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DP/ID/SER.A/627 22 August 1985 ENGLISH

ASSISTANCE TO THE TEXTILE INDUSTRY SI/SYR/84/801 SYRIAN ARAB REPUBLIC Technical report: Assistance to the Syrian public underwear Industry*

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

> Based on the work of Thomas J. Robinson , Expert in Cost Accounting

United Nations Industrial Development Organization Vienna

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V.85-30170

1. NAME: T.J. Robinson

4. PROJECT ACTIVITIES:

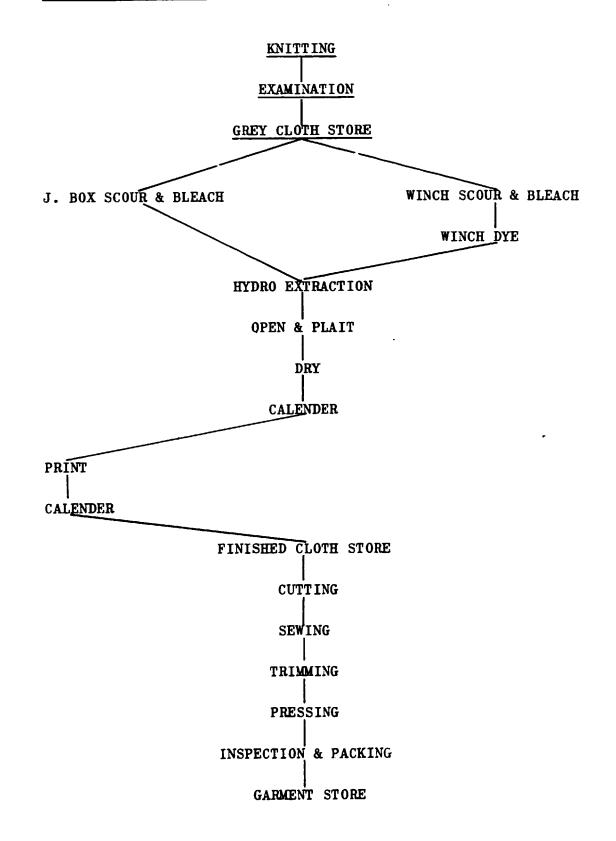
2. PLACES VISITED: Orient Underwear Company, Damascus

3. DATE OF MISSION: 23rd May to 19th June 1985

- 4.1 To examine the Costing structure, to discover the extent to which actual productivity at all stages of production can be accurately assessed.
- 4.2 Assess the effect on improvements in efficiency and productivity as suggested by other experts of the team.
- 4.3 Suggest improvements in the cost structure, to calculate competitive export prices.
- 4.4 Measure the improvements in productivity after six months (return visit) and suggest modifications and further actions to be taken.

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5.1 Production Sequence



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5.2 Cost Centres

Costs are allocated to 4 main production cost centres and two overhead cost centres:-

Knitting

Wet Processing

Cut & Sew

Finishing

Marketing

Administration and Finance

The Accountants allocate the costs of these functions on the basis of weight of Knitting and Wet Processing and on the basis of numbers of garments handled in cutting and sewing and finishing using standard throughputs (see Appendix 1).

The schedule of production in 1984 shows the extensive range of garments with weight in kgs and selling prices per dozen in Syrian pounds (Appendix 2).

5.3 Cost Analysis

Expenses are analysed under the following categories:-

Wages	-	direct, indirect and supervision
Yarn Costs	-	cotton and wool
Auxiliary Materials	-	(elastic, sewing cotton etc.)
Dyestuffs		
Printing	-	by outside contractor
Chemicals, including	bleach and soap	p powder
Polythene bags		
Cartons		
Packaging Materials		

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Repair and Maintenance

Electricity	-	apportioned by floor area
Other Services	-	water, air conditioning, garage, fire service - apportioned on wages

5.4 Conversion Efficiency

Knitting	95%
Cutting and Sewing	85%
Finishing	88%
Overall	71%

These figures vary from product to product, but this is the current average performance. There is no weekly or monthly report comparing results with previous periods or with a standard performance.

5.5 Wages Systems

A basic wage is paid to all operatives who can achieve the minimum standard of performance. In addition, a bonus scheme is in operation which pays up to 25% bonus for performance in excess of the basic standard. This applies even in sewing where the standard time allowed for each garment (see Appendix 1) would permit a system of payment by output of good quality garments.

5.6 <u>Machine Efficiency</u>

A statistical survey was carried out by the Knitting Expert who calculated that machine efficiency averaged 80% over the period under review.

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6. OBSERVATIONS

6.1 Cost Centres

Wet Processing embraces several processes, some of which are not common to all products. If they remain combined under one heading it is not possible to apportion costs totally accurately to products, but an attempt is made to distinguish products which do not use all of the functions comprising "Wet Processing".

6.2 Cost Analysis

Electricity is apportioned to departments on the basis of floor area.

Water, Air Conditioning, Fire Service and Garage; although very different, are grouped together as "Other Services" and apportioned on wages.

Repairs and Maintenance are allocated at source where possible. Maintenance of services is apportioned on wages.

6.3 Cost Reporting

Reports are prepared quarterly showing the output at knitting, wet processing, cutting and sewing and finishing. Material usage, services and other costs are analysed. Stocks of raw materials, work-in-progress, and finished goods are measured and incorporated in the reports.

The completed cost analysis is compared in a report with the achievements in the previous quarter.

6.4 Fabric Store

Knitted fabric is stored on the floor in the fabric store with no obvious means of extracting anything but the last-in. Old fabric could remain at the bottom of the pile for ever. Stocktaking would be carried out with difficulty.

6.5 Machine Capacities in Knitting

There is no record of the theoretical machine throughputs for the different knitting patterns, diameters and machine types and the only assessment of machine efficiency available was that calculated by the Knitting Expert.

7. SUGGESTED IMPROVEMENTS IN THE COST STRUCTURE

7.1 Cost Centres

- The number of cost centres should be increased to facilitate accurate costing of all products through the relevant processes.

7.1.1 Knitting, Examination and Grey Cloth Store

7.1.2 J Box Bleach and Scour

7.1.3 Winch, Bleach and Scour and Dye

7.1.4 Hydro Extract, Open and Plait and Dry

7.1.5 Calender

7.1.6 Printing (Done outside but a "process" nevertheless)

7.1.7 Finished Cloth Store

7.1.8 Cutting and Sewing

7.1.9 Trim, Pressing, Inspection and Packing and Garment Store

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7.2 Cost Analysis

7.2.1 <u>Electricity</u> is apportioned to departments on floor area. A much more accurate method is to distinguish between machine usage, lighting and air conditioning. An example of this approach is shown in Appendix 6.

7.2.2 "<u>Other Services</u>" should exclude Garage and Fire Services which are part of the overheads. Water is used in Scouring and Bleaching, Dyeing and Sanitary, and also used to produce steam for Scouring and Bleaching and Pressing and for Air Conditioning.

A technical assessment of water usage would be preferable to the present method of apportionment on the basis of wages. A more equitable apportionment of Air Conditioning is also desirable - differentiating between warm and cold seasons.

8. COSTING METHOD

8.1 Standard Product Costs should be prepared for every product. These standard product costs should be used as follows:-

8.1.1 Monthly assessment of the standard cost of production which would be compared with the actual cost and reported to Directors. Analysis of the reasons for cost differences would form an important part of the report.

8.1.2 To provide the data for differential pricing policy which would be most valuable in breaking into new markets.

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8.1.3 To provide data to accurately calculate the cost effect of changes in production methods and policies.

9. SUGGESTED METHOD

9.1 Computer Assistance

The existing computer has neither the capacity nor speed to give any assistance in a sophisticated accountancy system. The choice of a new computer should be left to a specialist who could also advise on ready-made programmes, training and the strict operating conditions necessary - an air conditioned room with filters to exclude dust operating on the plenum system an absolutely reliable electrical supply; access strictly limited to those personnel who have authority to enter the computer room.

The computer could provide an invaluable service in collection, analysis, storing and publication of production data, stocks, wages and bonus, quality control data, maintenance schedules, machine break-downs and many other records in addition to the standard product costing.

9.2 Preparation of a Budget

9.2.1 The budgeted (planned) number of garments to be produced in the year is the starting point. A comprehensive schedule of garments will have to be agreed as practicable by Marketing, Production and General Management. Acceptance at the highest level is an important factor in any budget programme.

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9.2.2 <u>Budgeted Costs</u> The budgeted number of garments will provide the basis for calculating the following:-

Machine requirements

Material requirements

Labour requirements

Ancillary materials, chemicals, dyes, packaging.

Other costs which do not vary directly with quantity of production will be based on recent experience - the actual level of expenditure in the last year for example in this way a schedule of costs for every cost centre may be prepared.

KNITTING, EXAMINATION & FABRIC STORES

Yarn

Wages

Electricity

Repairs & Maintenance

Other Services

Depreciation

J. BOX BLEACH & SCOUR

Wages

Chemicals

Electricity

Repairs & Maintenance

Water

Other Services

Depreciation

WINCH BLEACH & SCOUR AND DYE

Wages

Chemicals

Dyestuffs

Electricity

Water

Repairs & Maintenance

Other Services

Depreciation

HYDRO EXTRACT, OPEN & PLAIT AND DRY

Wages

Electricity

Repairs & Maintenance

Other Services

Depreciation

CALENDER

Wages

Electricity

Repairs & Maintenance

Other Services

Depreciation

PRINTING

Printing

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FINISHED CLOTH STORE

Wages

Electricity

Other Services

Depreciation

CUTTING & SEWING

Wages

Auxiliary Materials

Electricity

Repairs & Maintenance

Other Services

Depreciation

TRIM, PRESSING, INSPECTION & PACKING AND GARMENT STORE

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Wages Polythene bags

Packing Materials

Cartons

Electricity

Repairs & Maintenance

Other Services

Depreciation

Overheads

9.2.3 Marketing Adminstration and Finance

These functions would be budgeted with reference to the actual expenditure in recent months and in the previous year.

9.3 Standard Product Costs

When sufficient information is available it would be preferable to calculate the standard cost of production at knitting using the theoretical output of the machines to be used for each product; the standard machine efficiency; labour loading and conversion efficiency from that process to the final process. That information, however, is not available and is unlikely to be available from manual records in the near future. Other processes do not present the same difficulties, and sufficient data is available i to calculate standard product costs. A quite acceptable approach of knitting would be as follows:-

9.3.1 Yarn

Price per kilogram divided by the weight of yarn in each product and the result inflated by the conversion efficiency for that product.

9.3.2 Wages

The annual wages budget (including holdiay pay and other costs) divided by the budgeted weight of knitted production, to give a rate in Syrian pounds perkilogram of knitted fabric. The result divided by the weight of yarn in each finished product and inflated for the conversion efficiency of each product between knitting and the finished product.

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This conversion efficiency will exclude the losses of yarn into knitting, whereas the standard cost of yarn (9.3.1) will incorporate all losses.

9.3.3 <u>Machine Costs</u> (Electricity, Water, Maintenance, etc.) All of these are calculated in the same way as Wages - the annual budget is divided by the budgeted knitting production; the result divided by the individual weight of each product and inflated for conversion efficiency from knitting to the final process.

9.3.4 J Box Scour and Bleach

The budgeted costs of wages, chemicals, services, etc. at this process are divided by the budgeted weight of knitted undyed cotton and the results inflated for conversion efficiency from this process to final inspection and packing.

9.3.5 Winch Scour and Bleach and Dye

The budgeted cost of all the cost elements at this process are divided by the budgeted weight of knitted cotton for dyeing and, as previously, inflated for conversion efficiency losses from this process to final inspection and packing.

9.3.6 Hydro Extract, Open and plait and Dry

All knitted cotton fabric is treated at this process and the budgeted elements of cost are divided by the budgeted weight of knitted cotton and inflated for conversion efficiency as before. 9.3.7 Calender

This process is treated separately because printed cotton is calendered before and after printing. The cost elements at Calendering are divided by the budgeted weight of knitted cotton for undyed and dyed outlets, plus twice the weight of printed fabric and inflated for conversion efficiency as before. Printed fabric is therefore double the standard cost of dyed and undyed fabric.

9.3.8 Printing

If it is possible to isolate the cost of protective packaging, handling labour costs and transport costs, these should be divided by the budgeted weight of fabric for printing, inflated for conversion efficiency as previously explained, and included with the contract cost of printing.

9.3.9 Finished Cloth Store

Any costs directly associated with this store should be divided by the budgeted weight of all fabric produced and of course inflated for conversion efficiency losses in future processing.

9.3.10 Cutting and Sewing

Sewing thread, elastic, labels etc. will be charged as a rate per garment. The budgeted cost of elastic for example will be divided by the budgeted number of Grade I garments using elastic. Sewing thread is used in all garments and it is sufficiently accurate to divide the budgeted cost by the budgeted number of Grade I garments to establish a standard cost per garment. Wages and other costs are recovered on the basis of the standard rate of throughput at sewing. The standard sewing throughputs as shown in Appendix I are used to establish the total standard minutes production in the year and proceed as follows.

Budgeted numbers of each type of garment (Grade I) multiplied by the standard throughput = total standard minutes.

Divide each budgeted cost element by the above figure and the result will be the cost per standard minute for each cost element. Multiply these cost rates by the individual standard minutes throughput for each product to get the standard cost per garment (or dozen garments) by cost element.

9.3.11 Trim, Press, Inspect and Pack

The budgeted costs of poly bags will be divided by the budgeted number of Grade I products, allowing for the number of garments per bag for each product. The same approach applies to cartons and packing materials.

Wages and other costs are divided by the budgeted number of Grade I garments to get a cost rate per garment.

9.3.12 Overheads

The overhead budget is spread on the basis of wages at present and that is an acceptable method.

The overbead budget is expressed as a percentage of the total manufacturing wages budget and that percentage applied to the total standard cost of wages on every product. The overhead cost is to be shown as a single figure on each standard product cost and not of course as a separate figure for each processing stage.

9.3.13 Aggregate Standard Product Cost

The budgeted number of each product, multiplied by the standard product cost for each cost element at each cost centre should equal the budgeted cost at that cost centre. This calculation proves the accuracy of the arithmetic but not of course the accuracy of the data.

Monthly comparisons of aggregate standard costs and actual costs provide a check on the validity of the data, and also a vital check on performance.

In calculating the weight of fabric to be used in knitting it was recognised that there would be losses at every stage for example a product with a conversion efficiency as follows:-

Yarn loss	5%
Cutting & Sewing	15%
Finishing	4% waste
11	8% sub-standard

To produce 100 dozen of finished garments @ 1 kg per dozen = 100 kg.

Good output	100 kgs
Sewn garment	113.2 kg
Knitted fabric	133.2 kg
Yarn required	140.2 kg

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10. EFFECTS OF IMPROVEMENTS SUGGESTED BY OTHER

MEMBERS OF THE TEAM

10.1 Appendix 4 and 5 have taken some time to compile, and although not 100% complete, serve to demonstrate the scope for cost saving. Savings based upon these figures may be regarded as the minimum amounts.

10.2 Improvements in Conversion Efficiency

A 5% improvement in conversion efficiency would have the effect of producing a further 61000 dozen garments for no additional cost except poly bags and cartons and delivery costs. Alternatively, the existing output could have been achieved at a cost saving of at least £S2,500,000 (assuming wages and services to be fixed).

10.3 Improvements in Machine Efficiency

A 5% improvement in machine efficiency would have the effect of producing a further 61,000 dozen garments at no labour and machine cost in knitting. Alternatively, the existing output could have been achieved at a cost saving of at least £\$100,000

11. REVIEW IN IMPROVEMENTS ON RETURN VISIT

I suggest that my return visit should be in September or October when the 1986 budget will be in the course of preparation.

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WORK PROGRAMME

POST SI/SYR/84/801/11-51/31.7.B.

NAME :

THOMAS JOHN ROBINSON

MAY 1985

- 23 TRAVEL TO VIENNA
- 24 BRIEFING IN UNIDO
- 25 TRAVEL TO DAMASCUS
- 26 BRIEFING UNDP AND INITIAL MEETING WITH GENERAL ORGANISATION FOR TEXTILE INDUSTRY
- 27 DISCUSSIONS WITH GENERAL ORGANISATION AND INITIAL VISIT TO ORIENT UNDERWEAR FACTORY
- 28 FURTHER MEETING AT UNDP, INITIAL VISIT TO DESIGN CENTRE AND SECOND VISIT TO FACTORY
- 29-30 INVESTIGATE COSTING SYSTEM AT ORIENT UNDERWEAR

JUNE 1985

- 01-16 CONTINUED INVESTIGATIONS AND SUGGESTIONS TO ACCOUNTANTS
- 16 FORMAL VERBAL REPORT ON FINDINGS AND SUGGESTIONS

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- 17-18 PREPARATION OF WRITTEN REPORT
- 19 TRAVEL TO MANCHESTER

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SEWING THROUGHPUTS

Product No.	Minutes per Dozen	Product No.	Minutes per Dozen	
196	32	1405	19	
4280	39	401	24	
201	30	105	37	
1503	21	432	21	
3200	58	484	38	
465	54	481	40	
4000	37	480	66	
419	89	1030	53	
94	95	3190	48	
95	24	171	59	
1040	24	426	19	
3096	24	. 636	19	
93	24	1636	19	
406	24	185	16	
69	24	187	16	
132	35	3245	17	
81	67	805	18	
181	18	60	53	
180	18	69	53	
506	29	885	16	
192	17	240	17	
192	17	1460	2 1	
400	22			

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APPENDIX 2

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PRODUCTION IN 1984

	GARMENTS		QUANTITY	TOTAL	SELLING PRICE -
No		Size	IN DOZENS	WEIGHT-kgs	SYRIAN POUNDS PER DOZ.
60	Wool Vest	38	613	1777	356.10
		40	745	2235	366.30
		42	630	3280	376.50
		44	408	1428	386.65
69	Wool Pants	38	915	2791	373.95
		40	1382	4492	384.15
		42	1037	3526	394.30
		44	941	3458	404.45
		36	5	10	370.00
95	Long	38	300	683	123.25
	Cotton Vest	40	350	837	128.70
		42	314	826	134.65
		44	259	69 9	139.60
96	Dyed	38	648	1218	100.50
	T Shirt	40	146	291	104.95
		42	152	357	108.40
171	Long	38	2073	4457	118,80
	Pants Cotton	40	2793	6368	124.25
		42	2372	6381	130.20
		44	3095	8666	135.65
192	Striped	36	727	669	48,50
	Vest	38	2983	2923	52.00
		S	34378	30940	57.23
		М	65631	65631	57.23

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APFENDIX 2 (Cont'd)

	GARMENTS		QUANTITY IN DOZENS	TOTAL WEIGHT-kgs	SELLING PRICE - SYRIAN POUNDS PER DOZ.
No		Size	IN DOZENS	WEIGHT-Kg5	SIMIAN FOONDS FER DOZ.
192		L	68384	75222	57.23
		Ex L	36240	43488	57.23
		8	8720	12182	72.78
		9	3977	5767	72.78
196	Cotton	s	42442	28351	57.23
	Briefs	М	57829	41348	57.23
		L	55505	44571	57.23
		Ex L	40865	35062	57.23
		8	5126	4613	60.69
		9	4414	4193	60.69
		34	1337	923	45.55
		36	2359	1722	48.50
		38	6091	4751	52.00
		40	6101	5064	54.95
		42	4305	3875	57.90
		44	3107	2858	61.40
200	Cotton	34	1325	1093	61.40
	Vest 1 x 1	36	1395	1256	64.35
		38	8583	9012	67.80
		40	4602	5246	70.80
		42	5174	5950	73.75
		44	8413	10348	77.24
201	Cotton	34	137	89	47.05
	Slip 1 x P	36	2757	1861	50.00
		38	16152	11953	53,00

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GARMENT S		QUANTITY TOTAL IN DOZENS WEIGHT-kg		SELLING PRICE - SYRIAN POUNDS PER DOZ	
No		Size			
201	Cont'd	40	18484	15711	56.45
		42	14302	12443	59.40
		44	10773	10019	62.40
293	Dyed	38	388	44 6	80.20
	Cotton Shorts	40	727	931	84.65
		42	520	749	88.60
		44	469	755	92.10
460	Cotton	34	63	93	80.20
	T Shirt	36	4348	7087	84.65
		38	12246	21553	88.60
		40	19800	36630	92.10
		42	12729	45713	96.55
		44	2864	5986	100.50
		ES	12864	19296	95.80
		S	17491	27986	95.80
r -		М	11744	22314	95.80
		L	13409	26818	95.80
		EL	15678	35667	95.80
461	Cotton	36	1970	3211	84.65
	V Neck T Shirt	38	1472	2591	88.60
		40	1309	2422	92.10
		42	1961	3961	96,55
		44	108	226	100.00
			•		

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GARMENT'S				TOTAL WEIGHT-kgs	SELLING PRICE - SYRIAN POUNDS PER DOZ
No		Size			
1600	Dyed	38	382	390	Included with
	Cotton Slip	40	206	249	Vest as
		42	551	725	set
81	Ladies	44	698	1204	148.05
	Vest	46	622	1126	155.45
		48	1343	2686	161.85
		50	613	1318	167.80
		52	1263	3031	174.25
135	Ladies	38	520	858	98.00
	T Shirt	40	1108	1951	102.50
		42	653	1279	106.95
		44	671	1409	111.40
426	Ladies	42	1293	840	37.15
	Briefs Dyed	44	2354	1648	40.60
		46	711	516	43.55
		48	1061	902	47.05
		50	535	468	50.00
		52	1089	1035	52.95
432	Ladies	44	170	196	68 .3 0
	Briefs Dyed	46	2515	3521	72.75
		48	1892	2933	76.75
		50	1637	2578	80.20
		52	2684	5100	84.65

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	GARMENTS		QUANTITY IN DOZENS	TOTAL WEIGHT-kgs	SELLING PRICE - SYRIAN POUNDS PER DOZ
No		Size			
465	Dyed	36	315	718	168.00
	Long Vest	38	1795	4488	168.00
		40	908	2315	168.00
		42	1518	4023	168.00
		44	135	388	168.00
480	Cotton Shorts	38	3563	3884	64.75
	Shorts	40	2881	3457	68.30
		42	3009	4423	72.75
		44	3571	5535	76.25
481	Cotton Shorts	34	475	442	56.45
	Shorts	40	1605	1888	68,30
		42	3448	4655	72.75
484	Cotton Shorts	36	887	976	68,30
	Shorts	38	1665	2081	72.75
		40	2647	3547	76.25
		42	2176	3242	80.20
		44	3448	5379	84.65
10 3 0	Mixed Pants	40	4584	12377	306
1040	Mixed	1	4584	12377	294.00
	Vest	2	4928	14291	294.00
		3	4398	14294	294.00
1600	Dyed Cotton	38	323	329	153.45
	Vest	40	425	514	162.85
		42	427	562	176.70

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	GARMENT S		QUANTITY IN DOZENS	TOTAL WEIGHT-kgs	SELLING PRICE - SYRIAN POUNDS PER DOZ
No		Size		5	
636	Printed	42	2541	1677	40.60
	Ladies Briefs	44	2748	2061	44.55
		46	2236	1789	48.05
		48	2898	2434	52.50
		50	2373	2053	56.45
		52	2301	2071	60.95
1636	Printed	S	6337	3802	46.65
	Ladies Briefs	М	8533	5546	46.65
	•	L	8690	6083	46.65
		ExL	5922	4442	46.65
105	Childs	3	20	19	41.10
	Vest	5	30	40	46.05
805/	Childs	1	1658	580	26.25
180	Vest	2	6068	2739	28,70
		3	5240	2620	30.70
		4	6210	3416	33.15
		5	4364	2662	35.15
		6	5305	3501	37.65
		7	7962	6529	40.60
		8	1818	1636	42.60
181	Childs	1	3130	1064	. 26.25
	Vest	2	22	9	28.70
		3	532	239	30.70
		5	3038	1671	35.15
		7	40	30	40.00
		92	7018	4058	37.32
		10 4	13173	6587	37.32
		116	13386	8032	37,32

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GARMENTS			QUANTITY In dozens	TOTAL WEIGHT-kgs	SELLING PRICE SYRIAN POUNDS PER DOZ	
No		Size				
885	Childs	2	2193	636	19.80	
	Briefs	3	2749	935	22.30	
		4	2513	880	25.25	
		5	2614	1255	27.25	
		6	2200	1122	29.70	
		7	2878	1583	22.25	
1405	Dyed T Shirt	7	6504	7154	69.73	
	Printed Vest	. 1	548	241	54.95	
		4	174	87	55.00	
3245	Napkins	-	8188	8678	38.60	
4000	Dyed	92	7466	5600	68.42	
	Childs T Shirt 10	104	13632	10906	68.42	
		116	16046	18854	68.42	
		128	15455	19 2 19	68.42	
		140	15131	21183	68.42	
		152	6970	10107	68.42	

TOTALS

WOOL	6676	22997
MIXED	18,494	53,339
DYED COTTON	107,180	132,308
UNDYED COTTON	971,489	1,002,732
PRINTED COTTON	120,886	149,298
TOTAL COTTON	1,199,555	1,284,338
TOTAL	1,224,725	1,360,674

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STANDARD WASTE AT CUTTING

- SOME EXAMPLES

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PRODUCT No.	WASTE %
4000	3.7
196	6.4
192	2.2
1636	3.1
460	1.1
187	4.0
181	3.3
805	6.3
885	4.1
506	3.4
419	7.6

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COST OF PRODUCTION IN 1984

	KNITTING	WET PROCESS	CUT & SEW	INSPECT & PACKING	TOTAL	FABRIC COTTON	SUMMARY WOOL
	£S	£S	£S	£S	£S	£S	£S
COTTON YARN	41,428,041	-	-	-	41,423,041	41,423,041	
WOOL YARN	3,454,214	-	-	-	3,454,214		3,454,214
WAGES	1,372,366	936,071	6,430,896	2,662,902	11,402,235	10,986,042	
AUXILIARY MATERIALS	-	-	2,200,899	-	2,200,899	2,120,564	
DYES	-	101,421	-	- -	101,421	101,421	
CHEMICALS	-	1,116,739	-	-	1,116,739	1,075,977	
POLYBAGS	-	-	-	562,445	562,445	541,915	
CARTONS	-	-	-	1,322,913	1,322,913	1,274,625	
PACKING FOR DELIVERY	-	-	-	770,315	770,315	742,198	
ELECTRICITY	68,558	46,762	321,261	133,028	569,609	548,818	
REPAIRS & MAINTENANCE	64,091	43,715	300,328	124,360	532,494	513,057	
PRINTING	-	447,894	-	-	447,894	447,894	
OTHER SERVICES	663,044	452,253	3,107,021	1,286,554	5,508,872	5,307,793	
TOTAL	47,045,314	3,144,855	12,360,405	6,862,517	69,413,091	65,083,345	
OVERHEADS	937,984	639,785	4,395,383	1,820,038	7,793,190	7,508,731	
TOTAL COSTS	47,983,298	3,784,640	16,755,788	8,682,555	77,206,281	72,592,076	4,641,205

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APPENDIX 4

APPENDIA 5

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SUMMARY OF COSTS IN 1984

		CO	TTON	MIXED	WOOL	TOTAL	
	DYED	PRINTED	UNDYED	TOTAL			
	£S1000	£S'000	£S'000	£5'000	£S'000	£S'000	£S'000
YARN	4067	4589	30,823	39,479	3,887	1,511	44,877
KNITTING COSTS	211	238	1,597	2,046	85	37	2,168
WET PROCESSING	369	750	2,026	3,145	-	-	3,145
CUT AND SEWING	1,082	1,220	9,804	1,210	187	67	12,360
FINISH, INSPECT AND PACK	601	677	5,444	6,722	104	37	6,863
FOTAL MANUFACTURING	6,330	7,474	49,694	63,498	4,263	1,652	69,413
OVERHEADS	701	791	6,121	7,613	130	50	7,793
LOTAL.	7,031	8,265	55,815	71,111	4,393	1,702	77,208
WMBERS PRODUCED (DOZENS)	107,180	120,886	971,489	1,199,555	18,494	6,676	1,244,725
/EIGHT – kgs	132,308	149,298	1,002,732	1,284,338	53,339	22,997	1,360,674

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APPENDIX 6

EXAMPLE OF SUGGESTED CALCULATION FOR APPORTIONMENT OF ENERGY COSTS

		Electricity	{w	Steam_k	g/hr
	Motive power	Lighting	Air conditioning	Process	Space heating and air conditioning
Knitting	107.0	40.0	50.0		50
Grey room	1.5	1.25	-	,	
Bleaching	35.0	-16.0	20.0	2,600	-
Dyeing	10.0	5.5	5.0	350	-
Cloth store	-	7.5	8.0		180
Cutting	3.0	32.0	17.0		
Sewing inspection & packing	120.0	97.0	100.0	240	
Finishėd garments store	-	21.0	16.0		457
Order assembly area	-	4.0	5.0		80
Workshop and central stores	15.0	16.0	5.0		123
Yarn store	-	9.0	8.0		250
Chemical store	_	9.0	-	-	-
Boiler house and oil storage	51.0	2.0	-	_	-
Offices	5,0	10.0	30.0		230
Pumps and compressors	54.0	-	_		
Radiators to peripheral offices	-	-	-		
Domestic hot water	-	-	-		230