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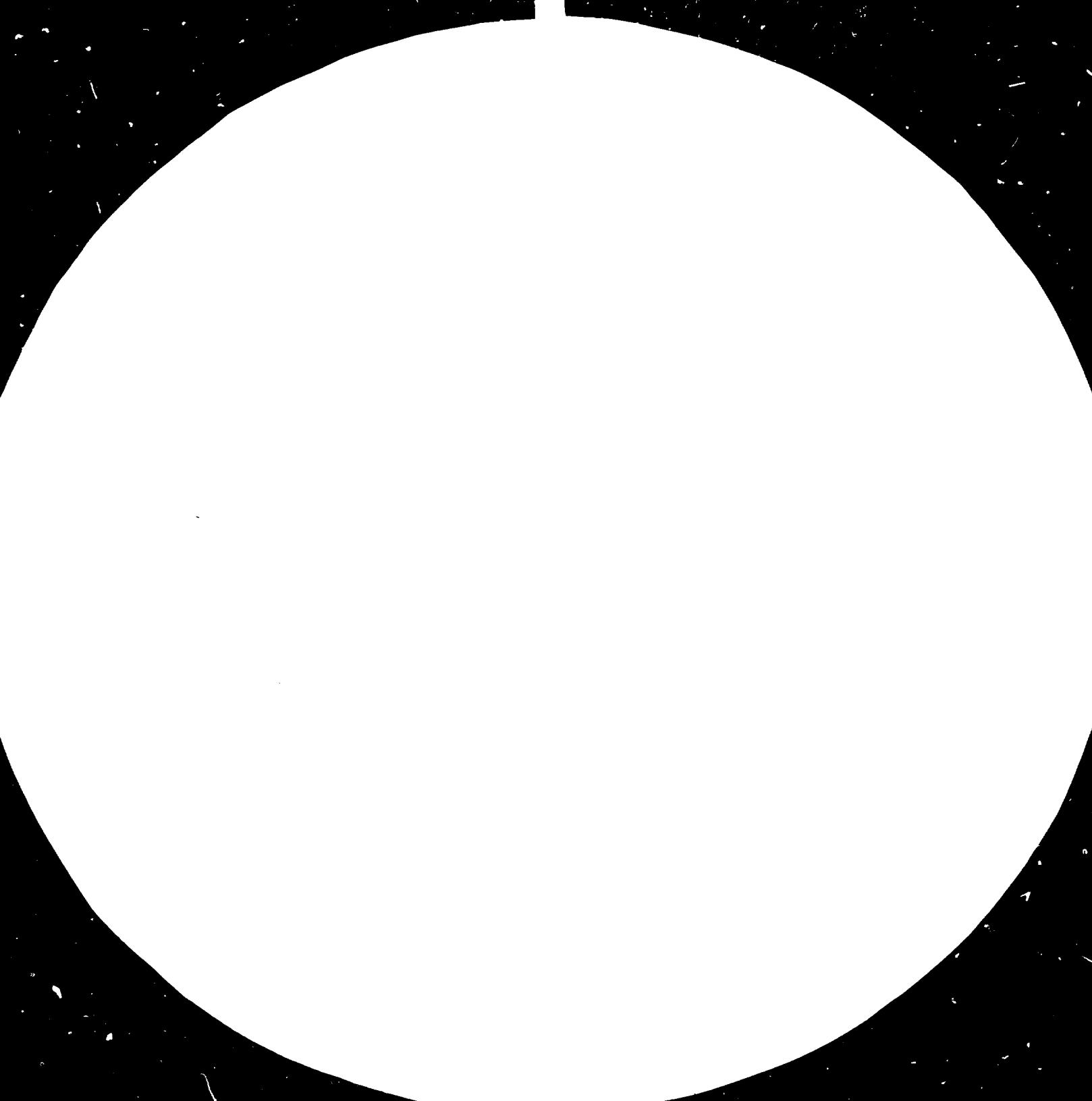
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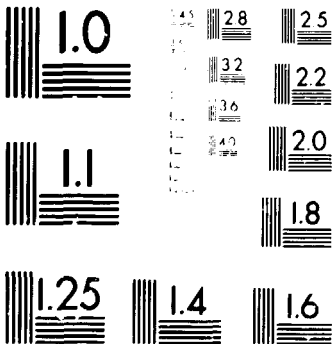
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India

APPLICATION OF RESEARCH RESULTS IN EASYCARE

COTTON FABRICS IN THE TEXTILE INDUSTRY

DP/IND/82/011

INDIA

Technical report: Second review of project*

(No. 2)

Prepared for the Government of India
by the United Nations Industrial Development Organization,
acting as executing agency for the United Nations Development Programme

Based on the work of T.A. Marsland,
Chief Technical Adviser

United Nations Industrial Development Organization
Vienna

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1.0 INTRODUCTION

~~This second~~ project visit is made in accordance with the Work Plan designed in collaboration with Mr. J.R. Modi, Assistant Director, ATIRA, during the initial CTA visit to Ahmedabad in August/September 1983, and approved at the Tripartite Review Meeting held on 11 February 1984.

The aims of the visit are fourfold, namely:

- To review the project work and progress over the period 1 October 1983 - 1 August 1984.
- To assist and advise on outstanding matter arising from the project work and the Work Plan.
- To fulfill those tasks assigned to the second CTA visit as per the Work Plan and confirmed at the TRM. These tasks being namely:
 - (i) The specification and job description for the Marketing Expert;
 - (ii) The preparation and planning of the No. 2 study tour - scheduled for June/July 1985.
- The fulfilment of specific tasks assigned during briefing at UNIDO - Vienna and UNDP - Delhi.

1.1 Briefing

The briefing sessions for this second visit took place on Thursday, 28 June - Vienna, and Friday, 29 June 1984 - Delhi. Persons present at the briefing in Delhi were:

Mr. P.N. Pathak - Programme Officer
Mr. R. Singh - Assistant Programme Officer

The specific terms of reference and constraints arising from the briefing sessions and pertinent to this second visit were:

- (i) To prepare specifications for the Market Survey Component of the project and the second study tour planned for 1985.
- (ii) To review the project work, the production of and progress to project outputs/objectives.

- (iii) To examine the requirement for additional technical input to the project work.
- (iv) That whilst UNIDO had no objection to a National Organization/ Individual being appointed to providing the marketing expertise, UNDP could not provide project funds for this purpose.

2.0 OBSERVATIONS

2.1 Project Progress

In accordance with the project programme, and the requirements of UNIDO, Project Progress Reports have been completed and forwarded in March 1984.

During the period under review, the project has progressed satisfactorily and is running to schedule as per the approved Work Plan. Project outputs - intermediate objectives, scheduled for the period have been attained and are contained in the report entitled 'Project Findings - Progress Report', prepared on 27 February 1984, and since forwarded to the appropriate quarters. A detailed, tabulated progress of the work, related to the Work Plan - Progress Stages, is included as Attachment I with this report.

Briefly summarising this progress, stages 1 and 2 - covering the Preparatory and Rationalisation of Fabric Ranges have been concluded, the former having been reported at length elsewhere. Stage 2 of the work programme has examined a wide range of fabrics currently used in the product end uses concerned in the project, selecting the most suitable, and subjected these to extensive laboratory testing and evaluation, and comparing these results with National and International Standards. This aspect of the work is summarised in the following table:

	Shirtings		Suitings		Bed sheets	Dress wear	
	100% Cotton	P/Cotton	100% Cotton	P/Cot.	100% Cotton	100% Cotton	P/Cot.
No. of fabrics initially selected	7	2	4	1	8	10	2
No. of fabrics satisfying national/international standards	3	2	2	1	3	3	2
No. of fabrics selected for mill trials	3	2	-	2*	2	3	2
Mill trial totals	5		2		2	5	

* 48/52 Polyester/cotton blend fabric introduced at this stage

The stage 3 - programme of work (mill trials) is now well in hand and progressing satisfactorily, shirting products having advanced to the initial Field Wearer Trials (stage 4).

2.2 Study Tours

During this review period, the Project Co-ordinator - Mr. J.R. Modi, Assistant Director, completed the initial Study Tour (No. 1) visiting industrial technical centres, research centres and technical control units of major retailing outlets. The experience gained has proved extremely useful for the continuance of the project work and in providing additional technical input which will be referred to in appropriate sections of this report.

2.3 Equipment

All equipments received to date have been installed and commissioned to the ATIRA project staff's satisfaction. In the Technical Report resulting from the initial project visit, comment was made that certain components of the sewing machines had been received in a damaged condition, and that this was the subject of an insurance claim then in process with UNDP - Delhi. In addition certain components of the machines were missing on arrival, whilst most of these have now been received these items remained outstanding. As the machine is not usable in the absence of these components, action should be taken to ensure that these are supplied. This matter and the insurance are the subject of continuing correspondence.

The status of budgeted project equipment that has not been received is as follows:

(i) Data Processing and Acquiring System

This equipment has been placed on order (UNIDO P.O. 15-3-C1047 refers), but is subject to the granting of an export licence by the United States Authorities. This information was relayed to ATIRA on 5 May 1984, since which date there has been no further communication. As the time is rapidly approaching when such equipment will be required in the project work, further delay will jeopardise the programme timing.

(ii) Garment Curing Oven

Following initial difficulties in locating a current supplies of such equipment, further enquiries revealed that there was little or no demand for permanently pressed garments - and as a result, the process and equipment were obsolete. This position was further confirmed during the Study Tour (No. 1) when enquiries in four western countries failed to reveal any serious interest in the process or products.

In consequence project work and products related to this process and equipment will not be pursued.

(iii) Minimum Application Equipment

This equipment permits the liquid application of chemicals and finishes to textile piece goods minimising the amount of liquid applied to the fabric with consequential savings in the chemical and energy costs. Affording such benefits, these systems have been adopted expensively by industry in the western countries. Whilst several systems have been developed, the two in most common usage are those based on Foam Generation and Minimum Application Techniques.

At the February 1984 Tripartite Review Meeting agreement was reached that a Foam Generator and Applicator should be procured for the project.

From experience gained during the study tour and subsequent discussions, the limitations of applying thermo setting resins and associated chemicals by this technique have become more fully recognised at ATIRA. As no executive action has as yet been taken, it is suggested that the request for Foam Generating and Application Equipment should be amended to one for Minimum Application Equipment

2.4 UNDP - Input Status Line 49-99

During UNIDO briefing on 28 July 1984 the remaining balance on Line 49-99 was given as being \$ 49,000. Reviewing this budget on station and taking into account cancellation charges and estimates for equipment not received, the balance is \$ 39,790. As it was not possible to reconcile these varying balances on station, the matter is drawn to the attention of Central Administration for classification and final reconciliation.

Whilst no quotations are to hand for the minimum application equipment, it is anticipated that remaining balances will be more than sufficient to meet the cost of the equipment.

2.5 Work Programme - Modifications

Changes in the market demand for certain textile products and the non-availability of garment curing equipment have necessitated more changes in the work plan.

A requirement for both the national and export markets in suitings - mens trousering in particular, is that the finished garment is capable of retaining a sharp crease in the front and back of the leg sections. In the work plan arranged during the first CTA visit and subsequently approved, it was planned that these garments would be manufactured from post-cured easycare finished fabric - that is, the uncured chemically treated fabric would be made-up into trouserings, front and back leg creases would be then be pressed in on a garment press and subsequently given a permanency by curing the easycare finish in a garment curing oven. In the absence of a curing oven, this method of production is not possible, furthermore an easycare hundred percent cotton fabric prepared by the pre-cured method, is not readily creased nor does it have a capability of retaining creases. In consequence, 100% cotton fabrics for suitings will have to be omitted from the project work.

From experience, and confirmation during the study tour there is currently little or no retail demand for permanently pressed mens trousering manufactured from 100% cotton fabrics. The cotton trousers that are on sale are generally in a pure or non easycare finish intended for the very casual trade e.g., denim jeans.

An alternative method of imparting crease intention properties into an easycare suiting fabric is to use polyester/cotton blended fabric. In such fabrics, the heat stabilising properties of the polyester, overcome the crease resistant properties of the chemically treated cotton fibre making it possible to impart semi/permanent creases in the fabric during the pressing operation.

Rather than reduce the development work on suitings by the elimination of 100% cotton fabrics, it was considered to be of more importance to the industry to increase the range of polyester/cotton blend fabrics examined in order to establish the minimum polyester content required for good crease retention properties in easycare treated polyester/cotton blended fabrics. These minor changes in the project work content is no way detract from the established aims and objectives of the project.

2.6 Marketing Survey

A prime task of the current CTA visit was to plan for the project marketing activity and prepare a job description for the marketing expert/organization. However, in the face of conflicting suppositions and uncertainty as to funding source it was not possible to directly proceed with this work. The main factors having a bearing on the matter were:

- (i) The supposition that the Government of India had insisted on a national organization/individual undertaking the work.
- (ii) The confirmation that UNDP funds would not be made available in the event of (i) above.
- (iii) For the more extensive, domestic aspects of the work, it was advantageous that a national organization should be recruited.
- (iv) ATIRA did not have the human resources to undertake the work on the scale as originally conceived.
- (v) ATIRA did not have the financial resources to support a work effort of this scale; as additional Government funding had not been made available.

Confronted with the evident finality of these restrictions, discussions were held at ATIRA with Dr. T. Radhakrishnan, Director and Mr. J.R. Modi, Project Co-ordinator, and the following compromise arrived at:

- (a) ATIRA staff would undertake the overall responsibility for the market survey work.
- (b) An external expert would be recruited to provide specified inputs including the preparation of that part of the report concerned with export markets.
- (c) With regards to the very limited funds available to ATIRA for such work, the scale of work would have to be drastically reduced from that originally envisaged.

These reductions are:

- (i) That two product ranges only would be subjected to field wearer trials instead of the four originally planned. The products selected being - shirtings and bed sheetings;
- (ii) That a maximum of 350 garments/articles would be provided, because of financial restraints for the field wearer trials. This irrespective of the number required to give a statistically meaningful sample.
- (iii) That the field wearer trials would be conducted locally in Ahmedabad, accepting the fact that this might not provide a sufficiently representative sample of consumers for such products.

Although this falls short of the original requirements of the project, it is believed to be the best possible compromise in the given circumstances.

This was the situation as at 27 July 1984. On that date a communication was received from UNDP - Delhi to the effect that UNDP funds could be made available for such work subject to the Government of India's specific approval. The ATIRA is to contact the Ministry of Commerce to obtain such clearance from the Department of Economic Affairs, Ministry of Finance for the use of project funds for this purpose.

During de-briefing at UNDP - Delhi, Dr. M.K. Hussein, S.I.D.F.A., commented that there was serious doubt whether such approval would be granted. Further, that an indepth survey of domestic and export markets would be contrary to UNDP policy and not essential to the main objective of the project, which is to transfer the technology of easycare finishing and processing to industry. In this respect, the input of a National/ External expert, with ATIRA staff undertaking this aspect of the project - as agreed at the February TRM, would satisfy the needs of the project and receive UNIDO and CTA agreement.

In consequence, and pending the outcome of ATIRA's communications with the Government on this subject which it will relay to UNIDO; UNIDO will delay the recruitment of the marketing expert until week commencing 4 November 1984.

2.7 Additional Technical Input

ATIRA, as a research association having extensive library and technical abstracting facilities, and liaison with overseas research centres, is aware of the latest technologies and developments related to thermosetting resins for imparting easycare properties to cellulosic and polyester/cellulosic blended fabrics. An important aspect of the current project is that the level of technology applied to the work is one that is appropriate to the industry in India; in that chemicals used in the formulations and as additives in the finishing process are freely available, and the equipment employed is common to the majority of mills. ATIRA would welcome additional technical input to the project, providing that these same conditions applied, and the input applicable in the Indian context. To further this possibility, ATIRA has submitted a technical memorandum outlining the technical and scientific aspects of the work, for onward transmission and comments. The comments, when received, will be considered for their relevance to the project work and the prevailing conditions in the Indian textile industry, and the matter pursued if appropriate.

2.8 Project Outputs and Controls

Scheduled project outputs and control procedures completed during the period under review are as follows:

(i) Outputs

- (a) A report entitled "Project Findings" and covering the preparation of fabric, chemical formulations for easycare finishes, their application, and an evaluation of process variables with an up-date on the project status.

Prepared: February 1984

Scheduled date: February 1984

(b) Study Tour Report (No. 1)

Prepared: July 1984

(ii) Control Procedures

- (a) A Tripartite Review Meeting held on 11 February 1984, when full approval was given to the project Work Plan and Programme of Work;
- (b) Project Progress Report, completed and forwarded March 1984;
- (c) In addition to the above, Government of India Progress Reports have been prepared for the periods ending:
 - September 1983
 - December 1983
 - March 1984
 - June 1984

All the above outputs and reports have been circulated to the appropriate quarters.

2.9 Industry Involvement - Steering Committee Meeting

In pursuance of the terms contained in the Project Document, a meeting was held at ATIRA on 21 July 1984, with Dr. T. Radhakrishnan, Director as Chairman. At the meeting Mr. J.R. Modi, Assistant Director and Project Co-ordinator outlined the project work to date, and that intended to be covered in the immediate and near future. He also gave a brief resume of his recent study tour to W. Europe, United States of America and South Korea, highlighting current technical and application developments in the finishing of easycare fabrics.

An interesting discussion period followed this presentation, the main topics of which were:

1. Use of reactive chemicals in combination with DMDHEU resin as a means of improving the strength properties of easycare finished fabrics and garments.
2. Comfort aspects of the various finished fabrics subjected to field testing in garment form.

Interest was such that an undertaking was given that these aspects would be taken into consideration in the project work and reported on at a later date. The minutes of this meeting are included with this report - Attachment II.

3.0 RECOMMENDATIONS

Having had the opportunity of reviewing the project progress and obtaining an understanding of current and foreseen obstacles to its continued future progress, the following recommendations are put forward for approval and actioning.

3.1 Equipment

(i) Data Processing and Acquiring System

In the event of an export licence not having been received, Purchase Order No. 15-3-C1047 should be cancelled, and an order placed for alternative equipment from sources not requiring an export licence. A neutral specification for such equipment, and a list of potential suppliers is included in the appendices to this report, Attachment III.

(ii) Minimum Application Equipment

That ATIRA should acquire the facility to apply easycare chemical finishes to textile fabrics by "Minimum Add-on Techniques". The evaluation of such techniques compared to conventional processing would be accommodated within the work programme - and the technical and economic benefits of such systems relayed to the industry in future project reports.

The preferred equipment is a Minimum Application System, neutral specifications for this and a potential supplier are given in the appendices, Attachment IV.

3.2 Market Survey

In the absence of further information regarding the constraints and restrictions mentioned in the foregoing, the revised market survey activity in the project work plan should be approved and a marketing expert recruited to carry out the specified assigned tasks. A job description for this post is included along with this report - Attachment V.

ATIRA have also requested that provision should be made for the procurement of competitive products from W. European and N. American markets in order that these maybe technically evaluated relative to the products developed during the project work.

3.3 Mid-Term Review

With regard to the project work, a convenient timing for the mid-term review would be January 1985. This timing would coincide with the next major point of decision making, and the installation of all equipment associated with the project.

It is understood that a second tripartite review meeting would not be appropriate until the second quarter 1986.

3.4 Additional Technical Input

A decision as to whether ATIRA would request additional technical input to the project should be delayed until such time as the comments to the technical memorandum have been received and reviewed by ATIRA.

3.5 Study Tour No. 2

Early approval of the study tour No. 2 is requested and the programming of visits finalised to avoid last minute arrangements. A proposed specification for this tour is included at the back of this report - Attachment VI.

If required, the CTA could be available to assist in arranging U.K. visits.

4.0 CONCLUSIONS

The project at ATIRA is proceeding satisfactorily in all respects of the Work Plan. It has attained the initial estimated objective and is on course to achieve those scheduled for later stages of the project work. The project should therefore be allowed to proceed according to the approved revised (September 1983) Work Plan, including the minor modifications referred to in this report document.

Early action in the procurement of outstanding equipment; and in the approval of decisions arrived at during this second CTA visit, will ensure that this progress is maintained without hinderance.

PROJECT - STATUS REPORT

ATTACHMENT I

WORK PLAN PROJECT PROGRESS STAGE		MAIN ACTIVITY	SHIRTING 9 SORTS	SUITINGS			BED-SHEETS			DRESS FABRICS		
				P/Cot 33/67	P/Cot 48/52	100% Cotton	100% Cotton	100% Cotton	100% Cotton	P/Cot 15/85	P/Cot 33/67	
1 PREPARATORY	1	Equipment-Acquisition to Commissioning	Completed	All equipment received			----- commissioned -					
	2	Lab. Evaluation of Preparation Methods, etc.		-----			Completed	-----				
	3	Progress Report		-----			"	-----				
2 PILOT SCALE TRIALS	1	Product Selection		-----			Completed	-----				
	2	Selection of Fabric Ranges		-----			"	-----				
	3	Pilot Scale Manufacturing and Processing		-----			"	-----				
	4	Laboratory Evaluation		-----			"	-----				
	5	Rationalisation Fabric Ranges		-----			"	-----				
3 MILL TRIALS	1	Manufacture of Trial	Completed	-----			In Hand	Completed				
	2	Supervision of Mill Processing	Completed	-----			Suspended*	Completed	In Hand	In Hand	In Hand	
	3	Establishing Garment Standards	Completed	In Hand	In Hand	-----			Completed	-----		
	4	Laboratory Evaluation	Completed	-----			Completed					
	5	Laboratory Comparative Evaluation	Completed	-----			Not Applicable					
	6	Progress Report (ATIRA)	-----	-----			Not Due					
4 WEARER	1	Supervise Garment Manufacturing	Completed	-----			In Hand					
	2	Prep. and Supervise Wearer Trials	In Hand	-----								
	3	Lab. Garment Assess	" "	-----								

* Certain items of equipment are outstanding (see 3.1)
Suspended in absence of Garment Curing Oven (see 2.5)

ATTACEMENT II

INDUSTRY STEERING COMMITTEE

MEETING - MINUTES

Minutes of the Second Meeting of Project Advisory Committee for UNIDO sponsored project on 'Application of Research Results in Easy Care Cotton Fabrics in the Textile Industry' (IND/82/011).

The second meeting of the advisory committee for the above mentioned project was held on Saturday, 21 July 1984, at 3.00 p.m. at ATIRA. The following members were present:

Mr. T.A. Marsland	Chief Technical Adviser
Mr. A. Subramanian	Sarangpur Cotton Manufacturing Co. Ltd.
Mr. Ashokabhai Mehta	Shri Ambica Mills Ltd.
Mr. J.L. Vij	Ahmedabad New Cotton Mills Co. Ltd.
Mr. K.G. Shah	Ahmedabad Mfg. and Calico Ptg. Co. Ltd.
Dr. T. Radhakrishnan	ATIRA
Mr. S.S. Trivedi	"
Mr. J.R. Modi	"
Mr. C.S. Rao	"

Mr. Vij was deputed by Mrs. Meenalben Sen, who is a member of the Advisory Committee, representing Ahmedabad New Cotton Mills Co. Ltd. Mr. Maheshbhai Shah (Shri Ambica Mills Ltd.) and Mr. Kiritbhai Shah (Rohit Mills Ltd.) could not attend the meeting.

Dr. T. Radhakrishnan chaired this second meeting. Mr. J.R. Modi presented the work carried out so far with special reference to the following points:

- (i) Selection of conditions for preparatory processing;
- (ii) Standardization of easycare finish formulation;
- (iii) Selection of different varieties of fabrics for wearer trials and;
- (iv) Present status of easycare finishing in western countries covered by Mr. Modi in his study tour.

He has also informed the members about the future plan of work namely:

- (i) Evaluation of selected fabrics for wearer trials and Laboratory evaluation of these finished fabrics for their performance;

- (ii) The need of market research in the near future to assess the consumer response/demand and;
- (iii) Developmental work in easycare finishing using reactive acrylates, reactive silicones, etc. (if these can be procured from West Germany) for better retention of physical properties).

Some of the important aspects discussed during the meeting are as follows:

- (i) For liquid ammonia treatment, a minimum of about 300 metres in each variety is required. Efforts will be made to procure the fabrics. Part of the fabrics will be treated by liquid ammonia process and the remaining will be mercerised. Both the fabrics will be evaluated before and after easycare finishing.
- (ii) Intermediate calendering which was suggested in the last meeting does not give any improvement in dry crease recovery and in physical properties. To improve the feel and appearance, fabrics used for wearer trial are given a passage through pre-shrunk-felt calender range as a last step in processing.
- (iii) More emphasis will be given to durable press (DP) rating rather than crease recovery for evaluation of fabrics after easycare finishing.
- (iv) The easycare finished fabrics will be evaluated for different properties related to comfort. The properties discussed during the meeting were
 - Vertical Wicking Test
 - Moisture Regain
 - Air Permeability
 - Weight/Square Meter
- (v) To have effective participation of garment industry in the large scale trial, it was decided that co-operation of a garment manufacturer attached to a textile mill will be solicited.

J.R. Modi
Project Co-ordinator

ATTACHMENT III

SPECIFICATION FOR DATA PROCESSING EQUIPMENT

A. HARDWARE

1. CPU : 32 bit or 16 bit with 32 bit internal architecture or 16 bit bit-slice processor; with floating point hardware support; and a console terminal.
2. Memory : 512K bytes/1 Mega bytes.
3. Mass Storage : (a) Hard Disc drive with 30 MB or greater capacity - preferably removable.
(b) 8" Floppy drives - 2 Nos. with 50 spare floppy discs.
4. Card Reader : 80 Columns, 300 Cards per minute.
5. Printer : 132 Columns, 300 Lines per minute.
6. Terminals : VDU Equivalent to VT-100 type - 2 Nos.
7. Extra Ports : 2 Extra RS-232-C or RS-422 ports for Real World Communication.
8. Standard Accessories and Spare Parts for all hardware.

B. SOFTWARE

1. Operating System : Equivalent to RSX or RSTS operating systems on DEC computers, with general purpose utilities including SORT/MERGE.
2. Languages : BASIC and FORTRAN (preferably Fortran 77) with scientific subroutines package.

C. ESTIMATED VALUE

: \$ 60,000 to \$ 80,000

D. LIST OF POSSIBLE SUPPLIERS

I. JAPAN

- a) Fujitsu Ltd.
- b) Hitachi
- c) Nippon Electric Company (NEC)
- d) Toshiba
- e) Mitsubishi Electric
- f) Oki Electric Industry Co. Ltd.
- g) System Formulate Corporation
- h) BMC International
- i) Canon
- j) Casio Computer Co.

II. U.K.

- a) International Computers Ltd. (ICL)

III. NORWAY

- a) NORSK DATA

ATTACHMENT IV

MINIMUM APPLICATION EQUIPMENT

JUSTIFICATION

In recent years minimum add-on techniques of applying chemical liquors to textile piece goods have been developed as a means of reducing the total chemical cost and the energy required in subsequent drying operations. The two main techniques adopted in developed countries are, the use of foam generating and applicator equipment, and techniques based on the regulated roller feed of chemical liquors directly onto the fabric. Of particular interest to the project work is that such systems utilising lower liquor to fabric weight ratios, inhibit the migration of resins during drying thereby increasing the fabric strength properties.

Of the two techniques, the latter affords a wider range of applications, and is therefore more compatible with chemical finishing practices adopted in the textile industry. The acquisition of such equipment would enable ATIRA to undertake R + D work in this field related to the project work - with anticipated benefits in the cost reduction of chemicals and energy for the production of easycare fabrics and garments.

SPECIFICATION

General Requirements

The equipment to be self-contained in respect of fabric guide rollers, liquor feed trough - with filling and emptying facility, and have the capability of being operated as an independent unit or in conjunction with other equipment (e.g., pilot scale stenter) for continuous running of longer lengths fabric.

Cloth Widths	:	500 mm. max.
Operating Speed	:	0.20 m/min.
Electricity Supply	:	220-240 Volts; 50 cycles A.C. Single Phase or 440 Volts 3 Phase
Controls	:	Right-hand Side of Cloth Direction
Liquor Application	:	Direct Roller : Fabric Contact
Fabric Transportation and Take-up	:	Integral to Equipment

SPECIFIC REQUIREMENTS

1. Variable Ratio of Applicator Roller and Fabric Speeds
2. Pre-selection of Liquor Add-on
3. Pre and Post Measuring of Moisture Content
4. Continuous Monitoring of Pick-up with Automatic Adjustment

KNOWN SUPPLIER

Name: TRIATEX INTERNATIONAL AG
Heinrichstr. 217
8005 Zürich
Switzerland

Attention: Dr. Schwenner

ATTACHMENT V

JOB DESCRIPTION

- Post Title: Marketing Expert
Textile Fabrics and Garments
- Duration: Three months (split mission)
(1) 3/4 weeks and (2) 8/9 weeks
- Dates Required: (1) 2nd Quarter 1985
(2) 2/3rd Quarter 1986
- Duty Stations: Ahmedabad Textile Industry's Research Association (ATIRA)
Ahmedabad/Home Base
- Purpose of Project: To introduce to the textile industry new chemical finishes imparting easycare properties to 100% cotton and low polyester/cotton blend fabrics and garments. These new finishes are designed to upgrade the performance and consumer acceptance of such products - stimulating a demand for these in the domestic market, and the subsequent development of an export trade. It is anticipated that the development of these markets will substantially increase the total off-take of fabric from the industry.
- Duties: The expert will be attached to the Ahmedabad Textile Industry's Research Association (ATIRA) and will work in close collaboration with senior staff assigned to the project. The expert will specifically be expected to undertake the following tasks:
- First Mission (3 weeks on station)
- (1) To familiarise himself with the aims and objectives of the project and progress to date, including results of local field test trials undertaken on products produced in project work.
 - (2) Working on conjunction with the Project Co-ordinator and senior assigned staff at ATIRA to provide inputs as required in:
 - (1) relating the conclusions drawn from the initial field test trial to goods intended for European and N. American markets;
 - (ii) the planning of a larger field test marketing of a restricted range of products to be mounted by the staff at ATIRA.

- (3) To obtain relevant information required for an Export Market Survey of W. European and N. American markets for the textile products concerned in the project.

Second Mission (3 weeks on station; 6 weeks home base)

- (1) To provide an input for the analysis of field test results - particularly where these may have a bearing on potential export markets.
- (2) In collaboration with ATIRA staff prepare a Market Survey Report covering the domestic and potential export markets. The expert concerning himself primarily with the export market. The export survey work is intended to be carried out as a desk study; the countries to be examined are W. Germany, France, U.K., and the U.S.A.

The expert will also be expected to prepare a report setting out the findings of his mission and his recommendations to the Government on further action which might be taken. Presenting this information in collaboration with ATIRA in a manner that it serves as a briefing document to the textile industry.

Qualifications:

Business/marketing management degree

(1) Education/training:

A degree in the social and/or behavioural sciences (including management), with course work or projects in at least 2 of the following:

- (a) statistics; (b) research methods; (c) marketing

Masters of other post-graduate qualifications on the lines above would be desirable.

(2) Experience

Professional experience in at least 2 of the following:

- (a) Staff function in marketing in research/marketing information service, related to consumer goods/commodities.
- (b) Product development, including research for marketing, placement, test marketing and market evaluation.
- (c) Design/supervision/direction of market research studies.

(d) Organization of marketing research, including setting up research centres and training of research staff.

(3) Special Familiarity Required

The marketing of fabrics and garments in W. Europe and N. America, the trends in demand and consumption, the secondary sources of data, the organization of the trade for these products.

Language: English

Background Information: In recent years ATIRA has developed a strong R + D capability in the field of chemical finishes for application to textile piece goods. The current project is designed to introduce to the textile industry easycare chemical finishes for application to 100% cotton and low polyester/cotton blended fabrics. The aim of the project is to acquaint the industry of the benefits afforded by such chemical finishes, and through their normal marketing channels stimulate a demand for such products, which in turn will lead to an increased off-take of fabric from the industry for both domestic and export markets.

An integral part of the project is to assess consumer acceptance of such products and prepare a marketing survey for domestic and export markets outlining the prospects for such products, and commenting on the appropriate channels of distribution, cost and selling price structures, competitive products, economic and fashion trends etc. The final report on this work will serve as a marketing briefing document to the industry.

ATTACHMENT V (a)

JOB DESCRIPTION

- Post Title: National Marketing Organization
- Textile Fabrics and Garments
- Inputs Required: During 2nd Quarter 1985 (First Part)
During 1/2nd Quarter 1986 (Second Part)
- Duty Station: Ahmedabad (ATIRA)
- Purpose of Project: To introduce to the textile industry new chemical finishes imparting easycare properties to 100% cotton and low polyester/cotton blend fabrics and garments. These new finishes are designed to upgrade the performance and consumer acceptance of such products - stimulating a demand for these in the domestic market, and the subsequent development of an export trade. It is anticipated that the development of these markets will substantially increase the total off-take of fabric from the industry.
- Duties: The organization will work in close collaboration with ATIRA senior staff and undertake the following specific tasks:
- First Part
- (1) To familiarise themselves with the aims and objectives of the project and progress to date including results of local field test trials undertaken on products produced in project work.
 - (2) Working on conjunction with the Project Co-ordinator and senior assigned staff at ATIRA to provide inputs as required in:
 - (i) relating the conclusions drawn from the initial field test trial to goods intended for European and N. American markets;
 - (ii) the planning of a larger field test marketing of a restricted range of products.
 - (3) To obtain relevant information required for an Export Market Survey of W. European and N. American markets for the textile products concerned in the project.

Second Part

- (1) To supervise and conduct a market field test of garments, including distribution and collection of information from users.
- (2) Analysis of field test results.
- (3) Prepare a Market Survey Report for domestic and export markets - Germany, France, U.K. and U.S.A. - for these textile products. The export survey to be conducted as a desk study. The report should be complete in all relevant aspects, including - distribution channels, cost and selling structures, competitive products, economic and fashion trends, trends in demand and consumption etc., etc.

The organization will also be expected to prepare a report setting out the findings of their mission and their recommendations to the Government on further action which might be taken. Presenting this information in collaboration with ATIRA in a manner that it serves as a briefing document to the textile industry.

Qualifications:

The Organization should have demonstrable experience in the conducting of market research assignments in India and western export markets, for textile fabrics and garments.

In addition, the organization should have the capability of conducting field trials as required in the project.

Language:

English

Background Information:

In recent years ATIRA has developed a strong R + D capability in the field of chemical finishes for application to textile piece goods. The current project is designed to introduce to the textile industry easycare chemical finishes for application to 100% cotton and low polyester/cotton blended fabrics. The aim of the project is to acquaint the industry of the benefits afforded by such chemical finishes, and through their normal marketing channels stimulate a demand for such products, which in turn will lead to an increased off-take of fabric from the industry for both domestic and export markets.

An integral part of the project is to assess consumer acceptance of such products and prepare a marketing survey for domestic and export markets outlining the prospects for such products, and commenting on the appropriate channels of distribution, cost and selling price structures, competitive products, economic and fashion trends etc. The final report on this work will serve as a marketing briefing document to the industry.

It is anticipated that this element of the project work will not exceed a total cost of \$ 22,000 or Rupee equivalent.

ATTACHMENT VI

STUDY TOUR NO. 2

Nominee: Mr. C.S. Rao

Duration: 6 weeks

Timing: June/July 1985

Countries to visit: W. Germany, U.K., U.S.A.

Objective: To gain experience in the technology of applying chemical finishes to cotton and cotton/polyester fabrics imparting easycare properties, the manufacture of garments from such fabrics, and current developments in these and related fields.

Purpose: To enable the nominee to take a more active part in the above project and provide additional input to forward ATIRA Research and Development work.

Field of Study: (1) Easycare chemical finishes and their application.
(2) Garment manufacture: Garment technology e.g. shirts, trousers, dress-wear.
(3) Developments in wet processing.

Suggested Itinerary:

W. Germany - 1 week

- | | | |
|--|--------|--|
| 1. Hoechst Aktiengesellschaft
Postfach 800320
6230 Frankfurt/Main 80
W. Germany | 2 days | Technical discussions on wet processing, dyeing, finishing. |
| 2. B.A.S.F. AG
6700 Ludwigshafen
Rhein | 2 days | Technical discussions - wet processing and chemical finishing. |

U.K. - 2 weeks approximately

- | | | |
|--|--------|--|
| 1. Marks and Spencer Plc
Baker Street
London | 4 days | Quality standards and requirements for easycare fabrics and garments.

Current practices in garment manufacture. |
|--|--------|--|

- 2. British Home Stores Ltd. 1 day Quality standards and requirements in easycare fabrics and garments.
- 3. Littlewoods Ltd. 2 days Quality standards for easycare fabrics and garments. Aspects of Q.C. in imported textile products.
- 4. British Launderers Research Association Harrogate 2 days Industrial laundering practices. Aspects of chemically finished fabrics/garments in laundering.

U.S.A. - 3 weeks approximately

- 1. Cluett Peabody Corp. 3 days Ammonia mercerisation - works trial on ATIRA fabric
Sanforised Corp.
530 Fifth Avenue
New York, N.Y. 10036
- 2. Du Pont de Nemours and Co. 1 day Technical discussions
R + D Division Wet processing and chemical finishing
Organic Chemicals Dept.
Wilmington de 19898
- 3. Clemson University 3 days Technical discussions
Textile Department Wet processing and chemical finishing.
Clemson Mill visit(s) - special interest
S. Carolina 29631 Continuous openwidth preparation of cotton and poly/cotton blends
- 4. J.P. Stevens and Co. Inc. 1 day - do -
Stevens Centre
400 East Stone Avenue
P.O. Box 2850
Greenville
S. Caroline 29602
- 5. U.S. Dept. of Agriculture 5 days - do -
Southern Region Research Centre
P.O. Box 19687
New Orleans
- 6. Rohm and Hass Co. 1 day Textile auxiliaries as applied to yarn and fabric
Independence Mall West
Philadelphia
PA 19105

Priority in visits should be of the following order:

- Week 1 : Items 1 and 2
- Week 2 : Items 3, 4 and 6 if time is available
- Week 3 : Item 5

