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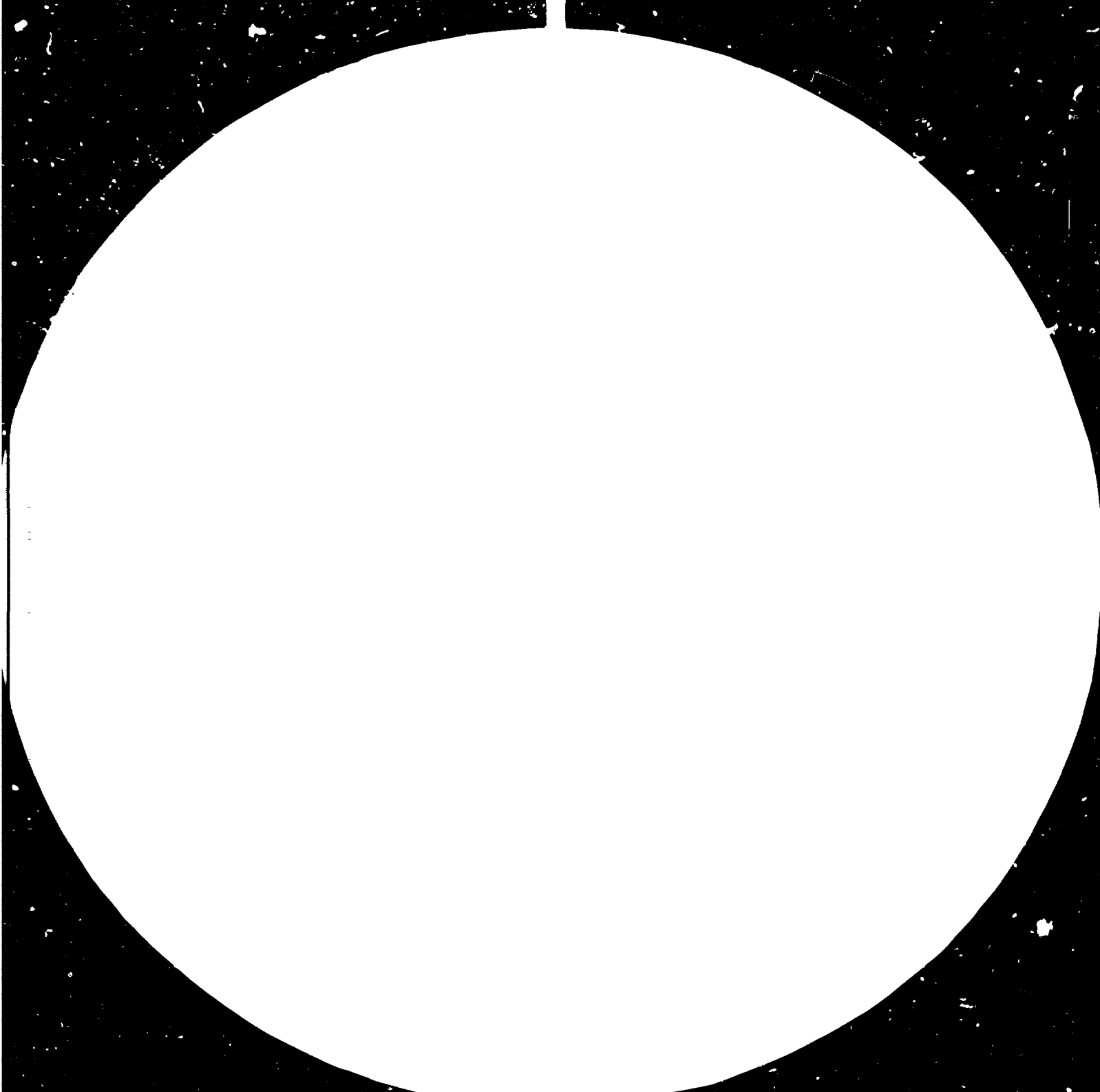

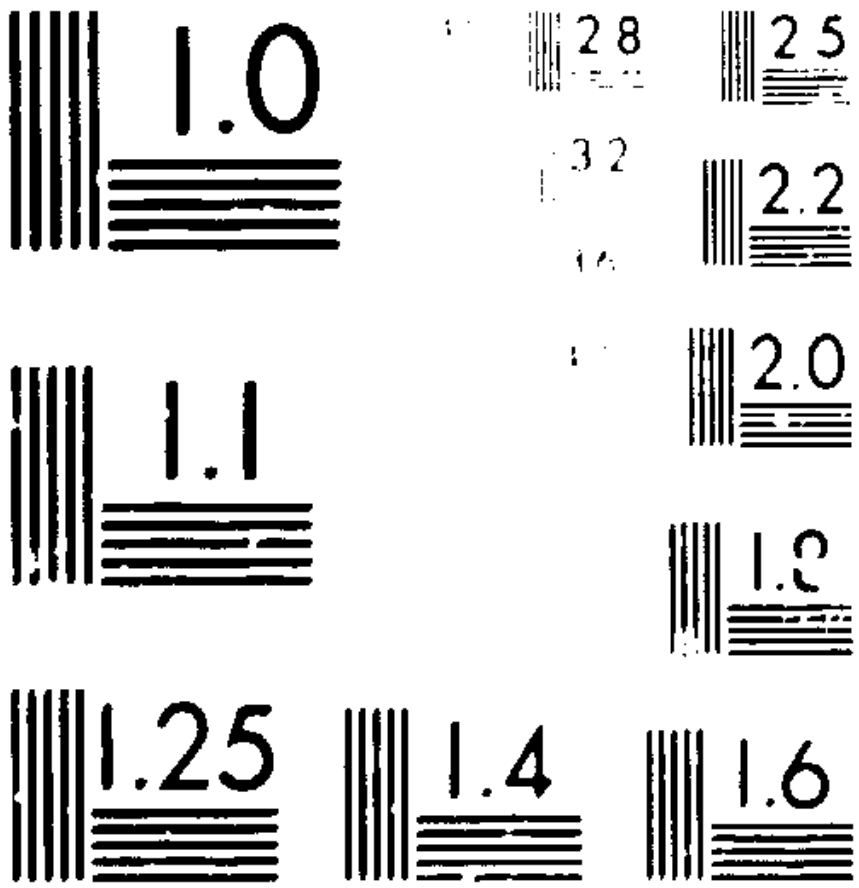
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11877

DP/ID/SER.A/383
15 September 1982
English

TEXTILE DEVELOPMENT CENTRE, PHASE II

DP/EGY/77/008

EGYPT.

Technical report: Survey and technical consultancy to manufacturing plants on woven garments, installation of machinery and equipment for the garment department at the Textile Development Centre of Alexandria, training of personnel*

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

Based on the work of Hartwig Hollmann,
adviser on woven garment manufacturing

United Nations Industrial Development Organization
Vienna

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I N D E X

EXPLANATORY NOTES

Reference to the Textile Development Centre (TDC) means the Centre set-up at the Textile Consolidation Fund premises at El Siouf, Alexandria, Egypt.

The Textile Consolidation Fund (TCF) is a State Organization for the Development of the Textile Industry with branches in Alexandria and elsewhere and head office in Cairo. The TCF is voiced abroad through its office in Geneva/Switzerland.

The TCT carries out testing and quality control for the industry, especially in relation to exports at its Testing and Quality Control Centre (TQCC) in Alexandria.

SUMMARY

The number of the project is DP/EGY/77/008.

The purpose of the project was:

- to estabslih a Garment Training Department for the local Garment Industry at the TDC premises in Alexandria.
- Installation of machinery and equipment - cutting, sewing, finishing (pressing) for training purposes.
- Training of counterpart personnel for the Garment Department.
- Assistance to garment plants through technical consultancy.

This adviser was recruited by the United Nations Industrial Development Organization for a period of 3 months.

This report covers the installation of machinery and equipment for cutting and sewing at the TDC in Alexandria under the advisor's supervision. (Annex 2).

A further objective was the training of counterpart personnel for the Garment Department.

Only every now and then one person with weaving background, but very little garment experience, was available. It is absolutely necessary to recruit a supervisor with garment experience who should manage and further develop the Garment Department with more personnel (three persons) not yet employed.

A special training programme for counterpart personnel to gain more industrial garment experience has been designed. (Annex 3).

As this advisor had not been given any further personnel for the purpose of training his activities mainly consisted of Technical Consultancy in garment factories in the regions of Alexandria, Mehalla-El Kubra and Cairo.

Detailed technical reports which were based on Survey Reports (Annex 7) of inspected factories have been worked out for these factories.

As this mission was very short it was not possible to follow-up the suggested recommendations in the plants. The consultancy and the final technical reports have been very much appreciated by the companies.

1. INTRODUCTION

A The Textile Development Centre (TDC)

The TDC has been set-up over the past 5 years at the Textile Consolidation Fund (TCF) in Alexandria where there already exists a Testing and Quality Control Centre (TQCC) for Textiles, itself the result of earlier UNDP programme.

The purpose of the Textile Development Centre is to provide assistance to the Textile Industry through applied research and development activities in all aspects of textile manufacture from fibres to finished garments.

The Centre when fully established will have the objectives of:

1. providing pilot plant and testing laboratories for work on industrial problems of immediate use to the textile industry.

2. carrying out pilot plant studies of materials, particularly cotton and its blends, including fibres, dyes, finishes, machines and processes.

3. carrying out qualitative and operational studies on industrial processes in textile mills to increase productivity and efficiency.

4. providing technical consultancy in management and technological problems and extending modern testing techniques to industry.

5. communicating to industry at all levels by organising seminars, conferences, symposia, group discussions and training courses.

6. disseminating technical information to industry, and

7. assisting the industry to set and maintain standards.

B The Garment Expert

The requirements of this advisor were to

1. Assist the local textile industry to extend its applied research activities in the field of woven garment manufacture made from cotton and man-made fibres.

2. Assist in devising and implementing applied research programmes within the TDC and in plants, including studies of

   the optimum processing conditions for the manufacture of woven garments from locally grown cotton and various types of man made fibres,

   how to increase efficiency and productivity in garment processes,

   how to reduce waste and second quality in garment processes.

3. Render direct assistance to plants through technical consultancy, e.g.:

   to assist in setting and maintaining standards,

   to assist in the modernization of garment processing technologies with particular reference to the introduction of new types of fibres and fabrics.

4. Make qualitative and operational studies in garment manufacture.

5. Train counterpart personnel to such a standard that they will be capable of taking over and continueing the work at the end of this assignment.

6. Suggest possible future developments of the TDC and its activities for the ultimate benefit of the local Garment Industry.

C Activities

This advisor was recruited by the United Nations Industrial Development Organization for a period of three months - starting date 31.8.1981 - with the following mission targets:

- Establishing a Garment Department at the TDC. Installation of Machinery and Equipment.
- Training of counterpart personnel for the Garment Department.
- Seminar for the Garment Industry. (Annex 4 .
- Technical Consultancy to the Garment Industry.

For future training purposes machinery for the following product categories have been installed:

Woven Garments (Shirts, pajamas, overalls.)

Knitted Garments (Underwear-Mens Briefs and Vests)

At the same time benches, cupboards and tables made in Egypt have been installed.

This advisor regrets very much that counterpart personnel for the purpose of training at the TDC was hardly available during his mission.

For translations during visits to the plants one counterpart of the Knitting Department of the TDC was very helpful and efficient in her work. After the mission this person returned to her former work at the Knitting Department.

The advisor was given a young lady with weaving experience, but unfortunately this lady was not very much interested in gaining garment "know-how". To get basic knowledge of garment manufacturing in industry a special and detailed training programme for this counterpart was worked out. (Annex 5)

For reasons mentioned above the mission consisted mainly in Technical Consultancy in six Garment Companies.

This advisor worked in the following companies:

Orient Linen & Cotton Co., Alexandria

National Spinning & Weaving Co., Alexandria

Arab-German Co. for Clothing & Equipment, Alexandria

Misr Spinning & Weaving C., Mehalla-El Kubra

El Nasr Spinning, Weaving & Dyeing Co., Mehalla-El Kubra

Nile Clothing Co., Cairo (Private Sector)

Data and information were collected by the companies as Survey Reports and for every company detailed Technical Reports were worked out accordingly. These reports consist of recommendations for improvements mainly in the areas of

- better material utilization in cutting (to reduce waste)

- quality control procedures.
  (To reduce 2nd quality garments)
- suggestions for new machinery/equipment and better production methods and processes.
  (To increase efficiency and productivity)
- operator training.
  (Very important by high absenteeism rates and labour turnover in the Egyptian Garment Industry)
- training procedures for supervisory personnel.
- for one company a new layout for the production department made by this advisor.

These suggestions made as Technical Reports have been discussed with the management of the companies and have been well accepted.

A necessary follow-up in the factories was not possible because the mission was short of time.

Visit- and Progress Reports have been worked out by this advisor for the UNIDO-Project-Manager in Alexandria.

This advisor's work programme is shown in Annex 1.

2. RECOMMENDATIONS

A. The Garment Department at the TDC

1. For the management of the Garment Department at the TDC a competent person should be employed - if this has not been done in the meantime. This person was greatly missed by the advisor. A further development of the Department to the benefit of the local Garment Industry can only be reached with a manager who has had several years of industrial garment experience, e.g. as Production-Engineer, Department-Head or Supervisor, provided with work programmes for the TDC and the Garment Industry by this advisor. If there was still need for such a supervisor, this advisor feels the members of the Technical Committee of the TDC could be helpful in recruiting him. This advisor repeatedly underlined the fact that the lack of a senior person could influence the effectiveness of this mission in a negative way, as far as the development of the Garment Department is concerned.

2. It is recommended after employment of a Manager for the department to employ the following staff:

   Cutter - if possible with tailoring background and following industrial garment experience.

   Training for the industry in

   - pattern making and -grading, marking, physical cutting procedures. (Especially in pattern making and -grading a lack of "know-how" was found.)

   Production-Engineer - with garment experience.

   - To train Trainers at the TDC for operator training in the plants. (A special operator training was also missed in most companies, which is necessary especially by high labour turnover and high absenteeism rates.

   - Training of factory personnel in quality control procedures.

   Sewing-Machine-Mechanic - with industrial experience.

   - For maintenance and repairs of machinery and equipment at the Garment Department of the TDC.

- If he has sufficient experience this mechanic could give basis courses for learner mechanics still being trained in the industry. (Some companies kept their machinery/equipment in very bad conditions.)

3. The Garment Department should work together with a leading garment company in the Alexandria area, regard it as a kind of pilot-plant. This could be arranged through members of the Technical Committeee at the TDC. From this company the Garment Department should get logistical aid, especially in the starting period. This has been carried out remarkably well already for the installation of machinery and equipment at the TDC.

4. A good connection and regular exchange of experiences and views should take part with the Textile Department of the Faculty of Engineering in Alexandria. As this advisor has been informed by the Director of the Textile Department, garment courses have recently been taken up in the programme for studies. Both institutions - Garment Department TDC and Faculty of Engineering (Textile Department for garments) - could work out training programmes together in order to utilize the installed machinery at the TDC. In future times this could be the start of a "Garment College" after the example of European institutions.

5. It is absolutely necessary that the personnel of the Garment Department, at least the Supervisor, should be able to get information regularly at machinery fairs, e.g. "Bobbin-Show" in the States or the Cologne-Show in West Germany.(All three years.) This should be combined with visits of garment factories in the countries where the fairs take place. Furthermore it is recommended in order to be always up to date in the "Garment-world", to subscribe for the Garment Department the leading technical magazines. This advisor suggests that the TDC should become a member of the "Clothing Institute" in London. (Annex 6.)

6. Having overcome the personnel difficulties at the TDC - this advisor knows that in Egypt it certainly will not be to easy for the companies to engage this technical staff, but one should not give in and be optimistic and believe in the future - it is recommended to plan a follow-up mission for a duration period of appr. 6 - 9 months. At this time the mission should mainly concentrate to work with counterpart personnel at the TDC and whereever possible with the Textile Department of the Faculty of Engineering in Alexandria. Main effort should be made in the areas of

Pattern making and -grading

Material utilization in cutting (this advisor noticed in all companies tremendous waste of materials in cutting and subsequently greatest potential of savings in piece-goods)

Operator Training (Training of Trainers for the Garment Industry)

Quality Control Procedures

Development of Middle-Management

As far the above mentioned subjects work programmes for the technical staff at the TDC to be worked out.

Furthermore follow-up visits to garment companies have to be planned which were not possible for this mission in this short time.

B. The Garment Industry (Nationalized)

1. Rationalization of the Garment Industry.
Too many different products are being produced in the plants and therefore the product mix on the production floor (sewing-department) is too big in most companies. Very low productivity and sometimes poor quality are the result of this policy. It is recommended to introduce more product orientated plants or in larger organization separate departments, as already developed in the largest Egyptian Garment Company. To reach this aim it is necessary to make an inventory of the present situation of the Garment Industry and further of the necessary amount of ready-made garments which is needed to provide locally produced apparel for the Egyptian people. For this purpose a planning/clearing office at the Ministry of Industries should be established which could guide the existing garment companies and plan to reduce the big variety of items produced and increase their capacity in one product category to make Egypt more independed from imported ready-made garments and thus save foreign currency.

2. In connection with point 1. a standardization of machinery/equipment should be achieved. In most factories too many brands of machinery are being used for the same type of operations. The results are difficulties in providing spare-parts, problems for the mechanics, training problems for operatives sometimes poor quality of the final product and all this summarizes in poor productivity. It is recommended that the a.m. clearing/

planning of the Ministry of Industries should make an inventory of the different brands in the plants and distribute in a way that each plant uses one brand only for their machinery/equipment.(A project of this kind has already been undertaken in the Textile-Industry in India.)

3. Those companies which are already leading and exemplary in their product category with regard to quality, productivity, machinery/equipment, training of personnel, should act as so called "pilot plants" for the Egyptian Garment Industry in their respective field. It is recommended in cooperation with the planning/clearing office, the Garment Department at the TDC and the Textile Department of the Faculty of Engineering in Alexandria, to train new recruits in all areas of garment manufacturing for the industry in these pilot-plants and to transfer them to less developed plants in order to upgrade and improve the standard of the whole garment industry. These pilot-plants themselves should preferably produce for the export of apparel.

4. In most companies the rates of labour turnover and daily absenteeism rates are very high which leads to a lower productivity and often also to poor quality. This fact should be more stressed in the plants where newcomers (learners) are trained as sewing operatives. It is recommended to install separate training departments which should be supervised by a special Trainer in all garment plants. A basic education and training of the Trainers for the garment industry should be carried out in special courses by the TDC in Alexandria. Better quality and higher productivity will be achieved by systematic training programmes in the garment industry.

5. The biggest potential in cost savings was found in the material sector in the cutting area of all plants. In some plants it was really a "waste of material" mentality. The main reasons are the lack of cutting planning, marking and direct supervision procedures. In his technical reports for the plants and verbally this advisor has mentioned these facts in a most explicit way. It is recommended to train the cutting supervisory personnel of the companies in "Material Cost Savings" in courses at the TDC in Alexandria. A saving specially in the material sector of piece-goods plays a major part in the production costs, as the costs of labour are low compared to the costs of material.

Annex 1

Textile Development Centre

DP/EGY/77/008

Hartwig Hollmann

Advisor in Garment Industries (Woven)

Post 11 - 08 B

Dates: 31 August 1981 to December 1,1981

Location: Alexandria

WORK PROGRAMME

Installation of machinery and equipment at the TDC in Alexandria	- 2 weeks
Introductionary visits with local Director and UNIDO-Project-Manager to Garment Companies	- 1 week
Technical consultancy in garment plants in Alexandria, Cairo, Mehalla-El Kubra	- 7 weeks
Report on visits Technical reports for the companies Development of an industrial training programme for counterpart personnel	- 2 weeks
Briefing/debriefing in Vienna and Cairo	- 1 week
Final report made at advisor's home	

Annex 2

Installed Machinery/Equipment at the TDC in Alexandria

Willcox & Gibbs	- Lockstich model 101 - for plain sewing
W & G	- Binder - 61-02 x 240 - 2 needle 4 thread chainstich interlock machine for collarette binding
W & G	- Overlock 504 - 4 - 45 - Single needle 3 thread overlock for overlock seaming and closing
W & G	- Cover seam - 41 - 01 x 356 - Chainstich interlock 3 needle 4 thread seam covering
W & G	- Elasticating - 61 - 05 x 356 MT 22 - Chainstich interlock 3 needle 5 thread with top elastic metering device for elastic attaching
W & G	- Overlock - 504 - 4 - 25 - Single needle 3 thread overlock hemming (welting)
W & G	- Overlock - 514 - 4 - 61 - 2 needle 4 thread overlock seaming
W & G	- Overlock - 514 - 4 - 69 - 2 needle 4 thread overlock seaming
W & G	- Safety stitch 516 -4 -28 -2 needle 5 thread safety stitch
W & G	- Lockstitch model 101 with hemmer
W & G	- Safety stitch 516 - 4 - 52 - 2 needle 5 thread for heavy materials
W & G	- Safety stitch 516 - 4 - 38 - safety stitch ruffling (shirring) machine
Necchi	- Buttorhole machine 400 - 100
Necchi	- Buttonhole machine 400 - 102
Necchi	- Buttonsewing machine 440 - 100
Necchi	- Lockstitch drop and needle feed model 881 - 100 for topstitching

Annex 3

DETAILED INDUSTRIAL TRAINING PROGRAMME FOR TRAINEES AT THE GARMENT INDUSTRY

A LABORATORY

A1 Design/Grading Department — 5 Days

A11 Work with Designer to understand the different Body Measurements.

A12 Work with Grading Personnel when up and down grading pattern.

A2 Marking — 6 Days

Work with marking Personnel to obtain best possible material utilisation of markers.
Make several markers.

A3 Perforating — 1 Day

Work with Personnel to make perforated markers.

B CUTTING DEPARTMENT

B1 Piece Goods — 1 Day

B11 Check in and measure piece goods

B12 Study method of piece goods storage

B13 Learn to read and interpret cutting sheet.

B2 Laying Up — 4 Days

B21 Mark off Laying up table for proper lengths.

B22 Prefigure amount of plys to be Laid up.

B23 Learn laying up by edging one side.

B24 Learn procedure in handling narrow goods, shades, flaws etc.

B3 Cutting Table — 3 Days

B31 Get familiar with the Straight Knife Cutting Machine.

B32 Position marker on Lay.

B33 If possible try to cut a small Lay. - Be Careful! -

B4 Cutting Bandknife — 4 Days

B41 Get familiar with the Bandknife.

B42 Staple templates on stacks to be cut.

B43 If possible try to cut on the Bandknife. - Be careful! -

B5 Numbering/Sorting/Bundling — 2 Days

B51 Learn the operation of numbering.

B52 Learn where to locate number.

B53 Number all parts.

B54 Position tag and tie up.

B6 Quality Control — 2 Days

B61 Work with Quality Control people.

B62 Learn tolerances on cut.

B63 Learn how to check cut ply with master patterns.

B7 Department Planning/Supervisor — 2 Days

B71 Learn daily duties plan and schedule work.

B72 Reports daily, weekly, monthly.

B73 Find out supervisors role in quality and production.

B74 Learn the importance of inter-departmental cooperation, particularly between the cutting and sewing department.

C SEWING DEPARTMENT

C1 Basic Machine Knowledge — 1 Week

C11 Different types of machines and equipment.

C12 Their function and uses.

C13 Stitch formation.

C14 Attachments, guides and gauges.

C15 Recognise faulty stitching. Learn to correct it.

C2 Learn to operate difficult types of Machines — 1 Week

C21 Learn threading and sewing different types of machinery.

C3 Sewing Department — 4 Weeks

Try to sew all operations of the garment which Orient Linen is at that time producing.

C4 Quality Control — 1 Week

C41 Learn procedure of Quality Control in the lines and at the End of production.

C42 Learn how to measure garments properly.

C43 Learn types of defects on all operations.

C5 Work with Line Supervisor and Department Head — 1 Week

When Part C1 - C4 has been completed learn to run the floor.

Assuming responsibilities at quality production and control personnel under the direction of the Line Supervisor and Department Head.

Get involved to solve proplems in all phases of the work, learn to communicate properly.

D FINISHING DEPARTMENT

D1 Pressing Machinery — 2 Days

Familiarisation with pressing equipment.

D2 Work Distribution — 1 Day

D21 Check garments in conjunction with cutting sheet completed in the pressing storage area with respect to size, sheet and quantity.

D22 Repairs coming from sewing department place in proper location.

D23 Method for repairs which go back to sewing department.

D3 Press Operation and Ironing — 6 Days

D31 Proper position of garment on press.

D4 Folding — 2 Days

Learn to fold garment of acceptable quality.

Learn the different types of garments

D5 Examining — 1 Day

Learn what defects may occur and what the tolerances are -
(Poor collar shape, fullness, crooked pockets, zig-zag fronts, manufacturing defects, oil and dirt, flaws, puckering, crooked labels, stripes).

Annex 4

Seminar

PROBLEMS FACING THE EGYPTIAN GARMENT INDUSTRY AND POSSIBLE SOLUTIONS.

Textile Development Centre, Gamila Buhreid Street.
El-Siouf - Alexandria - 23 November 1981.

Programme

11.00 - 11.10 Welcome and Introduction.

11.10 - 11.55 Lecture:

Internal Problems.

Machinery/Equipment.
Organization.
Production planning and - control.
Training of operatives.
Maintenance.

External Problems.

Market trends.
Sales policy, product mix.
The influence of fashion and design.

11.55 - 12.10 Discussion.

12.10 - 12.30 Refreshments.

12.30 - 13.15 Lecture:

"Reduce Waste".

Better material utilization in the Cutting Department.

13.15 - 14.30 Discussion.

Annex 5

CONTENTS OF THE COUNTERPARTS PROPOSED TRAINING PROGRAMME.

Name of Trainee	:	Eng. Nabila El-Attar
Training Plant	:	Orient Linen & Cotton Company, Alexandria
Responsible for Training Programme TDC	:	Open
Counterparts in the Factory	:	Eng. Nashatt Eng. Kharia Kamel Mohamed
Training Period	:	16 weeks
Date started	:	1 December 1981 or 1 January 1982
Reports	:	1) Weekly Progress Reports to TDC and copy to Orient Linen & Cotton Company. 2) Final Report about the Training Period.

Proposed : Departments

A	Pattern Department	2 weeks
B	Cutting Department	3 weeks
C	Sewing Department	8 weeks
D	Finishing Department	2 weeks
E	Other Functions	1 week

A Pattern Department

A)	1	Design	) 5 Days
A)		Grading	
A	2	Marking	6 Days
A	3	Duplicating Markers	1 Day
			12 Days = 2 weeks

B Cutting Department.

B	1	Piece Goods	1 Day
B	2	Laying up	4 Days
B	3	Cutting Table	3 Days
B	4	Cutting Bandknife	4 Days
B	5	Numbering/Bundling	2 Days
B	6	Quality Control	2 Days
B	7	Department Planning Work with Supervisor	2 Days
			18 Days = 3 weeks

C Sewing Department

C	1	Learn basic machine knowledge - with mechanic	1 week
C	2	Learn to operate different types of machines	1 week
C	3	Sewing Department (Sew all operations)	4 weeks
C	4	Work with Quality Control	1 week
C	5	Work with Supervisor and Department Head	1 week
			8 weeks

D Finishing (Pressing) Department

D	1	Pressing Machinery	2 Days
D	2	Work Distribution	1 Day
D	3	Pressing Operation	6 Days
D	4	Folding	2 Days
D	5	Examining	1 Day
			12 Days = 2 weeks

E Other Functions

E 1 Management Functions

Work with Production - Engineer to obtain best results

Planning
Organising
Coordinating
Controlling
Personnel
Payroll
Office Procedures — 2 weeks

Annex 6

SUBSCRIPTION OF TECHNICAL PERIODICALS.

MEMBERSHIP AT THE CLOTHING INSTITUTE IN LONDON.

UNITED NATIONS

TEXTILE DEVELOPMENT CENTRE

Memorandum

To: Mr. Mohammed Hussein

From: H. Hollmann

Date: 21st October 1981

Subject: Subscription of Periodicals for the Garment Centre.

I have written on October 3rd to the Clothing Institute in London asking for a list of periodicals that they offer to the Clothing Industry. Furthermore requested informations about the membership in the Clothing Institute. (Attached is a copy of a short write-up from the Institute.)

The address from the Institute is as follows:-

The Clothing Institute
Albert Road
Hendon
London NW4 2JS
Great Britain.

May I suggest to subscripe the following periodicals for the Garment Centre, which I found not in the Informations Centres list.

1) Title : Bobbin Magazine

Published : Monthly

Publisher : Needle Trade Publishing Corp
1120 Shop Road
Columbia, S.C. 29202
USA.

2) Title : Bekleidung + Wasche

Published : Twice Monthly

Publisher : Heinrich Lapp Verlag GmbH & Co. KG
P.O. Box 345
4050 Moenchengladbach
West Germany.

3) Title : Manufacturing Clothier

Published : Monthly

Publishes : United Trade Press, Ltd.
Tailor & Cutter House
24-43 Gerrard Street
London WIV 7LP
Great Britain

4) Title : Menswear

Published : Monthly

Publisher : Menswear
Knightway House
Soho Square
London WIV 6DT
Great Britain.

Thank you.

H. Hollmann

c.c.: Dr. R. Nield
Eng. M. El Aref

THE CLOTHING INSTITUTE

17/18 Henrietta Street, London, WC2E 8QN NEW ADDRESS – SEE MEMO

The Clothing Institute is the professional body for the Clothing Industry. Its objects include training, recognition of achievement by diploma awards, and the acquisition and dissemination of technical information.

The Institute confers the qualifications of Licentiate Associateship and Fellowship in recognition of status of clothing technologists. It arranges conferences, summer schools, lectures and factory visits, provides library facilities and publishes a Journal and technical reports. The Institute has members in twenty-four countries.

Grades of membership are as follows: —

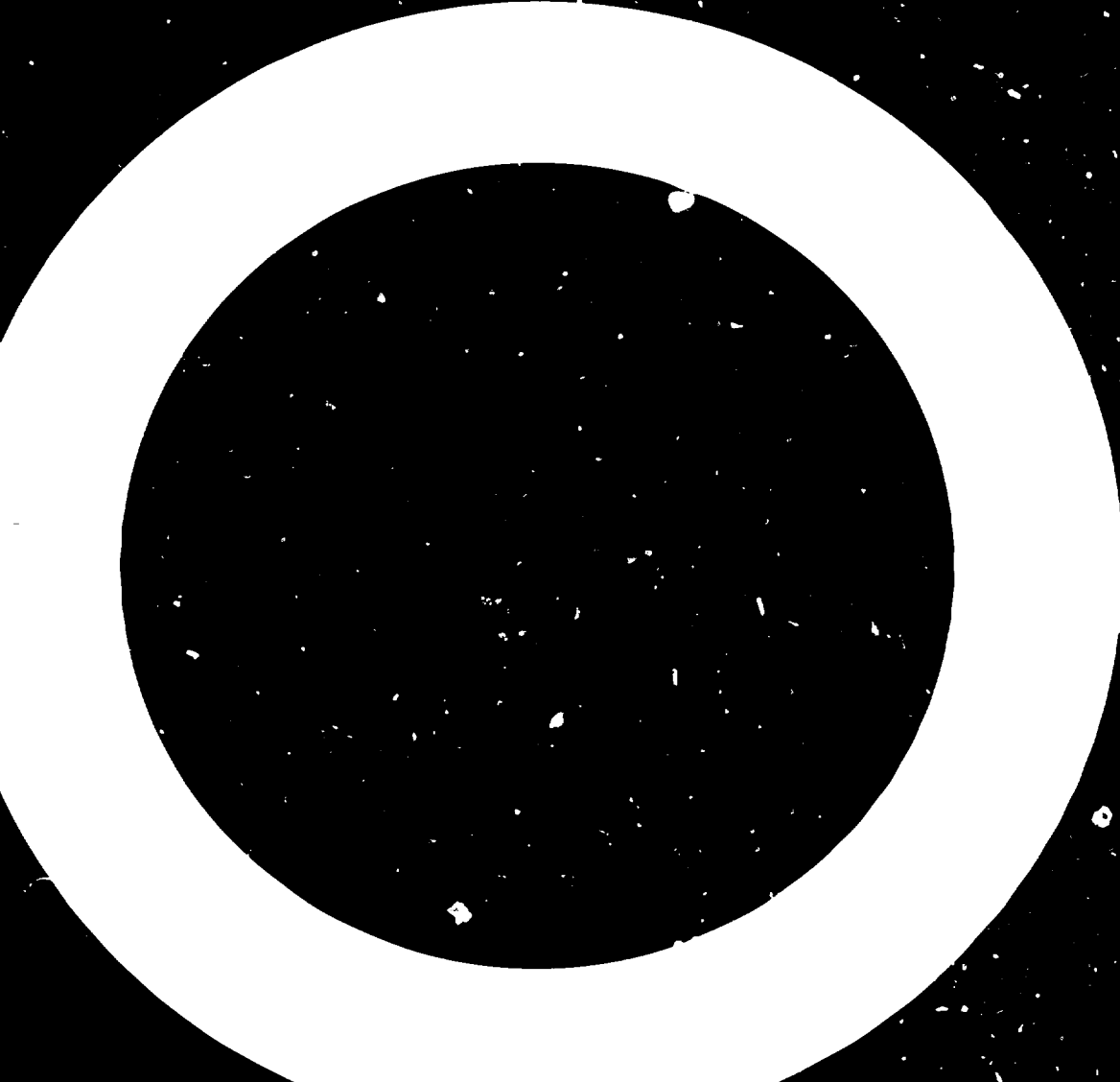
Patrons: are firms engaged in or connected with the Clothing Industry, who pay a minimum annual subscription of £21.00.

Ordinary Members: are persons engaged in or connected with the Clothing Industry, paying an annual subscription of £5.00.

Senior Students: are part time students or young people receiving training in Industry under the age of 25. The annual subscription for this grade is £2.50.

Student Members: are full time students of any age, or part-time students under the age of 22. They pay an annual subscription of £1.25.

Details of methods of qualifying for the professional grades of membership, namely, Fellowship, Associateship and Licentiateship, can be supplied on request from the Secretary of the Institute.



Annex 7

SAMPLE OF THE SURVEY REPORTS MADE AT THE VISITED GARMENT COMPANIES

Page 1

Date: / /

Subjects	Specification - Fact Findings -
A) General Information - Group -	
1) Address Cable, Telef, Telex	
2) Chairman/Executive officer	
3) Main Products	
4) Total Employees of the Group	
5) Company established.	
6) Most potential Customers (Local/Exports)	
7) State/Private Enterprise	

Date: / /

Subjects	Specification - Fact Findings -
- Garment Division -	
8) Head of the Division	
9) Head of the Technical Side	
10) Garment Div. established	
11) Types of Products produced	
12) Brand names	
13) Most potential Customers Local/Exports	
14) Price Range in the Market - Low; Medium, High -	
15) Average Price of a garment	
15) Total Employees Garment Division	

Date: / /

Subjects	Specification - Fact Findings -
17) Future Plans targets, Products.	
B) Technical Information 1) Daily production in the different product categories	
2) Working hours day/month/year	
3) Average Size of a cutting-order	
4) Work in process/Units or Dozen	
5) Cycle Time/days	
6) Size Range of Products in the Different product categories	

Page 4

Date: / /

Subjects	Specification - Fact Findings -
7) No. of different styles in a range	
8) Rate of daily absenteeism in % Past Records	
9) Labour turnover year	
10) Production planning/Control System	
11) Pay-system	

Date: / /

Subjects	Specification - Fact Findings -
(C) Cutting Department 1) Personnel Information 1.1. Head of Cutting	
1.2. No. of Employees	
1.3. Average earnings per day/week/month	
2) Technical Information 2.1 Marking system	
2.2 Die-Press/clicking Yes or no.	

Date: / /

Subjects	Specification - Fact Findings -
2.3 Which parts	
2.4 Material Ratings Per unit/Dozen	
2.5 Width of material used.	
2.6 Most promoinent material used	
2.7 Average price of a meter/yard	
2.8 Relation wages to 1m material Value of 1m in working minutes	
2.9 Physical facilities, type of machinery/equipment used (seperate list)	

Date: / /

Subjects	Specification - Fact Findings -
D) Sewing Department	
1) Personnel Information	
1.1. Head of Sewing Department	
1.2. No. of Supervisors	
1.3. No. of chargehands/ operatives servicehands	
1.4. No. of Employees/Sewing	
1.5. Pay-System	
1.6. Average earnings per day/week/month	

Date: / /

Subjects	Specification - Fact Findings -
2. Technical Information 2.1. Type of supervisory Personnel Group leaders, Chargehands etc.	
2.2. Type of quality-Control systems.	
2.3 Average production Figures on key operations	

Date: / /

Subjects	Specification - Fact Findings -
2.4. Units per operator per day	
2.5. Minutes per Garment	
2.6. Working/process system	
2.7. Average Bunle size	
2.8. Production Control system	

Date: / /

Subjects	Specification - Fact Findings -
2.9 Training-system for (newcomers)	
2.10. Physical facilities Type of machinery/Equipment used (seperate list)	
E. Finishing/Pressing/Ironing Department. 1.) Personnel Information 1.1. Head of Department	
1.2. No. of Employees	
1.3. Average earnings per day/ week/month	

Date: / /

Subjects	Specification - Fact Findings -
2. <u>Technical Information</u> 2.1. Working system	
2.2. Physical facilities Machinery /Equipment used.