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ASSISTANCE TO THE STATE COMPANY

FOR LEATHER INDUSTRIES .

SI/IRQ/77/902 .

IRAQ .

Technical report: Development of the leather goods  
industry .

000012

Prepared for the Government of Iraq  
by the United Nations Industrial Development Organization,  
executing agency for the United Nations Development Programme

Based on the work of E.C. Newman, design expert

United Nations Industrial Development Organization  
Vienna

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Explanatory notes

References to dollars (\$) are to United States dollars.

SELI refers to the State Establishment for Leather Industries in Baghdad.

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ABSTRACT

The United Nations Development Programme (UNDP) set up the project "Assistance to the State Company for Leather Industries" (SI/IRQ/77/302) to assist the State Company for Leather Industries (SCLI) in improving its production technology and the design of leather goods that it produces. The executing agency is the United Nations Industrial Development Organization (UNIDO).

A UNIDO expert in the design of leather goods was assigned to the project from 22 June to 10 September 1978. His duties were to assist SCLI in improving its production technology and the design of certain leather goods that it produces. Specifically, he was to advise and assist in the design of various types of leather goods such as suitcases, brief-cases, school-bags, gloves, belts and ladies' purses.

Although the assignment was for only three months, satisfactory progress was made in the following areas:

- A new line of soft luggage was designed and prepared for production
- New samples of men's handbags, travelling bags and small leather goods were made
- Technical advice on the improvement of every product line was given
- National experts were trained in their individual areas of work

The present factory is ready for expansion. Careful consideration should be given to the small leather-goods section. Before any such expansion can be done, however, it would be necessary for both the designer and a supervisor to be sent overseas for training, which should be combined with visits to trade fairs to obtain appropriate machinery. The tannery requires samples of leather with which to experiment to obtain the desired finish. A further programme should then be set up to provide more experts to advise on the implementation of this section.

The bridle section of the saddlery department has grown very rapidly. While it is now fully occupied by government contracts, there is an increasing demand for this product in the developed countries. This section is fully equipped with modern machinery; it would require only some improvement in the finished leather and some overseas training for a suitable supervisor to familiarize him with the quality requirements and product sizes to make this a promising product for export.

It would also be advantageous if a suitable agreement could be made with an overseas institute, such as the Cordwainers in London to train senior staff continuously, as the availability of knowledge and textbooks is limited. Such a programme would help to create the reservoir of middle-management personnel that is urgently needed.

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## INTRODUCTION

The United Nations Development Programme (UNDP) set up the project "Assistance to the State Company for Leather Industries" (SI/IRQ/77/302) to assist the State Company for Leather Industries (SCLI) in Iraq to improve its production technology and the design of certain of its products. The United Nations Industrial Development Organization (UNIDO) was designated as the implementing agency.

SCLI is one of the companies under Iraq's State Organization of the Textile Industries. It is divided into three sections: tanning, footwear and leather goods. Present tannery capacity is 20 million square feet (1.36 million square metres) per year, which is greater than the availability of local hides and skins. The tannery must therefore import skins and hides to utilize this capacity fully. Most of the leather produced is used for footwear, with lesser production for use in saddlery and leather goods.

The footwear section operates two large factories with a combined yearly capacity of 4 million pairs of leather and plastic footwear.

The third section, leather goods, is the smallest, with 320 workers. It was from a request by management in 1975 to expand and improve this section that an agreement was reached, in 1977, between UNIDO and the Government of Iraq. The project was to consist of the missions of two experts, one in leather goods production, the other in design, both for one year. These assignments were later reduced to six months for the production expert and to three months for the design expert, owing to his availability.

The duties of the design expert were twofold: first, to assist SELI in improving its production technology and design for various types of leather goods, such as suitcases, brief-cases, school-bags and belts, and second, to train a national specialist in the design of such products (see annex).

## FINDINGS

### General

The present factory is fairly modern by European standards and is well equipped with hydraulic cutting presses, fibreboard moulding and bending machines, powered guillotines, automatic riveting, strap-cutting, skiving and gluing machines and a good selection of modern sewing machines and high-frequency welding equipment.

There are two buildings. The main one, with 2,400 m<sup>2</sup> floor space, houses the production of fibreboard suitcases, attaché cases, saddlery, diplomatic pouches and general travel goods. The other one is much smaller (100 m<sup>2</sup>) and houses the production of belts and leather carpets.

Because of the specialized nature of the leather-goods trade, it is customary, in Europe, for a manufacturer to restrict himself to a single section of it, such as travel goods or handbags. It was therefore surprising to the expert to find all sections of the industry in a single factory.

After a rapid survey of the entire complex with Mr. Muhenned A. Moujib, the Technical Manager, the following programme was agreed upon:

(1) To study the major bottle-necks and alleviate as many of them as possible (four days);

(2) To examine the present product designs and see whether they needed improvement (five days);

(3) To train the staff in the basic constructions and designs now in use, produce a new line of luggage and provide more detailed knowledge of the production of small leather goods (seven weeks).

After a brief discussion with Mr. Hassan Al Haddad, the Production Manager, it was agreed that he and the expert would spend one hour each day studying individual production lines with appropriate supervisors, listing as many improvements as possible. Owing to managerial problems, however, it was agreed that items (1) and (2) be combined so as to lend more flexibility to the programme.



After two weeks, the suggestions of the expert were studied and some minor improvements for product quality were implemented. It should be noted that many of the items studied had been in production for some time and had reached high output. Any effort to improve product quality would result in reduced output, which would be unacceptable at this time.

#### Specific problems

A rapid survey of the plant revealed that a large investment had been placed in the luggage section, which was the largest and most highly mechanized, with expensive machinery. It was therefore necessary to use this machinery to best advantage. There was the problem, however, that the demand for fibre-board luggage was declining and that for soft, expanding luggage was increasing, which would eventually lead to a lower capacity requirement for the moulding machines and a higher one for the sewing machines. Work was therefore begun, with Mr. Hashim, the designer, on improving some ideas which, owing to insufficient technical knowledge and correct materials, had not yet been successful.

A new line of luggage was designed and a set of samples was produced in the factory, but they were inadequate. It was clear from this trial run that a less ambitious programme of new designs would have to be considered, and that the expert would have to devote enough time to see that every operation in sample-making was performed in a way that would ensure attainment of the required product quality.

The experiment was performed, and a new travelling bag was designed. This time the samples manufactured were more acceptable. After this, it was possible to design and manufacture samples of attaché cases, men's hand and shoulder-bags and a variety of small leather goods.

The primary problem confronting the designer is a lack of both proper materials and knowledge of what materials are required. After some discussion, the tannery produced sample amounts of leathers for small leather goods. It will be necessary, however, to obtain a sample range of leathers for the tannery to copy. Also, very few fittings are available in Iraq; they are mostly imported. Unfortunately, those responsible for purchasing have little knowledge of what is needed or what is available on the open market. Purchasing decisions are made on the basis of price rather than of quality, with the result that there is a large stock of unsatisfactory material that must be used up.

### Staff

Soon after the arrival of the expert, appropriate local counterpart personnel were assigned, including a designer, a supervisor and some technicians. All of them were competent and lacked only certain technical knowledge related to product quality, so it was possible to obtain results quickly. Much of the credit for these quick results can be attributed to the complete co-operation of the Production Manager, Mr. Hassan Al Haddad, and his assistant, Mr. Ali.

The Production Manager called a general meeting of all supervisors, and the expert explained the duties of supervisors to: (a) management, (b) staff under them, (c) the state, (d) the customer and (e) other supervisors.

### Cutting

The method used to make press-knives (band type) is unsatisfactory if large areas are to be cut. The present band-type knives become warped and deformed, so cut-out parts do not fit correctly. There are also no proper accessories for fitting marking punches into them. There are two ways to correct this situation: either by sending the larger knives away to be made from heavier-gauge steel or, if there is to be any expansion of the plant, an additional press should be acquired. Consideration should be given to one of the roller type, where the knives are set on a table, the material to be cut is placed over them, and the table passes under a roller. The principal advantage of this system is that the knives remain stationary and a complete case can be cut at once, with very little pressure on the knife.

### High-frequency welding (plastic)

One of the two machines needs repair. The present electrodes are of steel, which is a poor conductor of electricity and thus reduces the power of the machine. Brass electrodes should be used. They can be acquired as brass strip, with various edge finishes.

This section is now underutilized, but it has great potential for use with silk screening. Greater care should be taken to reduce dust. This could be done by using a silicone spray.

### Riveting

Most of the machines are of a type that produces a poor finish on the reverse side. Also, many of the rivets are too long. The use of rivet caps could be introduced, but it would slow production, as there is no automatic feed for them. The use of tubular rivets, which would give a more acceptable finish, should be investigated.

### Adhesives

The plant has no suitable adhesive for plastic. It would be necessary to import a material such as Evostick 523 (Evode, in the United Kingdom). Also, a better polyvinyl acetate (PVA) glue with more strength and flexibility should be used.

### Sewing and skiving machines

Many of the present sewing machines should have accessories for turning the edges of the material, elasticizing pockets and making handles. This is also true of the skiving machine, which could have a double foot to permit it to skive both sides of belts at the same time. The correct gauges of needles and thicknesses of thread should be used, and there should be a wider selection of thread colours.

### Edge-staining and finishing

With the introduction of light-coloured leathers, a serious attempt should be made to get the correct stain for the present machine or to obtain a more suitable machine to finish belt edges. At present, there is no crease line along the edges of plain belts. This can be made either by hand or by machine.

### Space

With the introduction of the saddlery section, the space for the fibreboard suitcases has become very cramped. It requires more space and an improved layout.

### Management problems

Although the present factory employs 300 workers and turns out a wide range of leather goods, its management is faced with the six following problems:

- (a) The labour turnover is 20 per cent, which necessitates a continuous training programme. Since there is no training department, this responsibility falls on the supervisor. The principal reasons for this high turnover are national service, short-term employment before entry into the university, movement to better-paid jobs elsewhere, and the need to employ unsuitable labour;
- (b) There is an overall shortage of labour, and especially of skilled labour, in Iraq. The wage differential between skilled and unskilled labour is so small in state industry that most skilled workers move into the local market;

(c) Quality control is lacking in all sections of the factory. Responsibility for it must be placed on the supervisors, who must also provide leadership and encouragement to their staff. They are faced with targets that increase yearly and which they try to achieve at the expense of quality. The present differentials between workers, supervisors and management are so small that there is no incentive to do a better job at any level;

(d) The shortage of skilled labour has caused many sections to become highly mechanized. Unfortunately, however, there is no preventive maintenance system. All there is is a single skilled mechanic who must withdraw machines for repair when they break down. This can disrupt the work flow and necessitate night shifts;

(e) There has been an effort to recruit younger and more academically minded people as supervisors, which is all very well, but they lack the experience and background knowledge of the people they are to supervise;

(f) Too much of the time of the present management is spent outside the factory, dealing with problems of the future, leaving too little time to control production and, when available, dealing with tasks that should be delegated to middle management, which needs more training.

## CONCLUSIONS AND RECOMMENDATIONS

### Conclusions

Although the present factory is producing goods to set targets, there is little control of their quality, for the three following reasons:

- (a) Although some of the staff have management training, there is almost no one with any real technical knowledge of the subject;
- (b) Some inferior materials are being used rather than discarded;
- (c) There is too much emphasis on quantity and too little on quality.

Some very expensive machinery is standing idle in the factory because no one knows how to adjust it, or because there are no materials available for its use. When equipment is purchased, factory management should establish close liaison with the manufacturer so as to become familiar with the full capabilities of the machines. There should be full sets of accessories and of workshop manuals.

If insufficient attention is given to maintenance, the incidence of machinery breakdowns and consequent stoppages of the line increases as the equipment becomes older and more worn.

The present system of product designing is adequate, but there is insufficient market research to determine the saturation points for certain goods.

Now would be a good time to expand into the market for small leather goods such as wallets and purses. Once designs have become established, they change very little, so large quantities of them can be produced. However, new and larger premises would be required for such production.

There are good export possibilities for the horse-bridle section. However, this would require that one technician be trained overseas in product quality and appropriate sizes.

### Recommendations

#### Designer

The present designer, Mr. Hashim, has some knowledge of suitcases and similar travel goods, but he has little knowledge of small leather goods or of

the capabilities of some of the equipment. He can derive only limited benefit from on-the-spot training, so he should be given at least one year of full-time training at a suitable institution overseas. This could be coupled with industrial visits.

#### Production manager

Mr. Hassan Al Haddad is a very good manager and can control the factory very well, but he has very little technical knowledge of the industry in general; this has impeded the development of new products. He therefore needs full training in all sections of the industry, which would mean at least two years in an appropriate institute overseas.

#### Saddlery and small leather goods

Both of these sections have large potentials for expansion and eventual export. Preparation should be made to send at least one staff member from each of these sections overseas for one year's training.

#### Quality control

A definite system of quality control should be set up. One of the more academic staff should be trained in this system, which should be implemented as soon as possible.

#### International experts

The expert mission reported here should be followed up by other short-term ones on special subjects, such as travel goods and small leather goods. They should be followed up promptly so as to maintain the momentum of the programme.

#### Equipment

Senior staff should be sent to visit overseas exhibitions such as MIPEL in Italy and at Offenbach in the Federal Republic of Germany. This would permit them to see modern equipment in action, rather than to merely order machinery from catalogues, since no real idea of the potential of equipment can be gained from the inspection of catalogues alone.

#### Expanding and large-sized luggage

At this time there is a large world-wide market for expanding luggage. To permit competition with imported luggage, it would be necessary to consider

importing elements such as pre-made aluminium frames, steel reinforcement wire, plastic shells for lightness and strength (especially for the present 63-cm and 75-cm cases), and better handles, fittings and linings.

### Machinery

Some of the products designed will require various thicknesses of leather, so it will be essential for a modern splitting machine to be available. This is an urgent matter.

### Maintenance

The present factory must have a planned maintenance system or it will come to a halt. More staff must be trained and a proper programme implemented.

### General

The employment of more female workers may help to reduce labour turnover. The establishment of wage differentials for various kinds of work and on different machines could make it easier to keep skilled labour. Also, the present wage differential between workers and management should be increased, or some other incentive system must be introduced if stability in management is to be maintained.

### Future training

There are very few technical manuals for the leather goods industry. It would therefore be advantageous to set up a continuous training programme with an overseas institute such as the Cordwainers in London. In this way more staff could be trained, thus permitting senior management to delegate some of its responsibilities.

Annex

JOB DESCRIPTION

Post title: Leather Goods Designer

Duration: Six months

Date required: Early 1978

Duty station: Baghdad

Purpose of project: To assist the State Company for Leather Industries in improving its production technology and design of different types of leather goods produced

Duties: The expert will be attached to the State Company for Leather Industries, which is one of the companies under the State Organization of Chemical Industries in Baghdad. The expert will work in close co-operation with the leather goods production development expert and will be specifically expected to:

1. Advise and assist in the design of various types of leather goods, suitcases, brief cases, school bags, gloves, belts, ladies purses, etc.
2. Train national specialists in the design of the above-mentioned products

The expert will also be expected to prepare a final report, setting out the findings of his mission and his recommendations to the Government on further actions which might be taken

Qualifications: Experience in design and pattern cutting of various types of leather goods (suitcases, briefcases, school-bags, gloves, belts, ladies' purses etc). Experience in introduction of methods and systems for change and flexibility to cater to the requirements of local and export markets

Language: English

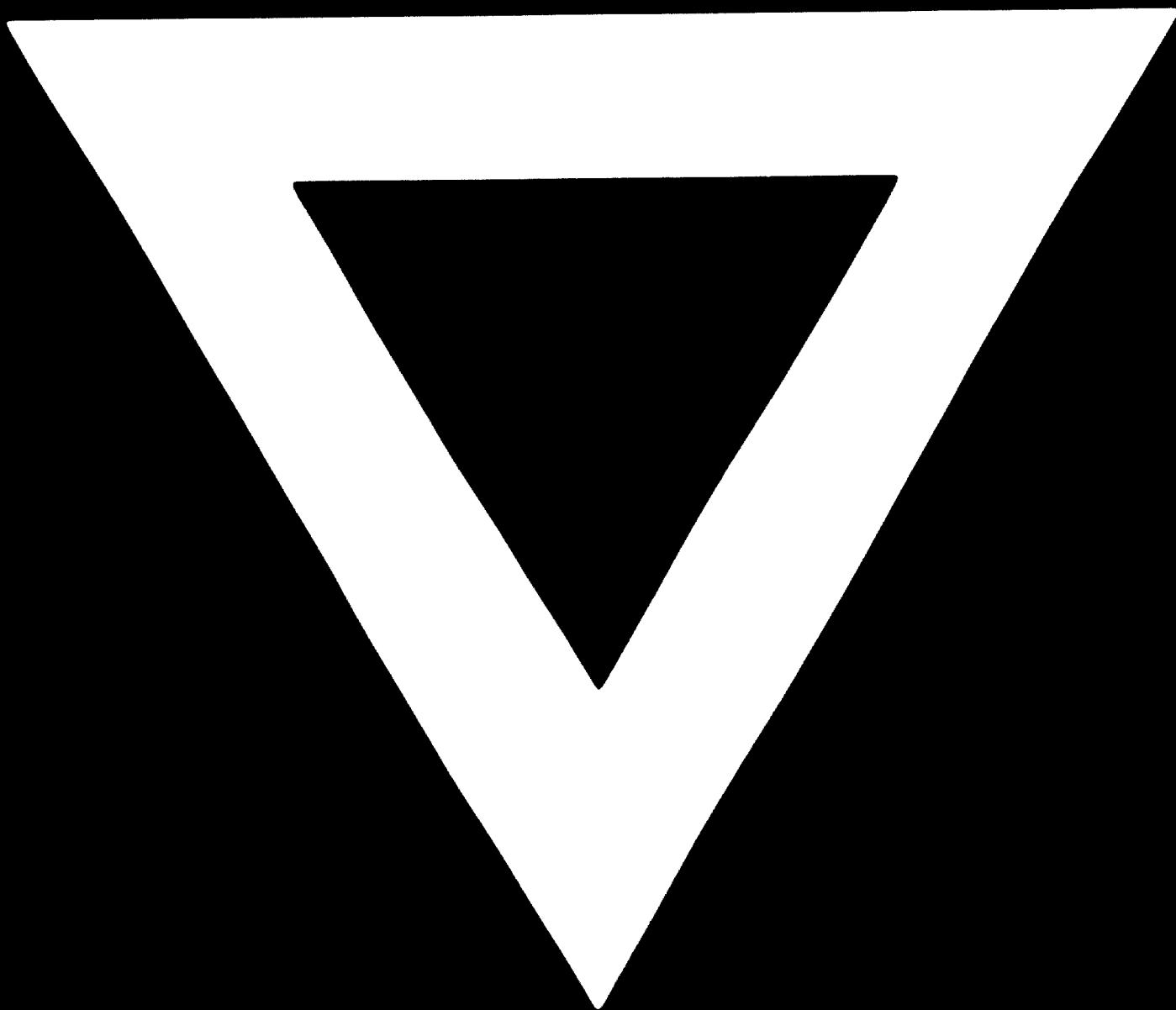
Background information: The State Company for Leather Industries is a well established company which produces different types of tanned leather and bags, including school-bags, travel bags, briefcases, suitcases, belts, pouffes and cushions, wallets and other products

In the "Investment Programme 1976 - Industrial Sector" an expansion of the State Company for Leather Industries is envisaged to add new tanning capacity (lamb and goat hides) of about 1.35 million skins per year. Another project included in the programme is the production of 1470 tons per year of leather board utilizing the remains of hides

During 1975, the management of the Company expressed keen interest in receiving assistance in the design of leather products and in production development technology



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