OCCASION

This publication has been made available to the public on the occasion of the 50th anniversary of the United Nations Industrial Development Organisation.

DISCLAIMER

FAIR USE POLICY

CONTACT

Please contact publications@unido.org for further information concerning UNIDO publications.

For more information about UNIDO, please visit us at www.unido.org

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
Vienna International Centre, P.O. Box 300, 1400 Vienna, Austria
Tel: (+43-1) 26026-0 · www.unido.org · unido@unido.org

RESTRICTED

DP/ID/SER.A/711
30 June 1986
ENGLISH

ASSISTANCE TO THE TEXTILE INDUSTRY

SI/SYR/84/801

SYRIAN ARAB REPUBLIC

Technical report: Assessment of progress*

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

* This document has been reproduced without formal editing.

V.86-57736

WORK PROGRAMME

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

NAME: THOMAS JOHN ROBINSON

APRIL 1986

23 TRAVEL TO DAMASCUS

24 MEETING UNDP STAFF AND DISCUSSIONS WITH DIRECTORS AT GENERAL ORGANISATION TEXTILE INDUSTRY

26 VISIT TO ORIENT UNDERWEAR FACTORY TO REVIEW PROGRESS OF THE RECOMMENDATIONS MADE BY ALL THE EXPERTS IN JUNE 1985

27 VISITED ALL SECTIONS OF THE FACTORY TO ASSESS THE CHANGES IN KEY AREAS OF ACTIVITY, ALONE AND AFTERWARDS ACCOMPANIED BY THE TECHNICAL DIRECTOR

28-29 CONTINUED DISCUSSIONS WITH ACCOUNTANTS AND OTHER DIRECTORS

30 MEETING WITH THE GENERAL DIRECTOR AND ALL HIS DIRECTORS FOR DETAILED EXAMINATION OF ACTION ON THE PRINCIPAL RECOMMENDATIONS MADE BY THE TEAM. A FURTHER MEETING WITH THE PRODUCTION AND COMMERCIAL DIRECTORS FROM THE HAMA SPINNING COMPANY TOOK PLACE IMMEDIATELY AFTERWARDS

MAY 1986

1-3 REPORT PREPARATION

4 TRAVEL TO VIENNA

5 DE-BRIEFING IN VIENNA

6 TRAVEL TO MANCHESTER

1. NAME: T. J. Robinson

2. PLACES VISITED: Orient Underwear Company Damascus

3. DATE OF MISSION: 23rd April to 6th May 1986

4. PROJECT ACTIVITIES:

4.1 To assess the improvements in production techniques, productivity, and in cost accounting methods.

4.2 To suggest any further actions to be taken.

Cost Accounting

The Arabic translation of the Cost Accounting report prepared following the first phase of the mission in 1985 could not be located at the Orient Underwear factory. A spare copy which I carried is being translated into Arabic but was not available during this phase of my mission.

The Technical Director again acted as interpreter and together we spent several hours with the Financial Director and Costing Manager who wanted a step by step instruction in the preparation of Standard Product Cost Schedules which is essential to any acceptable system of cost control. Very little real progress can be made, however, until the instructions contained in the original report have been translated and the long task of preparing basic information on machine capacities, labour requirements, energy consumption etc have been done.

The Standard Product Costs prepared for 1986 following our discussions last year are little more than average costs for most cost elements and are therefore the same for all products. Some elements of cost such as dyeing and printing are apportioned more equitably. The resulting standards are, as before, used for pricing policy and not for cost control and the weakness of their construction is causing concern.

Some thought has been given to "weighting" the costs between products by establishing a system of points for the degree of difficulty in the production sequences. As a first step this has some merit.

In order to get a clear assessment of the achievements since the team's visit in 1985 the major recommendations of the Experts were examined to discover what action had taken place.

These were examined by visual inspection or in-depth interviews with the managers as appropriate and finally in a formal meeting with the General Director and his senior staff (including two directors from Hama Spinning Company).

The Technical Director acted as interpreter and there was a useful and prolonged exchange of views with all those present.

There is still a marked absence of statistical data for measuring performance but it was clear that very little had been achieved in the implementation of the Experts' recommendations.

It was equally obvious that the day-to-day pressures and problems will continue to divert attention from taking action to overcome these difficulties. The real solution is to have an Expert in Syria, checking, prompting, guiding and supervising the training of the managers for a much longer period (1 to 2 years probably).

A great deal was said about Quality Control but there was no evidence that the excellent ideas have been translated into action. The presence of the Expert would have a very real chance of success.

There is still an urgent need to use the standards (even the existing ones) to produce a periodic schedule of standard cost of production for comparison with the budget for the same period and also of course with actual costs.

The collection and analysis of production data will provide valuable experience in overcoming the lack of knowledge about production output, conversion efficiency, productivety etc.

This task will now begin as a quarterly exercise and will be extended to monthly at some time in the future.

It has also been agreed that an attempt will be made to warehouse grey fabric in a manner which will permit a better method of extraction and permit stocktaking.

Raw materials for use in every department are predetermined when the budget is prepared. If production is below budgeted level there are surpluses and if the reverse occurs there are inhibiting shortages.

This practice creates inflexibility and technical and other changes are inhibited.

A review of requirements as part of the proposed quarterly cost analysis would help to ease these problems.

Production statistics are unreliable and reasons for bottlenecks are therefore obscure. Again, the regular submission of data for cost control will provide the incentive and also the experience to lead to an improvement.

A reliable system of differential pricing depends upon the availability of accurate costs which have been proven by regular comparisons with actual costs and the reasons for differences explained. All of this must begin with the collection and analysis of data and the eventual preparation of reliable statistics.

TECHNICAL RECOMMENDATIONS

1 SPINNING

1.1 Carding maintenance is particularly weak calling for urgent remedial action

The problem is acknowledged but there are major difficulties with spare parts and experienced technical help is still needed if progress is to be made. No real progress has been made.

1.2 Handling and transportation of yarn (and intermediate products)

Management are aware of the handling problem and are tackling it but it is difficult to eradicate the handling (or mis-handling) practices built up over 15 years.

The formation of a quality action group has not been implemented at Hama.

A number of plastic containers have been ordered to replace hessian sacks for transportation of yarn but the Directors will require a cost/benefit exercise to convince them of the value of changing completely from hessian sacks.

The Directors at Orient Underwear do not see a case for placing an order for plastic or cardboard containers until a cost/benefit exercise has been done. This has yet to be resolved.

1.3 Use Uster for fault finding and eradication

A new Uster has been bought as the result of this recommendation and the makers supplied a technician to train the Hama operatives in the correct use of the machine.

Follow-up There is a need to record results in order to eradicate faults.

1.4 Reduce the number of process steps between the card and the comber

The four-stage sequence has not been changed but it is planned to do a trial period in the way recommended.

There is obvious reluctance to interfere with the existing practice without the presence of an experienced technologist.

1.5 Fibre extract at combing should be increased systematically step by step to 18%

This recommendation has been accepted but no action has been taken, partly because of the cost of moving from the existing 14% to the recommended 18%.

The recommendation, however, will now be implemented and the effects will be measured in terms of yarn strength and regularity.

1.6 Form a Quality Action Group and follow up testing with remedial action

This recommendation to provide regular shop-floor supervision by knowledgeable authorative managers is accepted as sound advice but has yet to be implemented because of the pressure of other work.

1.7 Winding at Hama 2

The plan to install automatic/electronic equipment similar to that in Hama 1 will be implemented with the arrival of ten new machines of Chinese origin later in 1986.

1.8 The general levels of yarn irregularity point to a need for more detailed attention at drafting

The Directors anticipate an improvement in uniformity when new machines incorporating a count regulator are available but they are not expected for some considerable time.

2 KNITTING

2.1 Yarn Measurement

Some measuring of yarn count is done using make-shift equipment. Orient Underwear would appreciate the help of Shirley Institute in acquiring a wrap reel for which they will be happy to pay.

2.2 Storage of Yarn should be improved

Yarn storage as such is not seen as a major problem because supply is limited to about 10 days use. When supplies increase steps will be taken to improve storage.

2.3 Loop Length at knitting should be measured regularly

Four operatives have been taught to measure loop length and yarn tension using tension meters.

2.4 Sub-standard supply yarn should be rejected

Quantity available does not permit rejection at present but when supplies are more plentiful sub-standard will be rejected. Every effort is made to segregate this yarn throughout the processing sequence.

2.5 A system of preventative maintenance should be introduced

It is planned to use the maintenance staff during holidays to provide preventative maintenance. The plan is to look at every machine every three months.

I suggested that the incidence of breakdown was a good guide to the appropriate schedule of preventative maintenance and this was agreed.

2.6 Knitters should join broken ends with the correct knot

Instructions have been given to this effect.

2.7 All staff at knitting should be aware of quality

Quality Control activity is being increased in an effort to improve quality generally.

2.8 Quality of Hama 2 Yarn

I asked if the problems associated with the yarn from Hama 2 mill had eased and was told that there had been a general improvement following the work done at Hama by the team last year but a lot had still to be done.

There are also regular meetings at Hama and at Al Shark as suggested by the Spinning expert.

3 FINISHING

3.1 Orient Underwear should install their own printing equipment

This was discussed with UNIDO and GOTI and put into the Investment Plan for 1986 but not approved. It will be put forward again for the 1987 Plan.

There is no available spare capacity in the printing plants within the existing organisation, although it is reported to be barely 50% utilised.

3.2 Reduce sodium silicate in the bleach bath and increase the amount of Stabicol A

No action has been taken yet but an experiment is planned in order to assess the effects of the change.

3.3 Change softening agent

It was explained that EDUNINE SCL will not be available in 1986. The practice of ordering the year's supplies of materials upon completion of the budget is very largely responsible for the inability to change at short notice.

3.4 Reduce J. Box load to alleviate creasing problem

This is the subject of our experiment to find the optimum loading. It is not complete and no firm decisions have been taken. The impression is that management are not convinced by the evidence so far.

3.5 Drier speeds to be reduced if temperature drops

This is being done as instructed by Production Planning. Quality Control inspectors are required to patrol the area and see that this is carried out.

3.6 Set dye shade standards and define limits of tolerances

A sample of the standard dye shade is kept and referred to by inspectors. Some further practical help is required to define the tolerance limits and suggest remedial action where appropriate.

3.7 Check printed cloth for fastness

This is done but since it can not be returned to the Printers if it is unacceptable it is segregated and passed through for sub-standard outlets.

3.8 Avoid overstretching at Calendering

This is being studied and a Syrian standard procedure is being prepared. When finished the standard procedure will be implemented. In the meantime no changes in existing practices are planned.

4 GARMENT ASSEMBLY/STYLIST

4.1 Do not inspect machine-state fabric

Inspection will continue and results will be used for the control of production quality. These records are useful for monitoring purposes.

4.2 Improve the interlock fabric

Serious efforts are being made to improve through improved supply yarn and by the efforts of Quality Control at Knitting.

4.3 Use two 12 metre lays per table

This was tried following the team's departure in 1985 and the waste was found to be greater because of losses at each end of the two lays.

4.4 Use sharp needles for sewing and change them daily

The recommendation was recognised to have merit but the cost of changing needles daily would be prohibitive. The softer cloth coming through has helped to overcome the problem and operatives have been instructed to change the needles when the hems show signs of needle damage.

4.5 Use folders for all elastone-enclosing wastebands

The existing equipment is not suitable for wastebands. They are designed for singlets and an example of the work done using them was flawless but the examination of other garments was not done to see the overall quality.

When new machines are ordered the provision of suitable folders will be specified.

4.6 Reduce the elastone content of wasteband strips

No action taken yet but the setting of the machine which produces the strips will be examined.

4.7 Reject all stained or dirty garments

Recommendation accepted and this is being done.

4.8 Set quality standards and reject anything which does not reach that standard

The current stress on strengthening the Quality Control function is designed to achieve this. Progress, however, is bound to be slow. Department managers have been instructed to walk round the factory frequently and emphasise the drive for quality.

4.9 Improve or abolish pressing

Two new machines have been installed to supplement existing capacity. The new machines produced significantly better results but the operatives using the old ones were adopting the established practices of throwing the garment on to the conveyor belt in a heap and achieving the poor results observed last year.

Again I was assured that the strengthening of Quality Control inspectors will gradually improve working practices.

4.10 Advertise and sell at a higher price with a money-back guarantee

No serious thought has been given to this recommendation as yet.