78 lakhs towards the first and second instalments of the lump sum fee have been paid to the collaborator so far (November 1991).

5.4.3 A total expenditure of Rs.121.71 lakhs (including provision for payment to collaborator towards the third

instalment of fee) has been incurred on the project upto 31st March 1991.

5.4.4 In November, 1985 itself, the Company entered into a separate agreement with the same collaborator for the purchase of 10 numbers of photo dispenser booths at 5,500 plus £85 FOB charges per booth in fully assembled condition and another 190 nos. of booths at 4,400 plus 30 FOB charge per booth in semi-finished condition in the first and second year of the agreement. Against this, 187 booths (FOB value Rs.190.80 lakhs) were received by the Company during 1987-89. 124 booths were cleared from customs out of which 76 booths were sold upto November 1991 and 20 booths were franchised since 1990-91 without rental charges. The value of 63 booths not so far cleared from customs amounted to Rs.154.32 lakhs and the cost of 28 booths lying unsold with the company amounted to Rs.74.54lakhs. The Company incurred a loss of Rs.38 lakhs in the sale of 76 booths.

5.4.5 For the manufacture of the booths indigenously (with 4.02 percent import content), the company fixed the following manufacturing programme with the approval (September 1986) of Government:

Year	**No.of booths to be manufactured**
2nd	210
3rd	232
4th	256
5th	282

The indigenous manufacture, which should have commenced atleast by 1988-89, has not yet (November, 1991) commenced.

5.4.6 As narrated above, the company

- could sell only 76 booths out of 187 booths imported, leaving the balance in stock and under customs bond leading to blocking of capital;
- has incurred a loss of Rs.38 lakhs in the sale of 76 booths made so far;
- has not commenced indigenous manufacture of booths.

5.4.7 Management stated (December 1989) that

the Company had initially 3500 enquiries based on market survey. Unfortunately, import duty on this machine was increased from 55 to 174 percent and the Company's attempt to get concessions was not fruitful. However, the Company is confident of disposing of these units and entering the market in a big way. As for the loss, they expected to make profit in the production and sale of reversal film for these units which will cross subsidise the loss on the units.

5.4.8 The Ministry stated during Audit Board meeting in February 1992 that the unsold booths were being cleared and that the indigenisation programme had since been taken up.

5.5 Cine colour positive film project:

5.5.1 With declining demand for black and white photographic products in the cinema and amateur market and very fast shift towards colour in the movie industry, securing know-how in colour technology was considered inescapable if the Company was to meet the growth in demand for the product. Hence, a feasibility report for setting up a plant for manufacture of cine colour positive film with technical collaboration of M/s.Agfa Gavaert of West Germany was submitted by the company to Government in September 1983 for investment decision. The proposed plant with a total investment of Rs.208 crores and lead time of 4 years envisaged production of 12 million sq. metres of cine colour film.

5.5.2 Management stated(December 1989) that due to resources constraint, the project has not been approved by Government so far and that the Company was aiming to get an intermediary technology for manufacture of cine colour film by using the existing facilities with suitable upgradation involving an investment of about Rs.25 crores. The Ministry stated (June 1991) that "consequent to unification of Germany the scheme conceived may not become operative. They also said during Audit Board meeting in February 1992 that no budgetary support would be possible at this stage for implementation of this project.

6. PRODUCTION PERFORMANCE:

6.1 Process of manufacturing:

In the main plant, integrated production, that is manufacturing of film in all its stages is done in four major departments, as detailed below:

i) **Base Casting:** A high viscosity solution made up of cellulose triacetate (CTA) and triphenyl phosphate (TPP) dissolved in a mixture of solvents (methanol and methylene chloride) is prepared and continuously cast into film on stainless steel belts.

The film is then coated with a mixture of gelatine and solvents (subtrating operation) to ensure perfect adhesion of light sensitive layer. Thus rolls of film base of about 1.2 metre wide, 450 to 650 metres long and thickness varying from 0.090 to 0.200 mm, depending on the product requirement, are made ready for coating.

ii) **Emulsion preparation:** An emulsion of silver nitrate is prepared by adding to it a solution of alkali halides and gelatin.

iii) **Coating:** The emulsion is coated on the substrated base film. A top coat of gelatine to serve as a protective layer is also given wherever necessary.

iv) Conversion: The film is cut and finished in the various sizes required and packed for distribution. The imported jumbo rolls are also converted here.

6.2. Product lines:

6.2.1 Integrated production in the main plant covers the following major products:

i) Cine positive film (Black & White)

ii) Cine sound film

iii) Medical X-ray film and

v) Photographic paper (black and white)

6.2.2 Conversion of imported jumbo rolls is done both in the main plant (from 1972-1973) and in the conversion plant at Ambattur (from October 1979). The following products come under this operation:

i) Medical X-ray

ii) Amateur Roll film

iii) Cine colour positive Film

iv) Industrial X-ray film

v) Graphic Arts film

vi) Photographic colour paper

6.3 Assessment of Capacity

6.3.1 The installed capacity for the integrated production in the main plant was fixed at 6.15 million sq. metres in 1966, on the basis of agreement with the collaborators for setting up the plant. Since then conversion capacity for converting imported jumbo film rolls was added and improvements in the various departments of production effected. A Task Force appointed by the company to study the effect of the addition, improvements and to reassess the capacity of the plant, reported in November 1981, that the company, under the existing facilities and limitations, can attain an optimum production of 7.673 million sq. metres in the area of integrated production and 4.651 million sq. metres in jumbo conversion annually. This report was accepted by the company.

6.3.2 In May 1983, the Bureau of Industrial Costs and Prices (BICP), after considering the improvements made in speed of machines, level of rejections, product-mix etc. in the main plant, adopted a capacity of 15.463 million sq. metres (9.569 million sq. metres of integrated production and 5.894 million sq. metres of conversion production) for fixing fair selling prices. Since then rejection levels have come down and machine speeds increased further. An additional coating plant with a coating capacity of 2.131 million sq. metres of x-ray and roll film was commissioned in September 1986. Hence, there is now a need for fresh assessment of the capacity of the main plant. Management agreed (December 1989) to reassess the capacity.

6.3.3 Ministry said during Audit Board meeting in February 1992 that the task force appointed for the purpose of reassessing the capacity would submit its report by March 1992.

6.4. Utilisation of Capacity:

6.4.1 Integrated production was nearly 94 percent of the installed capacity (7.673 million sq. metres) in 1984-85 and declined in the subsequent years. Jumbo conversion which was 65 percent of the installed capacity (7.651 million sq. metres) in the same year has been rising since then and exceeded the integrated production from 1985-86 onwards.

The table below compares the actual utilisation of capacity for both the main plant at Udhagamandalam and conversion plant at Ambattur, with reference to the capacity assessed by the Task Force in 1981, for the last five years 1986-1991.

[in million sq. metres]

	Installed capacity	Actual production				
		1986-87	1987-88	1988-89	1989-90	1990-91
Integrated production	7.673 [77]	5.907 [75]	5.768 [70]	5.375 [81]	6.218 [77]	5.860
Imported jumbo conversion	7.651 [87]	6.642 [94]	7.181 [118]	9.043 [124]	9.524 [128]	9.796
TOTAL	15.324 [82]	12.549 [85]	12.949 [94]	14.418 [103]	15.742 [102]	15.656

NOTE: The figures in brackets indicate the percentage of actual production to installed capacity.

6.4.2 Product-wise figures of installed capacity, targets fixed for production and the quantum of actual production are given in **Annexure I.**

6.4.3 It may be seen from the table above, and **annexure I** that:-

i) the integrated production which was 94 percent of the installed capacity in 1984-85, has declined considerably in the subsequent years and touched a low figure of 70 percent in 1988-89 and stood at 77 percent in 1990-91;

ii) the jumbo conversion which was rising since 1984-85 exceeded the installed capacity from 1988-89 indicating that the conversion capacity available in the integrated production lines was utilised for jumbo conversion;

iii) the conversion capacity created in October 1979 at Ambattur was 3.00 million sq. metres. This was increased to 4.5 million sq. metres by transferring conversion equipments from the main plant in 1982-83. As against this, the plant utilisation ranged from 2.645 to 5.256 million sq. metres during 1986-91.

6.4.4 Explaining the fall in integrated production at Udhagamandalam, Management stated [June 1989] that the capacity was basically meant for manufacture of black and white products and that over a period of two decades consumer preference had shifted to colour products. They

further stated[December 1989] that the company had developed two products viz. photo type setting paper and reversal paper for photo maker and that the production of these would fill the gap between capacity and utilisation.

6.4.5 In the conversion plant at Ambattur, the under utilisation of capacity was in medical and industrial x-ray, and graphic art films. The unutilised capacity was being utilised for conversion of colour paper to a great extent from 1987-88. Management stated[December 1989] that the demand for x-ray film did not rise to the expected levels because of external factors. Amplifying the reply, they further stated:-

> "Initially importers of finished products against actual users licence were not required to pay sales tax and excise duty whereas the company was put to disadvantage with these levies. The company represented to Government and obtained concessional rate of customs duty. However, after 1983, taking the cue from advantage arising out of HPF's efforts, some agencies have set up slitting plants as small scale units in the backward areas which do not require any industrial licence and they were also exempted from the payment of sales tax and excise duty. Due to such multiplicity of concessions, their products became cheaper by 25 percent. Subsequently, many parties were issued with Carry on Business (COB) licence also. We had to face lot of problems and our market share was considerably eroded. The matter subsequently came up in High courts and the Supreme Court and as of now, the parties have been restrained from producing x-ray, graphic arts and cine films. In view of the prices in private industry being less than HPF prices as explained above, the production in HPF was restricted to the lower demand resulting in underutilisation of capacity."

6.4.6 The company was set up with the objective of attaining self sufficiency in the manufacture of photographic products such as cine films, x-ray films, photographic paper and other allied products to meet country's requirements in areas of education, health and entertainment. In view of the increasing consumer preference for colour products and in the absence of facilities for production of colour products these objectives remain to be achieved.

6.5 <u>Machine Utilisation:</u>

6.5.1 The average percentage of utilisation of the major machines both in the main plant at Udhagamandalam and conversion plant at Ambattur for the years 1986-1991 is indicated below:-

	Main plant at Udhagamandalam	Conversion Plant at Ambattur
1986-87	74	46
1987-88	67	53
1988-89	54	60
1989-90	62	73
1990-91	60	61

Regarding the reasons for decrease in machine utilisation, the management stated(June 1989) that most of the machines had an impact on integrated production and that the level of utilisation had been less than available capacity due to depletion in the demand for black and white products in the market.

6.5.2 The above utilisation percentages are much less than the capacity utilisation percentages given in paragraph 6.4.1 indicating that the installed capacity assessed in 1981 was on the lower side as compared to the capacity of the machines actually available.

6.5.3 An analysis of the cause-wise down time of the machines of the main plant at Udhagamandalam **(vide Annexure VI)** showed that most of the idle time was due to planned idle time and industrial relations. However, the tunnel coating, festoon coating and x-ray cutting machines have remained idle to a significant extent due to avoidable reasons like want of input material, process setting time and other reasons.

6.5.4 Details of utilisation of individual machines of the main plant as compared to the budgeted hours for the years 1986-1991 are given in Annexure II. It may be seen from the annexure that the actual utilisation of most of the machines was less than the budgeted hours. This was attributed by Management(June 1989) to changes in product-mix.

6.6. Consumption of Raw Materials:

6.6.1 The following table indicates the actual consumption of important raw materials in the various stages of production as compared to the norms mentioned in the Detailed Project Report(DPR) and standards fixed by the company for the years 1986-1991.

RAW MATERIAL	Unit	DPR Norm	1986-87		1987-88		1988-89		1989-90		1990-91	
			Std.	Act.	Std.	Act.	Std.	Act.	Std.	Act.	Std.	Act.
1. Consumption of Raw material per kg. of base produced												
Cellulose Triacetate	gms.	898	840	848	840	850	840	849	840	850	840	848
Triphenyl Phosphate	gms.	135	150	142	150	142	150	142	150	141	150	141
2. Consumption of Raw materials in substration process per sq.m.												
Acetone	gms.	40	-	41.67	-	41.16	-	41.12	-	41.15	-	38
Methylene Chloride	gms.	21	-	34.74	-	38.05	-	38.06	-	45.33	-	46
Methanol	gms.	16	-	31.54	-	32.92	-	35.26	-	38.86	-	41
3. Consumption of Silver Nitrate per Sq.m.												
Cine Positive	gms.	6.7/7.5	5.0	5.09	5.0	5.17	5.0	5.20	5.0	5.13	5.0	4.88
Medical x-ray	gms.	30/22.0	13.5	12.02	13.0	11.77	12.7	12.11	12.4	12.13	12.4	11.46
Cine sound	gms.	-	6.5	6.07	6.6	6.19	6.5	6.30	6.30	6.35	6.30	6.27
Bromide paper	gms.	3.0/4.0	2.3	2.16	2.3	2.11	2.3	2.15	2.20	1.94	2.20	1.84

6.6.2 The following conclusions emerge from the table:

i) The standard fixed for cellulose triacetate(CTA) was less than the DPR norm. But actuals were more than the standard in all the years.

ii) The standard fixed for Triphenyl Phosphate(TPP) was more than the DPR norm. The actuals were less than the standard but more than the DPR norm.

iii) Though DPR norms are available for acetone, methylene chloride and methanol used in substration sections, no standards have been fixed by the company in respect of these. The actual consumption of these materials, compared to the DPR norms was on the higher side and significantly in respect of methanol and methylene chloride.

iv) The standards for silver nitrate were less than DPR norms. In respect of Cine Positive films, the actuals were more than the standard in all the years, except 1990-91. The actuals for 1988-89 were more than the actuals for 1987-88 for all the products.

6.6.3 Management explained(December 1989) that the variations in the consumption of CTA and TPP were attributable to the adjustments made in the formulations for the elongation required. They, however, agreed to appoint a task force for fixing standards in respect of materials

consumed in the substration process and for revising the standards already fixed in respect of the other materials.

6.6.4 Ministry said during Audit Board meeting in February 1992 that the task force would submit its report by March 1992.

6.7 Process Losses

A. Solvent Loss

6.7.1 In the Film Base Department, Cellulose Triecetate (CTA) and Triphenyl Phosphate (TPP) are dissolved in a mixture of solvents- methylene chloride and methanol - to prepare collodion (a high viscocity solution)from which the base film is cast.

6.7.2 The following table indicates the solvent input, its recovery and loss *vis-a-vis* standard fixed by the company during the years 1986-1991:

Year	Solvent input (litres in lakhs)	Solvent recovery	Solvent loss	Per cent age of solvent recovery	Total loss per kg. of base film produced	
					Stan-dard (kg)	Act-ual (kg)
1986-87	46.52	36.85	9.67	79.21	0.95	1.06
1987-88	36.87	28.80	8.07	78.11	0.95	1.06
1988-89	33.92	26.23	7.69	77.32	0.95	1.05
1989-90	36.38	28.12	8.26	77.29	0.95	1.06
1990-91	42.76	33.13	9.63	77.47	0.95	1.09

6.7.3 The value of loss over the standard works out to Rs.98.25 lakhs for the years 1986-1991.

6.7.4 It will be seen from the above table that the percentage of solvent recovery has been decreasing from year to year, except during 1990-91 when it slightly improved over the previous year. The solvent recovery during 1968-69 to 1973-74 ranged from 81.7 percent to 86.5 percent. COPU was informed in 1973-74 that an equipment at a cost of Rs.14 lakhs had been installed in September 1973 for improving the solvent recovery to about 95 percent. This level of recovery however has not been achieved by the Company since then.

6.7.5 Management stated(June 1989) that the solvent recovery system together with the balancing facilities was installed prior to 1973 and as such, over a period of years, the mechanical efficiency of the equipments had considerably shown a decreasing trend. They further stated that any investment by way of total replacement/renewal plan would involve substantial investment, which would not be commensurate with the additional savings that might accrue.

6.7.6 The solvents used in the subtration section are not recovered as there is no system of recovering the loss. The value of solvents lost in this section amounted to Rs.151.70 lakhs during 1984-1989. Management stated (June 1989) that the loss was irrecoverable and that in view of the technical problems and in the absence of economic viability, solvent recovery in subtration section was considered not worth pursuing.

B. Collodion Loss:

6.7.7 The standard for collodion loss fixed by the Management is 6 percent. The actual loss was however much less than this standard during the years 1986-1991, as per figures given below:

Year	Gross input (kgs in lakhs	Base produced)	Loss	Percentage of of loss	value of loss (Rs.in lakhs)
1986-87	14.55	13.93	0.62	4.3	39.47
1987-88	11.75	11.37	0.38	3.2	24.71
1988-89	10.95	10.56	0.39	3.6	25.93
1989-90	11.74	11.39	0.35	2.9	25.86
1990-91	14.09	13.29	0.80	5.7	64.88

6.7.8 Management agreed (December 1989) to examine and revise the standard. Ministry said during Audit Board meeting in February 1992 that the task force appointed for this purpose would submit its report by March 1992.

6.8. Rejections:

6.8.1 The percentages of actual rejections on input compared with the norms recommended by BICP in 1978 and 1983 and the standards fixed by the Company every year in respect of major products, during the year 1986-1991 are detailed in **Annexure III.**

6.8.2 It may be seen from the Annexure that:-

i) BICP norms of 1983 are marginally less than that of 1978;

ii) Standards fixed by the Company and actuals in aggregate (productwise) in respect of various products have generally come down over the years.

iii) In substration stage, the standard fixed in respect of x-ray/cine sound was more than the BICP norm during 1986-87 & 1987-88/ from 1986-87 onwards. Similarly, in coating stage, standard fixed for bromide paper was more than the BICP norm from 1986-87 to 1988-89.

6.8.3 COPU in their 41st Report (7th Lok Sabha 1981-82) while considering the high rate of rejections with reference to BICP norms (1978) and those of an international company (pointed out by one of the Directors of the Company) recommended that the whole question should be gone into afresh by BICP with a view to laying down realistic norms and not to regularise the existing position but to bring about effective management control. BICP fixed norms in 1983, but they varied marginally from the norms fixed earlier in 1978 except in the case of bromide paper. Rejection levels of other international companies engaged in this field are not available for comparison. The aggregate percentage of rejections in all stages of manufacture of films and paper has come down substantially from the BICP norms during the last five years, indicating a need for revision of standards fixed by the company.

6.8.4 Product and stagewise comparison of the rejection given in **Annexure III** shows the following:-

i) In conversion stage, rejection in respect of cine positive/ cine sound was 7.70 percent/9.02 percent during 1986-87. But this has increased in the subsequent years except in 1990-91.

ii) In coating stage, rejection in respect of cine positive and cine sound was 4.01 percent/4.37 percent during 1986-87/1990-91. This level was not achieved in any other years.

iii) In conversion stage, the rejections in respect of x-ray came down from 17.07 percent in 1986-87 to 8.40 percent in 1990-91.

6.8.5 It may be seen from the preceding paragraph that it should be possible to reduce the rejection levels further at least to the lowest levels achieved in the earlier years.

6.8.6 Management stated(December 1989) that a task force would go into the standards for possible revision. Ministry said during Audit Board meeting in February 1992 that the task force was expected to submit its report by March 1992.

6.9 Preparation of Silver Nitrate and Recovery of Silver

6.9.1 Silver is one of the main raw materials used in the manufacture of photographic products and constitutes nearly thirty percent of the total cost of raw materials consumed. The purchased(or recovered) silver is refined and converted into silver nitrate by reaction with nitric acid. An emulsion of silver nitrate and other chemicals is prepared for coating.

6.9.2 A plant to manufacture silver nitrate is in operation. The original installed capacity of the plant of 90 tonnes per annum was increased to 120 tonnes per annum in 1977-78 at a cost of Rs.4.02 lakhs. The table below indicates the actual production in the plant as compared to the installed capacity and targetted production during the years 1986-1991.

(Quantity in tonnes)

Year	Installed capacity	Targetted production	Actual Production	Percentage of utilisation of installed capacity
1986-87	120	64	48	40
1987-88	120	62	52	43
1988-89	120	61	44	37
1989-90	120	35	49	41
1990-91	120	62	50	42

6.9.3 It will be seen from the above data that the installed capacity is in excess of the requirement and the actual utilisation was less than even the targeted production. Regarding under-utilisation of the capacity the Ministry stated (June 1991) that originally export of silver nitrate was envisaged which was subsequently banned by the Govt. and that the plant would be fully utilised when the new project for manufacture of polyester base x-ray attained full scale commercial production.

6.9.4 Process loss of silver arises during the manufacture of silver nitrate from silver, in the preparation and the coating of emulsion on film/paper, in film/paper rejection, in laboratory tests for quality control and in the process of recovery of silver from the washings and rejects from various departments. All silver bearing materials are processed for silver recovery by converting them into insoluble sludge which is then calcined and smelted to

recover silver. The conversion of sludge into silver gives rise to a slag during smelting which is silver bearing. The slag is also processed further for recovery of silver.

6.9.5 The losses arising in silver nitrate plant, sludge and slag recovery plants as compared to the standards fixed for the years 1986-91 are given below:-

(Qty. in Kgs.)

Year	Input	Output	Actual loss	Standard loss	Excess loss
i) SILVER NITRATE PLANT:					
1986-87	31,057	30,528	529	553	-
1987-88	33,637	33,090	547	599	-
1988-89	28,051	27,787	264	503	-
1989-90	31,136	30,962	174	561	-
1990-91	32,344	31,763	581	576	5
ii) SLUDGE RECOVERY:					
1986-87	11,884	9,904	1980	1758	222
1987-88	9,536	8,129	1407	1260	147
1988-89	9,603	8,325	1278	980	298
1989-90	9,542	8,416	1126	954	172
1990-91	7,549	7,292	257	755	-
iii) SLAG RECOVERY:					
1986-87	262	120	142	66	76
1987-88	68	56	12	17	-
1988-89	205	189	16	51	-
1989-90	381	400	(-)19*	95	-
1990-91	312	265	47	78	-

6.9.6 It may be seen from the above table that:-

i) The maximum loss has been occurring in the sludge recovery operations.

ii) In sludge recovery plant, the actual loss has exceeded the standard during all the years except in 1990-91.

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* In slag recovery the output should not be more than the input. In 1989-90 the output exceeded the input. The Management was unable to explain this phenomenon.

6.9.7 Management stated(December 1989) that standards in respect of loss in silver nitrate plant which was earlier fixed in 1973 would be reviewed and refixed, if necessary. Ministry said during Audit Board meeting in February 1992 that the task force appointed to examine this aspect would submit its report by March 1992.

6.9.8 As regards losses in sludge and slag, the Management explained that action had already been taken to install additional facilities to ensure total absence of silver in the wash water which would result in avoiding the ETP sludge arisings and consequently the slag also and that there might not be any silver recovery operations from ETP sludge and slag in the future.

6.9.9 The table below indicates the overall silver material balancing as reported by the Management to the Board during th years 1986-1991:-

100% silver (in kgs)

Details	**1986-87**	**87-88**	**88-89**	**89-90**	**90-91**
Opening stock of silver,WIP etc.	12,478	11,399	16,016	12,582	10,269
ADD: Input of silver & purchased Silver Nitrate	24,852	31,676	19,439	23,470	24,605
TOTAL `A'	37,330	43,075	35,455	36,052	34,874
LESS:					
i)Closing stock Silver,WIP etc.	9,400	16,016	12,582	10,269	11,697
ii)Sale/ Transfer to scrap	341	321	34	16	-
TOTAL `B'	9,741	16,337	12,616	10,285	11,697
NET INPUT `A'-`B'	27,589	26,738	22,839	25,767	23,177
LESS: Silver content in finished goods delivered`C' (as assessed)	24,938	24,772	21,281	24,487	22,292
Irrecoverable loss A - B'-`C'	2,651	1,966	1,558	1,280	885

Break up of irrecoverable loss					
i) in Silver Nitrate Plant	529	547	264	174	581
ii) in sludge Recovery	1,980	1,407	1,278	1,125	257
iii) in Slag Recovery	142	12	16	(-) 19	47
TOTAL LOSS	2,651	1,966	1,558	1,280	885
Percentage of irrecoverable loss to net input	9.61	7.35	6.82	4.97	3.82

6.9.10 It may be seen from the above table that during 1987-88, a quantity of 1999 kgs. (11,399 - 9,400) was added to the opening stock. This was attributed to inclusion of basement sludge not accounted for in the previous years. It was stated that basement sludge was the accumulation of sludge over a period of years which was since recovered during maintenance operations.

6.9.11 The irrecoverable loss of silver has come down over the years. However, in the year 1988-89, consumption per unit output of finished products was on the high side vide paragraph 6.6.2.(iv). Hence, the reduction in loss in 1988-89 is partly attributable to this factor.

6.10 Manufacture of Roll Films

6.10.1 Roll film was one of the items envisaged in the original collaboration agreement and its production was expected to be taken up after the commencement of production of medical x-ray in May 1968. Production of roll film was taken up from 1969-70 but it could not be sustained and given up in 1972 due to technological difficulties encountered in obtaining quality films and low yield, making it economically not viable. According to the management, the formula supplied by the collaborators was a low speed formula and its basic defect was on the anti-halo which when coated, penetrated the base and entered the emulsion layer. Thus the original know-how did not prove to be useful.

6.10.2 In order to produce roll film on a viable basis, the Company entered into an agreement with M/s. VEB Film, Fabrik Wolfen, German Democratic Republic in February 1977, for preparation of roll film emulsion, coating and conversion.

6.10.3 Trial production was made in 1979 but regular production, according to management, could not be taken up for want of adequate coating capacity in the existing coating plants. An indigenously designed coating plant was commissioned after 7 years in September 1986 and production

of roll film commenced thereafter. The delay in commissioning the coating plant was stated to be some technical problem in commissioning the coating plant. In 1988-89, extensive trials were made in the coating department by a task force at a cost of Rs.2.45 crores, - the bulk of the cost is accounted for by material scrapped. During trial runs, small quantities of roll films were produced.

6.10.4 Management stated (December 1989) that 10 lakh spools (50740 sq.m.) were produced in 1988-89 and they expected to produce 20 lakh spools in 1989-90. Against the expectation, the actual production was only 8.47 lakhs spools (43000 sq.m.) in 1989-90 and 7.29 lakhs spools (37000 sq.m.) in 1990-91.

6.11 Manuafacture of Processing chemicals:

6.11.1 In November 1977, a plant for manufacturing processing chemicals for x-ray films was commissioned at Ambattur. The installed capacity of the plant is 400 tonnes per annum. The following table indicates the production, sales and closing stock of chemicals during 1986-1991:

Year	Production	Sales	Closing Stock	
	(Tonnes)	(Tonnes)	Quantity (Tonnes)	Value (Rs. in lakhs)
1986-87	180.16	158.38	99.42	35.04
1987-88	200.08	193.33	107.36	37.14
1988-89	183.92	199.00	92.12	36.32
1989-90	180.55	203.24	67.61	23.08
1990-91	181.06	200.83	41.44	19.75

6.11.2 It may be seen from the above table that production had been only about 50 percent of the installed capacity. Sales of the processing chemicals improved from 1988-89.

7. SALES, PRICING AND MARKETING

7.1. SALES PERFORMANCE

7.1.1 The table below compares the actual sales during 1986-1991 with the demand estimates made by M/s. Kirloskar consultants Ltd., Pune, in their market survey(1982) carried out on behalf of the company.

(in lakhs sq.m.)

Product	Demand Estimates	Actual Sales				
	1987-88	1986-87	1987-88	1988-89	1989-90	1990-91
Cine Pos.(BW)	14.81	11.31	9.31	8.63	9.96	6.89
Cine Sound	5.04	2.57	2.12	2.09	2.14	2.20
Cine Col. Pos.	53.94	39.81	40.62	45.24	46.66	42.13
Bromide Paper	66.64	23.62	20.31	21.71	22.54	22.84
Medical x-ray	71.10	27.65	28.22	21.92	30.17	33.48
Indl. x-ray	1.33	0.67	0.59	0.66	0.59	0.61
Graphic Arts	14.00	2.95	3.55	5.11	5.99	8.84
Roll Films	15.35	2.93	3.85	2.41	2.39	2.30
Colour Paper	12.82	14.59	21.31	32.20	36.65	36.40

7.1.2 It may be seen from the above table that:

i) the sale of cine positive(black & white) is showing a declining trend except for the slight increase in sale during 1989-90.

ii) in respect of cine sound film, the actual sales have been gradually decreasing from 1986-87 onwards but for small increase in 1989-90 and 1990-91.

iii) in respect of bromide paper the company's market share was about one third of the demand estimates and of graphic arts ranged between 21.07 percent and 63.14 percent.

iv) the company's share in respect of medical x-ray and industrial x-ray was less than 50 percent of the demand estimates and that of roll films has not been significant considering the demand estimates.

7.1.3 The fall in sales in respect of cine positive (black & white), cine sound and bromide paper over the years was attributed (June 1989) by Management to fall in demand for black and white range of products vide paragraph **6**.4.4. In respect of industrial x-ray and graphic arts films, the Government informed COPU in December 1982 that import of these items (in finished form) had been brought under restricted list during 1982-83 in order to help the company to make fuller utilisation of its capacity. It is, however, seen that import of these items were brought under Automatic

Permissible List in 1982-83 but shifted back to OGL from 1985-86 onwards. Import of Jumbo rolls of graphic arts films has been on OGL all along, except for the period March-July 1989, when it was under Limited Permissible List. These liberalized import policies have been availed by other importers to import and sell these products to the disadvantage of the company.(vide paragraph 6.4.5). As for medical x-ray. Management reported to Government in May 1986 that regular medical x-ray film (which was produced by the company) was imported as special medical x-ray film(which was not banned) to the detriment of the company.

7.2 EXPORTS

7.2.1 The company's corporate plan (1980) envisaged an achievement of export performance of 10 percent in five years. However, the actual export performance so far has been disappointing as could be seen from the table below:

(Rs. in lakhs)

Year	Total sales	Export sales	Percentage of exports to total sales value
1986-87	11907	41.19	0.35
1987-88	13735	7.32	0.05
1988-89	14843	26.49	0.18
1989-90	18594	57.63	0.31
1990-91	22547	107.17	0.48

7.3 PRICING

7.3.1 According to the company "its pricing policy does not necessarily seek profit on every product line. In fact the policy adopts the principle of what the traffic can bear in deciding on the pricing pattern for the different products within the overall objective of earning a reasonable return on investment". As a result the company makes up the short fall in profit of own integrated production by means of cross subsidy from the profits earned on the converted products from imported jumbo rolls.

7.3.2 A comparison of product-wise unit cost and average selling price in respect of major manufactured and converted products including processing chemicals is given in **Annexure IV.**

7.3.3 With reference to the figures given in the annexure, the following points are noteworthy:

i) The average selling prices were less than the cost of production in respect of graphic arts films during all the years cine sound and cine positive in all the years, except 1989-90, photographic paper(SW) during 1986-87 to 1988-89 and 1990-91, roll film (NP 22) during 1986-87, 1987-88 and 1990-91 and cine colour AGFA in 1986-87 and 1990-91.

ii) The company made profits in the sale of medical x-ray of its integrated production during all the years as shown below:

(Rs. per Sq.m.)

Year	Cost price	Average sale price	Profit percentage on cost price
1986-87	107.62	120.36	11.8
1987-88	125.02	133.96	7.2
1988-89	130.53	144.80	10.9
1989-90	137.85	156.59	13.6
1990-91	172.59	181.93	5.4

During 1986-87 and from 1988-89 onwards bulk of the profit made by the company relates to medical x-ray.

iii) In the converted medical x-ray films the company lost in all the years except 1987-88 and 1988-89.

iv) In the converted colour paper, the company incurred losses in 1986-87 and 1990-91 but made profits in the other years.

v) In the conversion of graphic arts films the company has lost in all the years. This is attributed to severe competition from other importers under the liberal import policy vide paragraphs 6.4.6 and 7.1.3.

7.4 MARKETING

A) Direct Distribution

7.4.1 The marketing division of the company looks after the distribution of the products. The division has four regional offices at Madras, Delhi, Bombay and Calcutta with a total of 16 depots functioning under them. A central warehouse located at Ambattur handles the bulk of the products for distribution through depots.

7.4.2 Initially, the company distributed cine and x-ray films through private parties appointed for this purpose,

while the other products were distributed through the company's own depots. On the recommendation of COPU - vide their 55th Report 1973-74, the company discontinued the distribution of cine and x-ray films through private parties and handled the products through their own depots.

B) **Appointment of Stockists:**

7.4.3 In January 1984, the Board of Directors reviewed the marketing policy with a view to evolve a strategy for the future and decided to go in for stockists as a parallel channel of distribution while retaining distribution through their own depots. The stockists were to be paid an overall average commission of 6 percent of sale value.

7.4.4 The Company has appointed 28 stockists upto March 1991 for handling its products in the country upto March 1991. The table below shows the sales made through stockists in relation to the total sales.

Year	Total sales value (Rs. in lakhs)	Value of sales through stockists	Percentage of value of sales stokists to total sales	Quantum of stockists' sales (in million sq. metres)
1986-87	11907.30	7538.18	63.31	12.71
1987-88	13735.13	9422.74	68.60	13.09
1988-89	14842.82	10945.36	73.74	14.37
1989-90	18594.40	13385.37	71.99	11.31
1990-91	22546.97	15145.41	67.17	11.28

7.4.5 It may be seen that -

i) the sales quantum in 1982-83 and 1983-84 was 11.94 and 11.42 million sq. metres respectively. Although about 20 stockists were appointed by January 1984 itself, the sales had not increased substantially in 1984-85 and onwards, as compared to the previous years' sales.

ii) direct sales by the company have declined over the years. But the Company has not so far identified the surplus manpower in its marketing division with a view to absorb them in the new projects on hand, as envisaged originally.

7.4.6 Management stated (December 1989) that while the market for black and white products had been dwindling, there had been increased sales in other products and this way the stockists helped the Company. Management also stated that the stockists sell only the Company's products and had to show a minimum target as per agreement with them.

7.4.7 As per terms of agreement with the stockists, the company may at its decretion offer credit to them from time to time and on such terms as may be mutually agreed upon. Initially, interest free credit of 45 days was allowed to the stockists. However, with a view to achieving the budgeted sales and reducing the inventory, the credit terms were liberalised from August 1985, December 1986, December 1987, June 1988 and October 1988, by extending credit periods upto 195 days for certain products. For payments by stockists beyond the credit period, interest is collected from them for the delayed payments. For payments by stockists before the expiry of credit periods, rebates are offered for the unexpired portion of credit period. The liberalisation of credit policy from time to time has contributed to increased interest charges borne by the company as shown below:

(Rs. in lakhs)

Year	Interest paid on borrowings for working capital@	Interest recovered	Net interest borne by the company
1984-85	592.98	18.34	574.64
1985-86	775.32	52.78	722.54
1986-87	965.34	129.56	835.78
1987-88	1112.79	190.88	921.91
1988-89	1299.43	115.56	1183.87
1989-90	1257.89	236.98	1020.91
1990-91	2216.30	148.29	2068.01

@ includes rebates paid to stockists.

7.4.8 The company envisaged credit sales to the stockists upto 2 to 3 times of the bank guarantee. However, this limit was exceeded in all the years upto 1987-88 and ranged from 2.15 to 2.84 times in the subsequent years as could be seen from the following table:

Year	Bank Guarantee given by stockists	Outstanding from stockists	Outstanding in terms of Bank Guarantee
		(Rs. in lakhs)	(in percentage)
As on 31st March			
1987	1069.68	3840.60	359.04
1988	1168.86	3697.93	316.37
1989	1449.92	4115.79	283.86
1990	1926.73	4795.59	248.90
1991	2007.38	4329.61	215.68

Individually, the outstanding from the stockists as at the end of the year were 3.2 to 13.3 times in 8 cases in 1986-87, 3.05 to 16.31 times in 19 cases in 1987-88 and 3.1 to 14.4. times in 13 cases in 1988-89 and 3.1 to 8.59 times in 16 cases in 1990-91. Details regarding 1989-90 are not available. / bank Guarantee

7.4.9 Management stated (December 1989) that in future, credit would be limited to bank guarantees and bank guarantees, wherever necessary would be increased.

C) Sales to Government Departments

7.4.10 Pursuant to the recommendations of the COPU, the company took over direct distribution of the products to Government departments from 1st July 1978 and since then sales to Central DGS&D customers and departments of some State Governments enrolled as direct demanding officers under the DGS&D contract were being effected directly. The position continued in 1990-91 also.

In the case of West Bengal, supplies were made directly by the company to a State Government Agency. There were a number of State Government departments who were not enrolled as direct demanding officers. It was noticed that out of the total sale of Rs.31.82 crores realised by the sale of medical x-ray films in 1988-89, the direct sales amounted to Rs.13.43 crores only. Thus a large chunk of supplies of medical x-ray films was not made by the company but by the stockists who got a commission for the sale from the company. Considerable portion of the sales made through stockists related to Government hospitals.

Management stated(December 1989) that the hospitals of State Governments floated tenders for their purchase and the stockists/competitors who quoted lesser rates, got the orders. They however stated that proposals to the Central Ministry for issue of suitable advice to the State Governments for obtaining their requirement direct from the company would be made.

7.4.11 Ministry stated during Audit Board meeting in February 1992 that suitable instructions had already been issued to the State Governments in this regard and this would be followed up.

7.4.12 For sale of audio tapes to All India Radio and Films Division, the company engaged(March 1988)one of its stockists in Delhi (M/s Anu Enterprises) as a liaison agent, at 3 percent commission for one year. On the audio tapes supplied to All India Radio upto March 1989, a total commission of Rs.2.10 lakhs was paid to the agent. When asked about the need for engagement of an intermediary in a Government transaction, Management stated (December 1989) that the agent was engaged for liaisoning and he was paid service charges.

D. **Debtors**

7.4.13 Apart from the stockists, credit sales were made to retail dealers and other customers on the security of bank guarantees provided by them. The credit period ranged from 30 to 150 days, depending on the product.

7.14.14 The following table shows the position of total debtors, sales, debtors in terms of months sales etc. for the years 1986-1991.

(Rs. in lakhs)

As at 31st March	Total Debtors	Sales*	Total Debtors in terms of months' sales	Debtors more than one year old	Percentage of debtors more than one year old to total debtors
1987	4620.24	11907.30	4.6	1282.43	27.76
1988	5914.32	13735.13	5.17	654.87	11.07
1989	6527.22	14842.82	5.28	613.57	9.40
1990	5991.84	18594.40	3.87	475.54	7.94
1991	7009.67	22546.97	3.72	332.74	4.75

* Does not include Central Excise Duty.

7.4.15 As on 31st March 1991 the outstandings due from Government departments and private parties for over a year was as follows:-

	Govt. Depts (Rs. in lakhs)	Private parties
More than a year old but less than three years	23.43	134.85
More than three years	57.01	117.45
	80.44	252.30

7.4.16 Some cases of heavy outstandings are discussed below:

i) **M/s Gemini Pictures Circuit Pvt. Ltd., Madras**

A sum of Rs.318.23 lakhs was outstanding from the party against supplies made during March 1982 to October

1985. Against this a sum of Rs.86.89 lakhs was realised upto February 1989. The company has not taken legal action to recover the dues. No interest has also been levied and realised.

Management stated (December 1989) that further realisations had since been made leaving only a sum of Rs.131.29 lakhs still to be recovered. They further stated that the debtor had financial problems and hence legal steps would not have helped and that company would realise both principal and interest.

As on 31st March 1991 an amount of Rs.160.32 lakhs was pending recovery (excluding interest) from this party including value of supplies made subsequently.

ii) M/s Prasad Productions Pvt. Ltd., Madras

Against an import licence held by the party, who is also a major stockist of the company, in May 1986, the company arranged and paid for the import of 70 parent rolls of motion picture magnetic tape and 15 parent rolls of audio magnetic tape and after conversion(total cost of Rs.24.72 lakhs) delivered the same to the party in August 1987. Although as per agreement with the party, the value had to be realised from them before delivering the goods, the goods were delivered without collecting any amount. No security deposit or bank guarantee had been obtained either. A sum of Rs.18.92 lakhs has been collected so far (March 1991) leaving a balance of Rs.5.80 lakhs still to be collected. No interest has been levied.

iii) As on 31st March 1991, the company has initiated legal proceedings in 25 cases involving a total sum of Rs.36.84 lakhs. It is seen that legal recourse had to be made in most of the cases owing to insufficiency or absence of bank guarantee.

E Non-collection of enhanced excise duty:-

7.4.17 Excise duty on black and white cine films was enhanced from 30 paise per metre to 80 paise per metre (with effect from 1st March 1988). However, the company did not collect the enhanced duty from its customers from 1st March 1988 hoping that Government would withdraw the enhancement. On representation made to the Government, the rate of duty was reduced to 40 paise per metre with effect from 16th November 1988. But the company started collecting the revised enhanced duty of 40 paise from its customers only from 2nd March 1989. As the company had not claimed the enhanced excise duty from its customers it had to bear the enhanced duty and the amount thus not collected from the customers and borne by the company worked out to Rs.163.32 lakhs for the period from 1st March 1988 to 1st March 1989. The company has approached the Government for retrospective revision and pending Government's orders had enhanced the prices by 5% for compensating the excise duty not collected.

The Ministry stated (June 1991) in their reply that the revenue loss would be made good by partly claiming from various agencies/adjustment in prices suitably. No claims in this regard have been made so far (November 1991).

7.4.18 During the period from 16th November 1988 to 1st March 1989, the company continued to pay excise duty to Government at 80 paise per metre. The amount thus paid in excess of excise duty due (40 paise) comes to Rs.37.41 lakhs. This payment could have been avoi-ded. The Ministry stated (June 1991) that a part amount of Rs.26.70 lakhs had since been got refunded from Central excise. The balance of Rs.10.71 lakhs was a loss.

F. Non-obtaining of refunds of Octroi duty paid

7.4.19 For sale to Government departments in Bombay and materials transferred to branches outside Bombay, the company is entitled to get refund from the Bombay Municipal Corporation, of Octroi duty (4%) already paid on the goods moved into the city. As on 31st March 1991, refund claims totalling to Rs.33.43 lakhs relating to the period 1981-1988 were pending with the Bombay Municipal Corporation.

7.4.20 Out of the refunds due on sales to Government departments, fifty cases involving an amount of Rs.16.29 lakhs relating to the period October 1983 to April 1987 were stated to have been rejected for various reasons, such as "time barred", " order is subsequent to transport", "no delcaration at the time of import", etc. which could have been avoided by the company. The Company appointed an agent in July 1987 for collecting the refunds from the Bombay Municipal Corporation on a commission of 5 percent. This has also not enabled the company to realise the refunds.

8. INVENTORY:

8.1. Purchase Procedure:

The company's purchase procedure provides for calling for open tenders only in exceptional cases, under specific orders of management and it does not indicate any limit beyond which open tenders are to be called for. Materials covered under Rate Contracts are procured by placing indents on DGS&D. For other items, tender enquiries are issued to a panel of leading firms in the line maintained by the Purchase Department. For proprietory items the purchase is finalised by single tender enquiry and/or by negotiation.

Management stated (October 1989) that most of the raw materials required by them were supplied by a limited number of manufacturers and subjected to stringent specifications required for photographic industries. As such, there had been no necessity for the company to go in for open tenders involving high value.

8.2. Inventory

8.2.1 The following table indicates the position of the inventory at the end of each year during 1986-87 to 1990-91

(Value Rupees in lakhs)

	1986-87	87-88	88-89	89-90	90-91
1) Raw Materials and Components	1455.70	1960.96	2949.65	3732.64	6227.03
2) Stores and spares	372.15	357.99	420.83	509.67	639.21
3) Tools and Instruments	0.57	0.87	0.95	0.89	0.84
4) Work-in-Progress	950.77	1390.65	2115.06	2606.75	2978.11
5) Finished goods	2280.70	2293.03	2845.86	3021.10	3699.77
	5059.89	6003.50	8332.35	9871.05	13544.96

8.2.2 Inventory levels of raw materials, components stores and spares and finished goods at the end of each year during 1986-87 to 1990-91 were as indicated below:

Year	Raw materials Components Stores and Spares	Finished goods
	Months consumption	Months Sales
1986-87	2.40	2.29
1987-88	2.75	2.00
1988-89	3.43	2.30
1989-90	3.58	1.95
1990-91	1.81	1.50

8.3. Slow moving/Non-moving items

8.3.1 As at 31st March 1991, the company was having 5696 items of slow/non-moving items of raw materials and stores valued at Rs.103.81 lakhs as indicated below.

Sl. No.	Description	No.of items	Value Rs. in lakhs
1.	Raw Materials	19	7.84
2.	Conversion Stores/RM/Packing	224	11.03
3.	Processing chemicals, Stores and Factory Supplies	1533	28.27
4.	Mechanical Stores	3472	42.78
5.	Civil Stores	286	11.67
6.	Laboratory Stores	162	2.22
		5696	103.81

The company is making periodical review of these items and disposing them of.

9. MANPOWER

9.1. Manpower

9.1.1 COPU in their 55th Report (1973-74) recommended that the company should, on the basis of recommendation of a sub-committee of the Board, fix the staff strength of various sections and the staff found surplus should be utilised elsewhere in the expansion programme of the Company. Accordingly, the man power requirement was re-assessed by a sub-committee of the Board in October 1980 as 2775 persons(excluding Officers), including 193 persons for the conversion plant at Ambattur, for achieving a production of 12.7 million sq.m. of finished products and 200 tonnes of processing chemicals.

9.1.2 The table below compares the assessment of manpower by the Board's sub-committee with the actual strength during the years 1986-1991.

Department	Assessed strength by Board's sub-committee	Actual men-in-position as on 31st March				
		1987	1988	1989	1990	1991
1. Film Base	185	174	172	170	169	159
2. Emulsion	147	138	132	130	128	127
3. Coating	128	137	132	131	130	129
4. Conversion	477	441	438	439	434	425
5. Silver Nitrate	108	101	103	86	85	84
6. Civil maintenance Mechanical & Service	402	503	497	444	362	378
7. Laboratory	226	254	270	278	259	282
8. Ambattur Plant	193	242	254	265	271	263
9. Other depts	909	778	821	1057	1069	1114
Total	**2775**	**2768**	**2819**	**3000**	**2907**	**2961**
10. Officers	Not assessed	597	621	624	647	670
GRAND TOTAL	**3365**	**3440**	**3624**	**3554**	**3631**	

9.1.3 The increase in employment over and above the sub-committee's assessment was attributed by the Management (June 1989) to the growth in the activities of the company.

However, actuals in some departments like film base, emulsion, conversion, silver nitrate and others were less than those assessed in 1980, due to reduced activities in these departments.

9.1.4 Hence there is now a need for making a fresh assessment to take into account increase/reduction in activities in the various departments.

9.1.5 The requirement of officers and trainees in the various departments has not been assessed so far.

The Ministry stated (June 1991) that the sanctioned strength and actuals as on 31st March during the years 1985-89 were as follows:

As on 31st Mach	Sanctioned strength	Actuals
1985	3482	3226
1986	3498	3297
1987	3528	3365
1988	3528	3440
1989	3793	3624

In view of the above, it was stated that there was no necessity for fresh assessment.

In the Audit Board meeting with the Ministry in February 1992 it was further clarified by the Ministry that there was no surplus labour in the Company in view of the new projects on hand.

9.2 Overtime payment:

9.2.1 The table below indicates the total amount of overtime(OT) paid by the company during 1986-1991 and the percentage thereof to the total salaries and wages paid in respect of manufacturing and other divisions:

(Rs. in lakhs)

Year	Manufacturing Division			Other Divisions		
	Payment of O.T.	Total Salary	Percentage of O.T. to Salary	Payment of O.T.	Total Salary	Percentage of O.T. to Salary
1986-87	2.45	186.51	1.31	10.10	474.77	2.13
1987-88	1.90	194.98	0.97	13.09	592.64	2.21
1988-89	2.51	210.46	1.19	15.96	501.23	3.18
1989-90	2.73	230.77	1.18	22.00	736.88	2.98
1990-91	6.82	306.96	2.22	22.01	956.20	2.30

9.2.2 It may be seen from the above that the total OT payment and also its percentage to total salary and wages was on the higher side in the divisions other than the manufacturing division.

9.2.3 Management stated(June 1989) that OT payments in non-manufacturing divisions like transport, finance, administration and security are bound to be on the higher level owing to increased activities in certain periods of time, like budget preparations, compilation of annual accounts, etc. and operational conditions.

The Ministry stated (June 1991) that the company was operating at a lower strength by 3-4 percent compared to the sanctioned strength and that the impact of overtime allowance was hardly 2 percent which was less than the employee cost of the sanctioned strength. It was also stated that the company continued to take effective steps to monitor and reduce overtime.

10. FINANCIAL POSITION AND WORKING RESULTS:

10.1. Financial position

10.1.1 The following table indicates the financial position of the company during the years 1986-1991.

(Rs. in lakhs)

	1986-87	1987-88	1988-89	1989-90	1990-91
Liabilities					
a) Paid-up capital (including Share Capital Deposit)	4165.00	6173.00	6553.00	10153.00	1953.00
b) Reserves and Surplus	1710.86	2248.14	2837.89	3450.77	3648.48
c) Borrowings:					
i) Govt. of India	1257.20	766.97	259.33	236.00	212.66
ii) Bonds		12800.00	12800.00	12800.00	12779.54
iii) Banks-Cash credit	3495.22	218.49	4089.83	5559.85	10717.79
iv) Other short term loans	2200.00	1300.00	3062.45	5245.97	4349.86
Assets					
d) Gross Block	2304.68	2576.58	2740.91	3054.00	3827.15
e) Less: Depreciation	1233.50	1316.35	1336.73	1444.03	1583.78
f) Net fixed Assets	1071.18	1260.23	1404.18	1609.97	2243.37
g) Capital work-in-progress(including in transit)	2977.80	7449.82	9610.75	13639.86	21773.59
h) Investments	0.06	1000.06	1000.06	2477.48	1000.06
i) Working capital	8552.01	13413.26*	16786.32*	18542.66	17187.67
j) Miscellaneous expenditure	227.23	383.23	801.19	1175.62	1456.64
Capital employed	9623.19	10673.49	14190.50	20152.63	19431.04
Net worth	5648.63	8037.91	8589.70	12428.15	14144.84

Note: i) Capital employed represents net fixed assets plus working capital.

ii) Net worth represents paid-up capital plus reserves and surplus less intangible assets.

* Includes Rs.4000 lakhs kept under call deposit account for capital expenditure and this amount has been excluded for working out capital employed.

10.1.2 The working capital is on the increase over the years. As compared to production, it represented 8.7,8.5,10.2, 10.3 and 9.2 months' value of production during the years 1986-1991. This has led to increased borrowings leading to considerable payment of interest charges. The interest paid during 1990-91 amounted to Rs.20.68 crores.

10.2 Working Results:

10.2.1 The following table indicates the operational results of the company during the years 1986 to 1991.

(Rs. in lakhs)

	1986-87	1987-88	1988-89	1989-90	1990-91
i) Sales	11907.30	13735.13	14842.82	18594.40	22546.97
ii) Add:accretion/ deduct decretion stock	(+)645.25	(+)382.71	(+)1031.07	(+)642.55	(+)114.39
iii) Value of Prodn.	12552.55	14117.84	15873.89	19236.95	22661.36
iv) Material cost	9090.92	10559.27	12246.18	14998.58	19234.83
v) Conversion expenses					
a) Power & Fuel	194.35	192.02	191.09	155.83	267.64
b) Wages & Salaries, bonus,allowance etc.	968.56	981.65	1251.39	1122.41	1993.84
c) Staff welfare expenses	73.17	89.29	101.89	62.40	85.37
d) Depreciation	86.94	90.21	86.61	78.78	133.90
e) Administration and other expenses	727.59	934.75	1051.38	1089.03	1388.03
f) Interest	1092.11	1202.81	1345.59	1366.77	2358.53
g) ADD: deferred revenue expenses					

written off	42.98	58.20	94.73	196.66	300.95
h)LESS:expenses transferred to capital and other accounts	141.00	281.82	827.49	0.19	1187.49
i)LESS:Other Income	244.37	328.37	348.50	432.37	522.30
Conversion expenses	2800.33	2938.74	2946.69	3639.32	4818.47
vi)Net profit for the year	661.30	619.83	681.02	599.05	(1391.94)
vii)Add/Less prior period transactions and Tax provision written back	(+)18.54	(+)77.70	(+)74.65	(+)197.54	(+)1589.65
viii)Net profit	679.84	697.53	755.67	796.59	197.71
ix)Percentage of a)Consumption of raw materials to value of production	72.42	74.49	77.15	77.97	84.88
b)Conversion expenses to value of production	22.31	20.82	18.56	18.92	21.26
c)Net Profit for the year to value ofproduction	5.27	4.39	4.29	3.11	(6.14)

10.2.2 During 1990-91 the profit was mainly due to prior period adjustments.

10.3. Product-wise profitability

10.3.1 The contribution made by each of the major products to the total profits of the Company for the years 1986-1991 is given below:

(Rs. in lakhs)

Product	1986-87	1987-88	1988-89	1989-90	1990-91
OWN PRODUCTION					
Cine Sound	(-)13.95	(-)13.26	(-)26.01	5.52	(-)21.57
Cine Positive	(-)45.29	(-)49.79	(-) 4.34	46.02	(-) 4.29
Medical x-ray INDU	296.84	113.32	254.87	432.16	254.09
Bromide paper (SW,DW&SS)	86.17	(-)134.98	(-)55.31	169.27	127.71
Roll films	-	(-)0.32	7.31	(-) 4.38	(-)70.85
CONVERSION					
Cine colour	202.66	450.65	240.58	259.25	(-)487.01
Medical x-ray	(-)10.97	34.17	93.83	34.10	(-)158.01
Roll films	(-)6.05	(-)63.49	18.37	20.35	(-) 64.15
Industrial X-ray	79.06	95.91	158.58	(-)1.88	59.36
Graphic Arts	(-)78.95	(-)31.57	(-)103.32	(-)181.74	(-)340.96
Imported Finished Goods	6.19	17.08	20.27	(-)121.06	(-)196.48
Cine ColourPaper	(-)39.80	61.97	93.18	182.11	(-)437.70
Processing Chemicals	13.07	15.70	17.06	16.20	26.34
Other Products	44.43	22.29	(-)0.90	(-) 59.33	(-) 113.54
PROFIT	533.41	494.30	714.17	796.59	(-)1427.06
ADD: Miscellaneous Income & other adjustments	146.43	203.23	41.50	-	1624.77
TOTAL PROFIT	679.84	697.53	755.67	796.59	197.71

10.3.2 During 1990-91, Medical x-ray(own production) bromide paper and industrial X-ray and processing chemicals contributed to the profit, whereas all other products were sold at a loss.

10.3.3 It was stated during discussions with the Ministry (February 1992) that the losses were because of constraints in revising the selling prices between January - August 1991 and that the impact was not expected to be severe in 1991-92 accounts.

10.4 Impact of new industrial policy on HPF

10.4.1 The slitting and confectioning activity was brought under Schedule IV, for the purpose of licensing, under the IDR Act in 1986 through the efforts of the company. According to the new industrial policy of 1991, this industry does not come under the purview of annexure II in the list of areas for which licensing would be compulsory. Hence, the protection being enjoyed by the Company so far stands withdrawn. The private entrepreneurs can now enter the slitting and confectioning business.

10.4.2 In this connection, the company reported (September/October 1991) to the Government that the changed situation would have an adverse impact not only on its ongoing project for manufacture of polyster base medical X-ray but also on its future operations due to increasing competition from slitting and confectioning units of imported jumbos enjoying exemption from excise duty/sales tax.

10.4.3 On this the Ministry stated (February 1992) as follows :

> "In the new industrial policy, an industrial licence is now not required to take up this activity. HPF expects that there will be a spurt in setting up of new slitting and confectioning units with few investments for integrated manufacture. The few large multi-nationals would also enter in this field to the detriment of HPF's interest.
>
> While efforts are being made to minimise the adverse effects of the NIP on HPF, HPF has also been asked to take preventive steps in this regard. Measures to protect HPF's investments in the integrated manufacture of polyester and graphic arts and X-ray films would be considered at the appropriate time".

10.4.4 With the new policy permitting conversion activities in all range of products, both integrated and converted, the question is whether the company would remain competitive compared with the imported prices of these products for its survival.

10.4.5 The Management's view is that with the indigenous prices of silver, the main raw material for films constituting nearly 30 percent of the raw material cost, being three times higher than the international prices, it is very difficult to be competitive in integrated products. As far as converted products are concerned, the slitting and confectioning units in small scale sector enjoying exemption from excise duty/sales tax have already a competitive edge in the market affecting the market share of HPF. Further, with the new iundustrial policy, the foreign multinationals, because of economies of scale, can now supply jumbo rolls at very competitive prices and easily outprice HPF by setting up conversion units in India through their agents.

10.4.6 During discussions the Ministry stated (February 1992) that under the new industrial policy the Government would like public sector undertakings to operate on sound commercial lines and to make themselves competitive nationally and

internationally, and so it was now for HPF to respond effectively to the emerging challenges by becoming more competitive. When asked about what exactly were the measures envisaged by the Ministry to minimise the adverse effects of the new industrial policy on HPF, as indicated in their reply (February 1992), they said that at presemt these could not be stated in specific terms as a clear picture was yet to emerge on recent initiatives in respect of the liberalised policy introduced by the Government.

10.5. Dividends:

The company incurred losses from inception to 1974-75 and earned profits thereafter. By 1981-82, the losses were wiped off and from 1982-83 onwards the company has been paying dividends to Government as indicated below:

(Rs. in lakhs)

Year	Paid-up capital	Percentage of dividend	Amount of dividend
1982-83	1632	3	48.96
1983-84	1632	3	48.96
1984-85	1632	3	48.96
1985-86	1632	3	48.96
1986-87	3832	1.25	47.90
1987-88	6173	0.81	50.00
1988-89	6553	0.76	50.00
1989-90	9253	0.54	50.00

No dividend was paid for 1990-91.

11. RESEARCH & DEVELOPMENT:

11.1 The Corporate plan of the company envisages spending a minimum of one percent of turnover on research and development(R&D) efforts. R&D expenditure as a percentage of turnover during the last five years is indicated below:

(Rs. in lakhs)

Year	Reasearch and Development Expenditure	Turnover	Percentage on turnover
1986-87	85.55	11907.30	0.72
1987-88	82.44	13735.13	0.60
1988-89	167.82	14842.82	1.13
1989-90	142.51	18594.40	0.77
1990-91	192.69	22546.97	0.86

11.2 Activities of the Research and Development Department consisted of:

- Development of new products
- Product and Process Improvements
- Import substitution

11.3 Of the five new products taken up for developement, two products, viz. OPX super medical x-ray and plastic bromide paper were withdrawn after test marketing due to lack of demand.

Two other products, diazo paper and photo typesetting paper(Panchromatic) taken up in 1982-83 and 1983-84 are stated to be still under development. The one product successfully developed and marketed is photo type setting paper(Orthocramatic).

11.4 As part of the second mentioned activity, emulsion formulations to reduce coating weight of Medical x-ray, Bromide paper, cine positive(black & white) and Cine sound negative films were developed. This, it is claimed, has resulted in considerable savings to the company over the years.

N. Sivasubramanian

New Delhi
The 27 JUL 1992

(N. SIVASUBRAMANIAN)
Chairman, Audit Board and Ex-officio
Additional Deputy Comptroller and
Auditor General (Commercial)

Countersigned

New Delhi
The 27 JUL 1992

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

ANNEXURE I (Referred to in paragraph 6.4.2)

	INSTALLED CAPACITY	1986-87				1987-88				1988-89				1989-90				1990-91			
		TARGET	ACTUALS	% OF ACTUALS TO CAPACITY	% OF ACTUALS TO TARGET	TARGET	ACTUALS	% OF ACTUALS TO CAPACITY	% OF ACTUALS TO TARGET	TARGET	ACTUALS	% OF ACTUALS TO CAPACITY	% OF ACTUALS TO TARGET	TARGET	ACTUALS	% OF ACTUALS TO CAPACITY	% OF ACTUALS TO TARGET	TARGET	ACTUALS	% OF ACTUALS CAPACITY	% OF ACTUALS TARGET
A. OOTY PLANT																					
INTEGRATED PRODUCTION:																					
PRODUCTS																					
i) Cine Film Positive(B&W)	2.200	1.393	1.394	64	100	0.650	0.751	34	116	0.690	0.763	35	111	0.990	1.063	48	107	0.904	0.711	32	79
ii) Medical X-ray	2.162	2.300	2.313	107	101	2.800	2.508	116	90	2.620	1.979	92	76	2.000	2.474	114	124	2.700	2.687	124	100
iii) Bromide Paper	2.739	1.408	1.829	66	130	2.006	2.071	76	103	1.720	1.959	72	114	1.900	2.297	84	121	2.000	2.087	76	104
iv) Graphic Arts Film	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
v) Cine Sound films	0.527	0.227	0.232	44	102	0.235	0.230	44	98	0.180	0.180	34	100	0.250	0.230	44	92	0.215	0.247	47	115
vi) Roll Films	0.045	-	-	-	-	0.055	0.169	376	308	0.210	0.413	917	197	-	0.043	96	-	-	0.037	82	-
vii) Others	-	0.100	0.139	-	139	-	0.041	-	-	-	0.081	-	-	0.175	0.111	-	63	0.425	0.091	-	21
	7.673	5.428	5.907	77	109	5.746	5.768	75	100	5.420	5.375	70	99	5.315	6.218	81	117	8.244	5.660	77	94
B. JUMBO CONVERSION:																					
OOTY PLANT:																					
i) Roll Film & 35mm Cassettes	1.069	0.289	0.199	18	69	0.332	0.277	83	83	0.235	0.160	15	68	0.300	0.153	14	51	0.250	0.130	12	52
ii) Cine Colour Positive	2.062	4.178	2.937	142	100	3.780	2.773	134	106	4.220	3.034	147	105	5.100	2.875	139	56	3.885	2.825	137	73
iii) Colour Paper	-	1.541	0.861	-	56	2.450	0.639	-	26	2.695	1.234	-	46	3.514	1.240	-	35	4.530	1.930	-	43
iv) Medical x-ray	-	-	-	-	-	-	-	-	-	-	0.060	-	-	-	-	-	-	-	0.019	-	-
v) Others	-	-	-	-	-	-	-	-	-	-	-	-	0.151	-	-	-	-	-	-	-	-
AMBATTUR PLANT:																					
i) Medical X-ray	2.000	0.609	0.438	22	72	0.432	0.424	21	98	0.405	0.479	24	118	0.400	0.560	28	140	0.900	0.578	29	64
ii) Graphic Arts Film	0.750	0.419	0.404	54	96	0.400	0.285	38	71	0.300	0.482	64	161	0.450	0.573	76	127	1.000	0.922	123	92
iii) Industrial X-ray	0.250	0.038	0.063	25	166	0.060	0.067	27	112	0.070	0.075	30	107	0.075	0.045	18	60	0.060	0.058	23	97
iv) Cine Colour Positive	1.500	-	1.249	67	-	-	1.236	83	-	-	1.401	93	-	-	1.672	111	-	-	1.525	102	-
v) Colour Paper	-	-	0.491	-	-	-	1.478	-	-	-	1.987	-	-	-	2.408	-	-	-	1.809	-	-
	**7.651	7.072	6.842	87	94	7.454	7.181	94	96	7.925	9.043	118	114	9.839	9.524	124	97	10.625	9.796	128	92

** Target and percentage of actuals to targets shown against cine colour positve and Colour Paper under Ooty plant include figures of Ambattur Plant also.

ANNEXURE II(Referred to in paragraph 6.5.4)

Main Plant - Machine utilisation

(Figures in percentages)

Name of the Machine	1986-87		1987-88		1988-89		1989-90		1990-91	
	Budget-ted	Actuals	Budget-ted	Actuals	Budget-ted	Actuals	Budget-ted	Actuals	Budget ted	Act-uals
1. Base Casting	74.18	79.90	63.76	67.05	63.00	60.37	64.95	70.75	73.41	79.63
2. Subbing	72.20	63.28	62.82	53.61	63.61	47.80	65.29	54.26	73.21	56.50
3. Tunnel Coating	40.85	43.78	55.04	42.25	57.71	39.92	61.31	50.00	68.04	45.22
4. Festoon Coating	100.00	63.07	79.32	48.61	84.38	44.95	89.01	46.42	99.77	48.25
5. X-Ray cutting	87.00	74.74	87.34	79.42	85.20	64.79	84.37	69.78	100.00	78.71
6. Paper cutting	39.12	45.73	69.46	49.19	71.25	44.77	92.73	48.25	90.42	49.70
7. Perforator 35mm	83.27	80.16	72.02	75.54	73.11	68.01	72.17	71.54	86.82	65.26
8. Perforator 32mm	72.30	79.10	53.80	73.32	46.46	68.56	53.64	54.07	58.36	50.75
9. Hand spooling	100.00	50.07	52.50	46.38	86.03	35.13	98.80	30.49	70.01	36.20

Annexure III (as referred to in paragraph 6.8.1)

REJECTIONS

S - Standard

A - Actuals

(Percentages)

Product/stage of operation	BICP norms on the basis of input		1986-87		1987-88		1988-89		1989-90		1990-91	
	1978	1983	S	A	S	A	S	A	S	A	S	A
Cine Positive												
Base Casting	6.50	6.50	6.00	7.02	6.00	5.24	6.00	5.65	5.70	5.64	5.70	5.64
Substration	3.00	3.00	3.00	4.47	3.00	2.78	3.00	2.83	2.90	3.63	2.90	4.68
Coating	5.06	5.50	4.50	4.01	4.50	4.48	4.50	4.69	4.50	4.24	4.50	4.30
Conversion	12.60	12.50	7.56	7.70	7.56	8.96	7.56	8.71	7.60	7.76	7.60	7.23
Aggregate	25.13	25.00	19.50	21.31	19.50	19.88	19.50	20.23	19.20	19.69	19.20	20.31
X-ray												
Base Casting	7.75	7.75	7.75	8.16	7.75	6.47	6.50	6.32	6.50	6.35	6.50	6.40
Substration	3.75	3.75	4.00	3.87	4.00	3.24	3.50	3.20	3.30	3.39	3.30	3.90
Coating	16.00	15.00	14.00	11.02	14.00	11.84	12.20	11.41	12.00	10.21	12.00	9.71
Conversion	18.00	18.00	14.65	17.07	14.65	15.41	15.43	16.59	15.55	15.43	15.55	8.40
Aggregate	38.84	38.11	35.00	34.85	35.00	32.51	33.00	33.00	32.80	31.30	32.80	31.58
Cine Sound												
Base Casting	8.00	8.00	7.50	7.96	7.50	5.80	7.50	6.39	7.00	6.95	7.00	6.98
Substration	3.75	3.00	4.25	3.21	4.25	2.50	4.25	3.50	4.00	4.62	4.00	5.06
Coating	6.00	4.00	4.50	4.44	4.50	4.44	4.50	4.79	4.50	4.73	4.50	4.37
Conversion	20.00	20.00	8.37	9.02	8.37	9.95	8.37	9.20	8.40	9.47	8.40	7.47
Aggregate	33.41	31.46	22.50	22.55	22.50	20.97	22.50	21.91	21.90	23.46	21.90	21.86
Bromide Paper												
Base Casting												
Substration												
Coating	7.00	4.80	5.00	4.31	5.00	4.44	5.00	4.31	4.50	4.31	4.50	4.37
Conversion	8.00	6.00	4.74	3.46	4.74	3.84	4.74	4.79	4.71	3.32	4.71	4.07
Aggregate	14.44	10.51	9.50	7.62	9.50	8.11	9.50	8.11	9.00	7.49	9.00	8.26

ANNEXURE IV (Referred to in paragraph 7.3.2.)

COST AND SALE PRICE OF MAJOR PRODUCTS

Sl. NO.	PRODUCT	1986-87		1987-88		1988-89		1989-90		1990-91	
		C.P.	A.S.P.	C.P.	A.S.P.	C.P.	A.S.P.	C.P.	A.S.P.	C.P.	A.S.P
1.	Cine Sound (35 mm)	59.16	53.71	65.67	59.40	76.69	64.10	73.31	75.27	108.75	98.93
2.	Cine Positive (B&W)(35 mm)	52.81	48.56	58.83	52.79	60.72	59.60	62.93	67.01	92.48	91.66
3.	Medical x-ray										
	INDU	107.62	120.36	125.02	133.96	130.53	144.80	137.85	156.59	172.59	181.93
	Converted	136.13	128.91	129.56	136.84	124.84	140.82	165.23	157.25	205.14	176.19
4.	Photographic paper										
	SW	39.23	38.09	46.26	37.10	48.54	43.70	49.18	56.86	71.18	74.96
	DW	41.69	48.55	55.40	50.39	57.58	56.30	59.25	67.69	92.51	98.65
5.	Cine Colour converted										
	ORWO	56.97	69.69	59.31	77.36	68.33	84.20	85.60	82.79	95.99	111.06
	AGFA	117.74	113.44	97.29	124.80	116.34	126.50	123.67	128.66	163.05	169.17
	KODAK	97.68	121.26	105.27	126.41	123.45	124.00	129.62	126.35	176.52	144.27
	Colour paper (Agfa,Fuji,Kodak)	80.29	77.55	78.00	81.54	82.51	85.43	97.83	102.87	115.30	103.35

6. Roll Film										
MP-22	208.00	203.45	228.56	204.64	243.30	244.69	238.81	240.57	384.29	335.15
MP-27	-	-	-	-	-	-	253.00	244.69	-	-
7. Industrial										
X-ray										
NDT-65	488.00	609.65	464.58	649.69	423.69	662.46	677.68	700.62	771.71	886.72
NDT-70	531.33	576.31	499.04	483.62	-	-	663.57	554.95	-	-
8. Graphic										
Arts										
CEL-4	124.63	97.79	108.67	100.11	121.21	102.70	138.17	107.43	189.73	153.36
CEF/CCL/COD	-	-	-	-	160.69	120.10	152.30	127.80	230.63	146.80
9. Processing chemicals Rs/kg										
Developer	49.13	60.17	42.94	59.36	46.80	60.70	50.04	61.44	68.62	79.82
Fixer	23.41	28.24	23.93	28.02	23.20	28.30	25.79	31.64	24.91	38.91
Replenisher							58.60	107.83		
10. Magnetic Tape							54.48	55.90		

CP- COST OF PRODUCTION, A.S.P.- AVERAGE SELLING PRICE

ANNEXURE V (Referred to in paragraph 3.1.2)

ORGANISATION CHART

CHAIRMAN-CUM-MANAGING DIRECTOR

GENERAL MANAGER PRODUCTION & ENGG/OOTY	GENERAL MANAGER MARKETING
GENERAL MANAGER(WORKS) AMBATTUR	GENERAL MANAGER FINANCE
GENERAL MANAGER MAGNETIC TAPE PLANT	CHIEF PURCHASE MANAGER
GENERAL MANAGER QUALITY ASSURANCE	CHIEF MANAGER(HUMAN RESOURCE DEVELOPMENT)
GENERAL MANAGER DESIGN & DEVELOPMENT	COMPANY SECRETARY

ERRATA

Sl. No	Page No.	Reference	For	Read
1.	8	5th line	5,500	£ 5,500
2.	8	7th line	4,400	£ 4,400
3.	8	7th line	30	£30
4.	10	8th line from bottom	v)	iv)
5.	12	Table	The figures given in brackets may be read against the years 1986-87 to 1990-91 instead of "Installed Capacity" to 1989-90.	
	14	20th &21st	(Vide Annex VI)	-
	28	14th& 15th line	upto March, 1991	-
	28	Table		
		Ist column	Year sales	Year
		3rd column	Value of through stockists	Value of sales through stockists
		4th column	Percentage of value of sales stokists to total sales sq. metres)	Percentage of value of sales of stockists to total sales
		5th column	(in million	(in million sq. metres)
	29	2nd line	decretion	discretion
	36	Table-GRAND TOTAL		
		2nd column	3365	-
		3rd column	3440	3365
		4th column	3624	3440
		5th column	3554	3624
		6th column	3631	3554
		7th column	-	3631
	37	Table	Year Manu-facturing Division	Manufacturing Division