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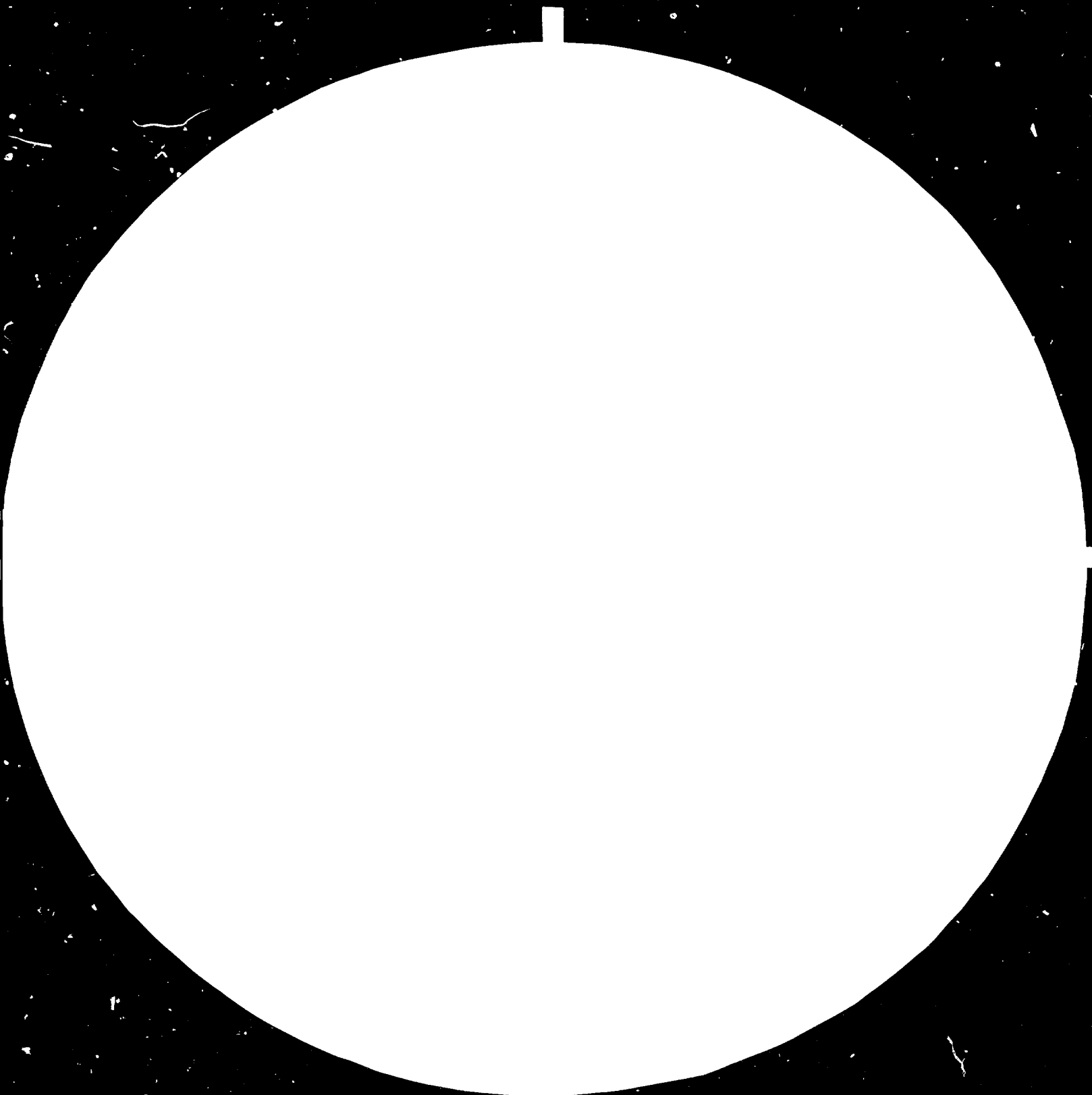
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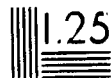
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Resolution test targets are used to measure the resolving power of an imaging system. The targets consist of patterns of lines of varying sizes and orientations. The resolution is measured in cycles per millimeter (lp/mm).

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INTEGRATED PROGRAMME OF TECHNICAL CO-OPERATION IN TRADE
PROMOTION WITH THE GOVERNMENT OF INDIA
PRODUCTION OF LEATHER GOODS.

AR/IND/79/011

INDIA.

Terminal report*

Prepared for the Government of India
by the United Nations Industrial Development Organization

Based on the work of B. Van Poelgeest,
expert in the production of leather goods

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PART A

Visits to leather goods and leather garments industries at Delhi, Bombay, Kanpur, Calcutta, Madras and Bangalore (see annex - Companies visited). Among the manufacturers selected by T.D.A. for the visits were several small industries, which were too small in size to be able to sustain regular export to Western Europe and other countries.

The equipment they possess is of a type that no uniform quality of the articles made could be guaranteed. They use only locally made sewing machines (Singer); no cutting presses or skiving machines are available to them. The export orders they might have had in the past will be lost in the long run to better equipped and organized factories.

A few factories do have the required machines; however, they are not expertly utilized. The control of the cuttings coming out of the cutting press is often not sufficient. The clicking knives are often deformed through mishandling, resulting in imprecise cuttings. The cuttings do not have the required skiving width because the course of the cutting machine is out of line. The skiving procedure must be adjusted to the process for which the skiving is to be done.

In many factors manual work is done in a very inefficient manner, mainly because no time studies have been made of this type of work. Also a lot of work (beatings, gluing, etc.) is done on the sewing machine by the tailor himself. This work is not part of his job and should be done by assistants and on separate tables (reduction of cost price).

It must be emphasized that the production of leather goods and leather garments done either by hand or machines, must be carried out on tables. Working on the floor cannot be allowed.

Working on the floor has three disadvantages:

1. Insufficient light
2. No possibility of keeping goods clean
3. A labourer who does his work sitting on the floor occupies more space than someone working at a table. Besides, the internal transport of the articles can be much better arranged on tables than on the floor.

Only in very few cases, mainly in the leather garment business, did the expert see well organized factories.

To establish efficient production lines, one needs long and practical experience in the sector concerned. If any lectures are available at all on this subject they will be hard to come by (trade secret).

In my final report I will indicate as completely as possible how a leather goods factory should operate and the kind of machine park one needs for specialized manufacturing.

I would like to indicate, at this time, that the purchase of a modern machine does not solve all problems. Preparations, internal transport, choice of raw materials to be used, all play an important part in the final result for which the machine in question is to be used.

India has the resources for a constant flow of very good quality leather i.e. red hairsheep - bufcalf, for a very reasonable cost price. With the right combination of materials and processing and the co-operation of the government (import of fittings), it should be possible for India to play an important role in the export market of leather goods and garments. There is a great potential for labourers, who, after specialized training, will be able to make quality goods at a competitive price.

Articles for export

In my intermediate report, I already mentioned that even in the long term there is a good possibility for the Indian leather goods industry to export goods to developed countries.

The following selected articles offer the best sales opportunities: wallets, passport holders, money purses, key cases, shoulder bags, shopping bags, school bags, leather travelling bags, cotton travelling bags with leather straps and briefcases.

Ladies' handbags are a more difficult line due to fast changing fashions; however, if there is good contact between a buyer from abroad, with latest information on fashions and manufacturers in India, it should be possible to build up profitable exports in this area as well.

Equipment

To be sure about the quality of the products mentioned above, the following equipment is almost indispensable:

- One cutting press 20 tons with nylon cutting pad;
- One bandknife splitting machine 300/400 m/m workwidth;
- One upper skiving machine;
- One strap cutting machine 250/300 m/m workwidth;
- One automatic straight edges folding machine;
- One strap folding machine for straps 12-15-20-25 m/m;
- One medium duty sewing machine with alternating pressers;
- One cylinder bed sewing machine with alternating pressers and piping attachment 5 m/m;
- Two Indian flat bed Singer sewing machines.

Besides the necessary handtools, it is advisable to have:

- A. One nylon cutting pad for handcutting;
- B. Aluminium straps in widths of 15-20-25-30-40 m/m thickness 1 1/2 or 2 m/m;
- C. One aluminium sheet of 1 m/m thickness for making cutting patterns.

The purchase of cutting (clicking) knives for the cutting press is left to the manufacturer. As a rule of thumb, it should be noted that quantities of small leather goods of about 500 pieces are cut by hand, while for bags with quantities above 1,000 pieces cutting knives for the cutting press are purchased. It should be mentioned that the quality of handcut pieces is often inferior to that of machine cut pieces.

Gluing

The type of glue used in the production of leather goods is of great importance. As a precaution however, attention should be drawn firstly to the dangers involved in spraying different types of adhesives and rubber solution glues via a compressor, namely the hazardous nature of the material used in relation to the possibility of fire and injuries to the health of the workers, when performed in an unventilated and crowded work area. In developed countries there are very strict rules and regulations against this industrial environmental danger, which, if not followed, result in heavy fines on the violator. The constant intake of vapours/fumes from these adhesive glues can bring about paralysis and other injurious side effects.

The spraying glue process should be done in a well ventilated closed room, with a large exhaust installed on the exterior wall, for extrication of vapours/fumes. The worker performing the spraying must, at least, have a cover over nose and mouth, the more preferred method would be a professional safety type face mask or full gas mask.

Applying glue to one small part must be done, as much as possible, with brushes and not with fingers. The application of latex-glue is done with pieces of foam.

The production manager himself must give his experts advice on how the glue should be applied and which type of glue should be used. The gluing of parts, sometimes takes 10-15 per cent of the total manufacturing time of an article; consequently, it is important that this happens smoothly and expertly.

Splitting

Splitting with the bandknife splitting machine. Determine for each part the ideal thickness necessary for the quality and use of the product. Indicate this thickness clearly for the different types of leather in the factory workbook. (Refer to the notes on how to put together such a book.) Describe in the work how a certain part should be used on the skiving machine. If it concerns small leather goods, glue sample (or parts of it) in the workbook.

Folding

Take care that the folding lines are straight and accurate. A crooked folding line spoils the look of an article. Use the folding machine as much as possible for long and straight foldings, short foldings (up to 10 c/m) can be done manually with a ruler. The material is not folded with the fingers, but by means of a piece of hard plastic or cardboard. If the folding is round or hollow, it can be folded by hand.

Protect the soft leather (sheep and goat) during the hammering by means of a piece of cardboard, or make a small table-machine, which can press the totalling parts in one movement. The more even and straight the folding is, the more regular the seam on this folding can be.

Stitching

Stitching catches the eye most and can be done best with a needle-transport stitching machine. For inside stitching and lining one can use the ordinary Singer machine. Often the seams indicate the quality of an article. A lot of attention should be given to this work. Take care that there is enough light falling ahead of the needle on the article to be stitched. Control regularly the strength of the thread on the stitchwork. If the thread, because of the stretching, is pulled too much on one side, it will reduce the quality of the product. No double stitching at the beginning and the end should be done. Instead, pull the thread in the beginning and the end inside the article, and tie the threads together with two or three knots. Apply a drop of latex glue on the thread before tying.

Try to make some room available in your factory, where sample makers can work in peace on new samples without being disturbed by production troubles or noise.

When a certain sample has been approved, the sample maker should describe in a workbook the process, which is necessary to make the finished product from the raw materials. Attach to each part of an article pieces of cardboard describing in detail the working process, i.e. splitting down to 0.5 m/m, skiving 10 m/m width from 0.5 till zero - gluing 8 m/m width latex glue etc.

If a certain treatment of the article has been finished by the people in the factory, the numbered cardboard plate with an example of the process must be available in the working area. This prevents a lot of mistakes and is a guarantee of more uniform quality. Let the sample maker, together with the foreman or production manager decide which process is to be followed. In order to realize the most efficient way of manufacturing it is necessary to prepare time studies of the process by trying out in different ways the process and registering the working time needed. The result of the shortest working period should be described in the workbook. All the numbered cardboard plates with examples of the process should be placed on a hook in the sample room. Each article has its own number, and each process has its own logical consecutive number.

When the timings have been decided upon, they should be used in preliminary calculations to decide on the price of the article.

In order to calculate the exact cost price of an article, it is necessary to collect as many details as possible - price of the leather linings - fittings - thread - glue etc. To decide on the exact working time - the fixed process timings from the sample room are added - plus the time needed for internal transport plus the calculated timing for cleaning, control and packing. The total timing of the working process is then calculated in money terms. The weight of an article must be found out in order to calculate the cost of transport. Added to this is the percentage for overheads and profits. The final result of this addition indicates the amount for which the article can be delivered - including profits. However, in reality it often happens that the calculated cost price is found to be too high by the customer.

Often one can only reduce the price by purchasing the raw materials at a cheaper rate and by more efficient production methods (purchase of modern machinery). The price one pays for raw material is of great importance and often decides if one could or could not have successful export trade.

The purchase of more modern machinery increases production, but also of course the overheads because of high investment in equipment. However, it often improves the quality of an article.

To calculate the exact percentage of the overheads is not a simple matter. Generally the following costs are added: interest on capital invested for equipment - interest on the amount invested for the factory buildings, even if it is private capital, or otherwise the rent of the factory, administration costs, electricity, water, personnel transport (car expenses), telephone - depreciation of equipment, maintenance of equipment - travelling expenditures, for buying and selling - etc. etc. (this list is not even complete as yet). All these expenditures together, which are different for each factory, must indicate yearly the total cost in order to keep the business running. The total costs must now be put in percentage per order. The size of overheads cost depends also on the number of employees in the factory. The fewer employees, the larger the overhead percentage which comes on the order, this in connection with the longer work period needed to finish an order (additional rent etc.).

Each company must try to bring its own designs and models on the market, in which case it is possible to ask for a higher price rather than having the customer bring his own models and designs. At the same time one is free to offer one's own model to other buyers as well, in which case larger quantities can be manufactured, and consequently clicking knives can be purchased sooner. Manufacturing larger quantities has the further advantage that workers get more training in the different process timings. At the same time, it gives your business a more individual profile, if you have your own model available with a trade-mark or emblem if possible.

It is advisable to subscribe to a German or Italian leather goods magazine. One should also receive regularly leather goods magazines, from each country one is exporting to. One's articles should be advertised in these foreign magazines.

In order to improve the quality of articles, one must try to get samples of articles from the manufacturers in Germany and Italy. Study each of the articles in detail and together with your sample maker, analyse how each article has been manufactured.

Try during the timing process of your sample to attain the same perfect finish as the model from a colleague from abroad. Don't be satisfied too soon with the results. Each small detail is important. If one cannot get the same quality in a certain detail, ask why and what could be the cause. Try the same process ten times, but applying different methods.

In the long term, the best base for the Indian leather goods industry is to concentrate on those articles which are very labour intensive. Labour intensive articles are those in which a working process of a minimum of 15 minutes is involved to be manufactured in a rational manner.

If in a factory one needs 15 minutes to work on one article, do not forget that the same article from abroad was probably made in only four-five minutes. To get an insight into this is not simple. This kind of information is not given by foreign manufacturers and if they do, one must often be very careful because often there is a certain motive behind it.

The word "rational" means that an industry, which is well organized mechanically as well as for the distribution of the work and the working process, needs only 15 minutes to manufacture an article from the cutting to the packing.

When an article has to be sent abroad, send two samples to a customer. One of the samples must have trade stamp or signature. The second sample must be returned by the customer with his signature. If there is a difference of opinion about the quality of the delivered goods, these two samples can prove who is right. Take care that there is quality control after each process. Final control alone of an article never gives good results.

Everyone must adhere strictly to quality control system in a factory beginning with the first treatment of raw material. The factory manager is responsible for the proper functioning of the system. In a well run factory each article has its own number, each process has its own production number as well.

The parts belonging together are put in a handbook in which is described which process a certain part must undergo before it can be assembled with the other parts of the article. The clicking knives are also provided with a number. Clicking knives after an order is finished, must be greased and safely put away - not piled up.

Maintenance of machinery

Make covers for all expensive machinery. Before the daily cleaning of the factory, all machinery must be protected against dust. The cylinder head of a needle transport stitching-machine in regular use must be unscrewed, taken apart and cleaned with kerosene. For the skiving machine in intensive use, the part in which the transport-stone turns must be taken out of the machine. The stone must be cleaned free from paint and glue - the ridges of the stone must be lightly greased. The skiving machine must be checked regularly for loose nuts and bolts.

If you have a hydraulic cutting press, the oil level must always be checked. If the strap cutting machine is not in use the transport roll must be turned down. If the machine has not been used for a longer period, the knives which are turned 1 or 2 m/m in the transport roll will rust very quickly. During the use of the machine, pieces from the knives will break. On delivery of a new machine always ask for the instruction book of the machine concerned. Buy machines from one firm, if possible, naturally one can expect better service. The expert had noticed that service given by Indian manufacturers was not very efficient.

Concerning service, try to get information by asking your dealer the names of firms to whom he has delivered machinery earlier, and then check up the maintenance service given.

General information

- (a) Take care to have clean and as much as possible cool air in the working area;
- (b) Treat your employees as assistants, not as slaves;
- (c) Try to understand small or large personal problems. The better the understanding between you and the employees - the more team spirit you will have, which again will improve the quality of your product;
- (d) Keep the working area clean and dust free as much as possible. Once or twice a week the floors should be washed with water after all higher parts have been dusted.

Check the workshop every week to see if there are any articles or things around, which are not necessary for production. Remove everything which does not belong to the store. Each obstacle will make your production less, which will cost you money.

The Training Centre in Madras

The Training Centre for leather goods industry in Madras has up to date equipment and adequate working space for the manufacture of leather goods. In spite of these excellent possibilities, information was received from many manufacturers that students, who have had their training from this Centre, did not live up to the expectations of the manufacturers, once they started to work.

A manufacturer expects from a student who comes from the Centre that after a training period of two-three months in his factory the student can be responsible for a small production group of 10 persons who can, under his (or her) management, manufacture independently. But in this the manufacturer is disappointed. The man or woman from the Centre is able to produce a new sample from an article, but has no or very little experience in how to organize a regular production-line based on time studies. In this field, which is the most important for the manufacturer,

the Madras student has no experience. The manufacturer needs a supervisor workman (woman); however the Centre only trains students to make samples of leather goods.

During conversations with Dr. Santappa, Director of the Centre in Madras, this problem was discussed. It was proposed that the Centre should give a manufacturer an opportunity to place small orders e.g. 200 wallets, and to have them manufactured in the Centre, whereby the process is done by the students under supervision and responsibility of the manufacturer's foreman, and with co-operation of the supervisor of the Centre. For this process, the training centre may claim any payment. It is very important that the factory-foreman has supervision and responsibility for this production. The idea is that the supervisor of the Centre guides production very critically and, together with the factory-foreman, discusses how to handle the process most efficiently, and to carry it out in practice. By this method, it is possible for the workers to be trained in a more efficient manner. The number of students in the school can be increased substantially if applicants are available. To obtain a number of 24-30 students must be possible.

The basic idea of the Centre, i.e. training of sample-makers, designers, and manufacturers, should be extended to include the training of supervisors, foremen, production managers. Students with talent, also in the management field will be accepted readily by existing and newly established leather goods industries.

It would be ideal, if the training centre could have a certain budget to invite foremen and production managers from abroad for two-three months to teach the students their production methods through actual production. There certainly will be leather goods manufacturers or tanners who will be interested in supplying the necessary raw materials, because once the product is finished it will come without any extra cost in the possession of the raw material suppliers.

To find production managers/foremen from abroad might not be very easy, but UNIDO and ITC/UNCTAD/GATT can assist. In my opinion, the initiative to follow this kind of training must come from the training Centre and not be left to the manufacturers.

The idea is to contact from abroad a specialist for certain articles for the production centre. They must not be teachers from technical schools, since these do not have experience in mass production. Besides Madras, training centres should also be organized in Bombay, Calcutta and Kanpur. The Indian leather goods industry, in the near future, will get more and more competition from other countries which can produce more cheaply. Hong Kong - Korea - Philippines - Indonesia - Malaysia, some of which already have a very efficient leather goods industry. Within three-four years, a large part of the leather goods industry will be moved from developed countries to developing ones. Which part of the trade India can seize in this short period will depend on the following conditions:

- (a) Improvement of quality;
- (b) Regular electricity supply;
- (c) Duty-free import of necessary fittings from abroad;
- (d) Improved training possibilities for the staff in mass production;
- (e) Banishing all types of corruption and bribing;
- (f) Simple and clear instructions concerning import and export of articles;
- (g) Avoiding all types of bureaucracy.

The above-mentioned conditions form one complete part. Upon this will depend whether India can participate successfully in the leather goods world market and raise her export each year (1979-80 approximately 18 Crores), or whether she will have to forego this part and hand it over to other, more active countries.

PART B

In order to achieve profitable exports of leather goods, the Indian manufacturer needs to take the following conditions into account:

It is best to market one's own designs, adapted to the saleable sizes generally required in the country in which activities are being concentrated. In the case of one's own design, the product can be offered to any importer, the advantage being a larger number of articles of the same design.

To achieve low manufacturing cost and consistent quality, it is advisable to have punching knives made for as many parts of a product as possible. These will produce parts which always have exactly the same measurements, whilst accurate cutting lines make skiving easier.

In order to make the whole production process easier for the workers, it is often necessary to use simple auxiliary tools. These tools cannot be bought; they usually have to be adapted to the article, type of leather, glue or lining material, etc. It is therefore necessary to design one's own tools or to have them made by a metal or wood worker.

It is difficult to offer any guidelines regarding these auxiliary tools, as there is a vast variation in the operations. The best advice is therefore to observe the various operations performed by an experienced worker whilst making an article, and to analyse them. In other words, see what he or she does to achieve a certain result, and then try and think of a tool which would do the same thing, but quicker.

To give an example: the edges of a certain part, approximately 30 cm long, are manually folded over and flattened. The edges can either be flattened with a beating hammer, or they can be folded by hand without the aid of a hammer. After folding the edges manually they can then be flattened with a hammer. However, it is better to fit a self-designed foot-operated clamp to the table, which will flatten the edges in one action. By means of such a table machine (the auxiliary tool) it is possible to do the job more quickly, and often more accurately.

For any firm involved in mass production, analysis of the various operations is of vital importance. It is therefore advisable to appoint one person in the factory who is solely concerned with this work, including time and motion studies.

When more than 20 workers are employed, and when the job analyst has a good understanding of the work, the cost will be recovered in the number of working-hours saved.

The job analyst's work also includes the constant critical examination of the workplace, the internal transport of the articles during the process of manufacture, the lay-out of the machines, the use of the machines, the work rate, and quality control. Suggestions may also be

expected from the job analyst regarding improvements in the working environment, the position and installation of fans and lighting points, the size and height of work-tables, the collection and storage of semi-manufactured products, and a reduction of the working hours spent on one article by time and motion studies comparing the various operations. The job analyst is the brain of the company who, together with the factory production manager and the foreman, directs the production and, by mutual discussions with the management, determines the working methods and directs the planning of production.

Planning

Production planning determines whether or not a certain article will make a profit.

In most cases, the better the planning, the better financial return.

Good planning includes, inter alia, the following points and conditions:

Timely purchasing of the materials required for a certain order and negotiating the lowest purchase price with the supplier;

Uniform quality of the materials, recording deviations from uniformity of materials in stock and those still to be received;

Appropriate storage of the materials in the warehouse (leather must not be damaged during storage or internal transport);

Checking that all materials are available in the required quality before production commences;

Checking to see that the machines are operational:

Capacity planning of the machines (how many hours per day the machines have to work to keep up with the manual work or to stay ahead of it);

Data availability - the way in which a certain part has to be worked by the machine (splitting thickness, skiving width, etc.);

Availability of working times for the various operations;

Division of work - who, or which group, carries out which operation;

Types of glue to be used for the various operations. Availability of the glue;

Have possibly difficult operations on the articles to be manufactured been thoroughly discussed with the factory production manager and the foreman?

Which operations should be checked in particular?

Are checks to be carried out to compare the actual and estimated manufacturing times?

Have packing arrangements been made, and are the packing materials available?

It is obvious that such planning is only possible when large quantities, from about 1,000 items upwards, of one and the same design are being manufactured, or when almost similar designs are regularly produced. It is important for the manufacturer to produce large quantities of the same design. Workers will become highly experienced in the production of a certain article, and shorter production times can be achieved. A short production time, plus a low raw materials cost, can give the manufacturer a competitive position on the world market for leather goods.

General

If a manufacturer produces a different or new article every week, he must pay particular attention to his weekly fixed overheads, and should regularly check whether or not his product is profitable. Manufacturers who "work" themselves poorer each week are not unusual; the only person who benefits is the importer.

Every importer looks for new articles.

Do not therefore limit yourself to copying designs from foreign magazines or from samples sent to you.

Try to market new designs.

If, as has been shown, the Indian textile industry can successfully export its own designs and patterns the leather industry should be able to do the same.

All the necessary conditions are present in India: materials, equipment and artistic talent.

It should be possible to achieve good results through trading initiative and reliable trading.

When quoting delivery dates, electricity cuts during production, or the non-availability of raw materials, must be taken into account.

Should the delivery date have to be changed for any reason inform your client and request his approval of the change.

Do not despatch any goods abroad unless you are certain that they meet your client's requirements.

You may not only lose your customer, but it may also prove a handicap when doing business with another client in the country concerned. Importers are often members of an organization and exchange information.

If it is desired to establish a good relationship with a foreign client, it is essential that the quality of the goods delivered matches the agreed sample.

If your foreign client cannot rely on receiving his goods exactly as agreed upon, and according to the samples, he will be reluctant to guarantee them to his customers, and this will result in reduced orders or no orders at all.

The importer will always try to find as many customers for goods which he buys abroad, if there are no risks regarding the quality. As soon as he has doubts concerning delivery dates or the workmanship of the articles he will change over to a different supplier.

The Indian manufacturer should not accept more orders than he can produce in his own factory.

As soon as he has to depend on deliveries from a third party he can no longer guarantee the absolute quality of the goods delivered.

High quality goods can only be manufactured when supervisors carry out daily checks on the production.

Third party deliveries can only be considered in the export of, for example, Shantimketan leather goods; in the case of this type of article

the importer pays more attention to the artistic design on the leather than to the quality of the product.

In case of cow leather articles the first and foremost quality requirement of the importer will be the cleanliness of the articles: is the article clean and without paint, glue or oil marks, since these would make the product virtually worthless.

ANNEX I

Companies visited

1. GOODWILL LEATHER LTD., NEW DELHI:

This company is producing leather garments of medium quality.

The selling price of leather jackets is between \$60-70 per piece.

Export orders of not less than 150 pieces in one design in different colours are acceptable.

After receipt of Letter of Credit from abroad they can dispatch goods within four weeks.

The company is anxious to start producing other leather goods as well, but does not have equipment for production up till now.

The owner must expand the space devoted to leather garment production as present space is not sufficient. At present work is being done in only six to seven rooms with insufficient lights.

To control the quality of the different jobs on leather garments it was observed by the expert that it was very difficult to work in these dark rooms.

2. IDEAL INDUSTRIES, NEW DELHI:

The expert visited their showroom. Mr. Bahadur, the owner of the company, had shown him leather goods of good quality. The owner told the expert that the leather used for making the goods was imported from Italy. The expert had tried twice to see their works, but there was no chance. Mr. Bahadur told him that he needed permission from the Government to allow the expert to visit the place.

Mr. Bahadur promised to arrange this permission, but failed to do so.

3. ANCA LEATHER LTD., BOMBAY:

The expert paid two visits to the above works.

On his first visit, he found out that this factory had a good chance of being able to export fashion leather bags. Mrs. Chopra, the owner, told him that she had good contact with a buyer in Germany from whom she got orders of 1,500 ladies' handbags per month. The bags made in this factory incorporated the latest fashions.

The expert observed that the working area was too small for all the machinery. The sewing section was well equipped with modern machines.

During his second visit the expert told the lady owner that she should note down the remarks and complaints he made. On his first visit the expert had observed that most of the jobs were being done in a very inefficient way. The expert had gone around and given his advice about cutting, gluing, folding, piping etc. The lady found that it was not necessary to make notes. She was mainly worried about the delivery time for the goods in production. Lack of experience in efficient production methods is the bottleneck in this factory.

The owner herself gives all the orders in connection with the jobs, but first she had to learn how to do these jobs.

The advice given to the owner by the expert would be as follows: For two days do not go to your factory, stay at your home, take a notebook and make notes as follows:

- (a) What operations have to be carried out on the bags in production.
- (b) What was the estimated time for every operation. How the workers were doing their jobs at present, and how should they do it.
- (c) How much time a worker should spend on a particular job.
- (d) To calculate the time it is necessary to make time studies.
- (e) Clear with your supervisor or manager the time required for a particular job, and try to work within that period.

L. LEATHER GOODS HOUSE, BOMBAY:

This factory is very well equipped with leather goods machinery but they do not have enough space to run their machinery properly.

Mr. Prem L. Mantani, owner of the factory, has long experience in the field of production of leather goods. His production foreman was willing to learn from the advice given by the expert and he made several notes in his notebook.

The expert explained how to organize belt production in a proper way, how to set-up the production line, how to start with the cutting of the hides, how to arrange the cutting on the strap cutting machine etc.

The expert explained in detail how to separate the straps in modern ways. With the help of a carpenter, a wooden case was prepared as an example. With

the help of these cases it was easy to keep 5,000 straps on a half square metre of the workfloor and to know exactly how many straps of each colour and length were available.

The expert also explained as to why they had cut the lining for the belts together with the belt straps and how to arrange the splitting of the straps and how the gluing machine could be used.

The expert explained how European factories could make their belts in such a short time.

For the wallets and billfolds production, the expert gave his advice and explained why they had to use Latex glue for most of the folding operations.

The address of the suppliers of Latex glue in India was given to Mr. Mahtani.

Advice given to Mr. Mahtani by the expert was:

- (1) Remove the machinery not in use from the working floor to create more space.
- (2) Remove all the raw material not used for years from the racks, and keep the raw material used for production only.
- (3) Remove everything not necessary for production away from the workfloor.
- (4) Install all machinery in a proper way.
- (5) Try to get orders for labour intensive items (+ 15 minutes work on one piece). The production of belt is not really labour intensive. The raw material must not cost more than one third of the labour wages.
- (6) Try to settle problems with the workers, a good quality production is only possible with good team work, they must feel contented in their place of work.

With experience, Mr. Mahtani should be able to develop a good and profitable export in leather goods.

5. TATA EXPORT LTD., BOMBAY:

The expert paid a visit to their showroom at Bombay. Leather goods in this showroom were of excellent quality. Their prices seemed high for the European market, but then prices can always be adjusted.

The leather garments in their showroom were made from good raw material; the fashion was not up to date.

The expert was not able to pay a visit to their factory, so that he is not in a position to give his opinion on the set up of their production and working methods.

6. BAJAJ LEATHER LTD., SEA LORDS:

This company is one of the leading manufacturers of leather goods in the country. The owner and manager, Mr. Bajaj, is an energetic person and has very good business sense and the relation with his workers is good.

Mr. Bajaj has concentrated on the production of leather belts and wallets for export, mainly to the United States of America.

The quality of their products is up to the standard required by buyers in the United States of America and Europe, and their prices are very competitive.

The factory is well equipped with machines designed to handle bulk production of high quality. The expert found a designing room with a proper organization.

Production is planned and there was good quality control of work in process.

The Production Manager went around with the expert in the factory, and made notes of all suggestions and criticisms made by the expert.

For the belt production, the expert gave several suggestions on how to increase output, how to simplify work. He also explained how to organize the belt production and how to arrange different operations on the machines to do the work easily, quickly and more smoothly.

The production time of a plain belt should not be more than 2 1/2-3 minutes. A folded belt takes about 7-10 minutes of working time.

Mr. Bajaj is producing his own buckles for their belt production. The expert was surprised that their buckles had such good finishing and plating.

This factory shows that if given energy and the right application, there is always a solution to problems. To make one's own buckles is not an easy job.

The biggest problem this company is facing is that of working space. They have to work on different floors in too small spaces.

The expert gave suggestions on what can be done to get more working space, but the best solution would be to shift to another building with sufficient place for working. The prices per square foot of new buildings in Bombay for rent are so high that it will increase the overhead of the company in a way that it would be very difficult to make a profit on the prices they are earning at present, for their export goods.

Here the Government can do something in the shape of rent subsidy.

To shift a factory from Bombay to a cheaper industrial area and to re-employ skilled workers is very difficult.

The same problems were noted by the expert with other companies.

Every big town needs an industrial area where small scale factories can set up their activities. Plots of land must be available at low rents. Factory buildings must be subsidised by the Government.

7. HANDICRAFT, BOMBAY:

This is one of the leading companies in Bombay. They have their own retail shops in Bombay, where they are selling leather goods and all items made from imitation leather and cotton.

The expert visited this factory twice and observed that they were continuously busy with the production of schoolbags from cow leather for a buyer from Scandinavia.

The owner told the expert that he could have more orders from Scandinavia if he could buy good quality cow leather for this purpose at reasonable prices, but that it was not available from the tanners.

The expert had contacted some tanners in the country to solve this problem for Handicraft.

On their new premises the expert observed that they had up-to-date equipment for the fabrication of leather goods, i.e., band knife splitting machine, folding machine, upper skiving machine etc.

Some labour problems were forcing the owner to split the manufacturing of the goods into small units.

This factory also needs sufficient space where they can install their machinery in a proper way, to make an efficient production line.

A lot can be done if the company had all its workers in one place to make work easier, to improve quality, to increase production by time studies, and to use Latex glue instead of rubber cement glue.

After visiting units of Handicraft, the expert observed that they were working on the floor which must be changed to working on tables. The production needs more supervising.

8. NAVRANG EXPORT, BOMBAY:

(Manufacturers and exporters of leather goods)

In spite of their small machines and equipment, they are producing good quality briefcases and other leather goods. The company has its own leather goods shop near Taj Mahal Hotel with a good selection of nice fashion goods.

It was observed by the expert that they were mainly busy with the production for their own shop where they were getting better prices. For export, prices must be competitive, and the production needs to be standardised; this is only possible if they work on modern machinery.

The expert offered to inform the owner about the production of aluminium frames for briefcases on his next visit, but during his second visit to Bombay, no appointment had been made for this factory.

9. Z.A.Z. TANNERY, JAJMAN, KANPUR:

This tannery is well equipped with modern machinery needed to prepare good finished leather goods.

They are already producing shoe uppers and now want to start production of leather goods.

If the necessary machinery is purchased and a skilled person is employed to supervise this production, then they may have a strong position in the field of leather products.

To employ a skilled Production Manager from abroad is a very costly proposition, but after six months-one year's training of the workers, a good Production Manager should be able to produce quality goods for export.

The selection of correct leather goods line which they want to start is very important. For that, they need good advice from somebody from abroad, who knows the leather goods demand in his country. To go abroad and have a look at the prices in the retail shops is not real marketing.

10. COLTS INTERNATIONAL LTD., KANPUR:

They have a large factory and enough machines to produce leather goods. Only a few people were working during the visit of the expert.

The owner disclosed that they did not have enough orders to dispose of their goods.

The samples shown to the expert were not up to a standard for which a buyer from abroad would be willing to pay a good price.

The expert observed that they had to improve their quality to get export orders.

One of the steps that may be taken for improving quality is to send for training a worker of the company (son or daughter) in a factory abroad specializing in fashion leather goods, and to get some marketing knowledge as well.

11. LEATHERAGE, BANSMANDI, KANPUR:

They are producing shoulder-bags in bulk quantity out of cow leather at low prices. Their export goods are mainly forwarded to England.

If they improve the quality of their production it would be possible for them to get a better price for their products.

In their work place, the expert observed that they were working under insufficient light.

To deliver cleaner bags, they must shift their work from the floor to tables, which will make it more easy to supervise the various operations during production.

For more efficient production, it is necessary to purchase some modern machines, such as sole splitting machine, upper skiving machine, heavy tread stitching machine etc.

UNIDO can advise them on the purchase of new machinery.

12. STARLING UMAGO, KANPUR:

(Managing Director, Mr. Rapat)

Their tannery, located on a very nice compound about 25 km from Kanpur, was one of the cleanest tanneries the expert had visited in India.

The quality of their finished leathers is of high standard.

The company wants to set up the production of leather goods in the future.

Mr. Rapat told the expert that he was willing to employ a skilled person from abroad as Factory Manager for his unit, to start their production.

The visit of the expert to this factory was very short. The agreement was made that he should come back on his next visit to Kanpur about 4 weeks later.

During his second visit to Kanpur the telephone of Leather Export Promotion Council was not in order, so that it was impossible to make an appointment with this tannery.

13. COIN INTERNATIONAL, KANPUR:

This saddlery is also producing shoulder-bags and small leather goods.

The shoulder-bags made from cow leather are low priced. If they are willing to invest some money for the purchase of modern machinery, i.e. sewing machines etc., to improve the quality of their products they could have more customers and obtain better prices for their export goods.

The owner told the expert that he was willing to buy more machines if he could get orders. The normal way is to buy modern machinery, improve the quality, then more customers will show up to buy production in large quantities.

The price list given by the Company to the expert was also handed over to a Dutch wholesaler. He may contact Messrs. Coin International for importing their goods.

14. THE CANAPATI GROUPS, CALCUTTA:

(Chairman, Mr. O.P. Agarwal)

This is a leading company in the production of working gloves.

Quality control is well organized because of the competition of low-priced working gloves from Hong Kong. (The Dutch are importing this item 90 per cent from Hong Kong, 9 million pairs a year.) The Company may have difficulty selling gloves.

Mr. Agarwal told the expert that their company had purchased several clicking presses to increase production and to reduce cost.

They are still awaiting after six months for the clearance of these machines from customs authority and have discussions with the customs people about import duty.

Mr. Agarwal was very interested in having business contacts with Dutch buyers. If the expert is back in his country for a longer period, he will do his best to get more contacts from the Netherlands.

The expert was not in a position to visit the leather goods unit of this company and, therefore, cannot give his opinion about the way this production is organized. The samples shown to him were of very high standard, the prices he noticed were a little bit high for bulk export. But prices are always negotiable.

15. ALANKAR EXPORTS, CALCUTTA:

(Exporters of working gloves)

The expert got a very good impression of this factory. Mr. Arora (the owner) is well versed in his profession with good business ethics. He explained how he calculated the price of their working gloves. The expert was impressed with the experience about his production and overheads. Because of the high prices of cow split in India, it is not easy to be competitive against other countries in working gloves. For example, Hong Kong is already importing waste leather for the production of working gloves. The expert will do his best to give some business contacts to Mr. Arora.

16. TANNERY J.E.C. LTD., CALCUTTA:

After making contact with Messrs. Tannery J.E.C. Ltd., in the Leather Fair in Calcutta, the expert paid a visit to the above organization.

He was impressed to see that they were able to produce such bulk production of finished leather of good quality with their old equipment.

Their price for nice quality buff calf leather is very competitive.

Because of the nice quality of their wallets shown at the leather goods fair, the expert was interested to see their leather goods unit.

Next day, the expert paid a visit to their factory, but was disappointed with the old machinery on their premises. It is not possible to produce the wallets they had shown to him with this machinery.

Anyway, the goods are produced in Calcutta, opposite their leather goods unit they have a production section for shoe uppers.

The expert was surprised to see the speed at which the workers operated their special machine for the shoe uppers, all of them were paid piece rates, in spite of which the quality of their work was excellent.

17. SOUTHERN SULPHATES AND CHEMICALS LTD., MADRAS:

This company has a very well organized production unit for leather garments. The quality of their leather garments is excellent. Their equipment for production is up to date.

They are considering expanding their factory, and keen to start large-scale leather goods manufacturing of their own. The expert had spent a whole day giving them advice on how to set-up their new activities for the production of leather goods. How to control the quality during production, how to do the foldings, and which articles are in big demand in Europe.

The expert put back in operation their skiving machine, the knife of which was damaged.

Together with Mr. Yahawar, the expert made some calculations for new items.

This company should be able to set-up export production in leather goods.

The expert advised them to invite a skilled person from abroad for six months to train their workers, which will save money in the long run.

18. GORDON WOODROFFE LTD., MADRAS:

This big and well equipped tannery with big production of goat-sheep and cow leather for export, selling their goods through their own sales organization in London, is one of the leading companies for leather products in India.

Apart from their tannery, they are producers of industrial belts in large quantities. The expert spent some hours in this section. His main advice was to look into the internal transport system. If they made time studies of the jobs in this unit, it may be possible to increase output by not less than 25 per cent. The workers in this section are at their jobs already for the last many years, and are highly skilled, but some of the operations could be made much easier after a foreman had analysed the work. This unit needs some fresh ideas. Their shoe upper sections situated on the opposite side of their industrial belts production factory, is very well organized. This unit has European standard in the set-up of the production lines, good internal transport, qualified control system during production etc. This is one of the best organized units, the expert has visited in the country.

Their leather goods section on the road to their tannery has the necessary machinery, but they need more organization in their production and better

supervising of the machine operations and hand work during manufacturing.

The folding of their wallets on a folding machine will give better quality and increase output.

19. RASHI LEATHERS, PTV. LTD., MADRAS:

A beautiful tannery with clean and modern up-to-date equipment. Their finished leather goods are of top quality.

During his second visit to Madras the expert spent half a day with this company. He gave advice on their leather goods section, which they had set-up in their new extension, where they had been already manufacturing leather garments.

For both of these products they are interested in purchasing needle-transport sewing machines to give better look to their goods.

A modern machine park for leather goods including band knife, splitting machine, upper skiving machine, clicking press, a straight folding machine and a strap cutting machine.

If they are prepared to invest more for the purchase of machines for their new activities, they will have a very strong position in the leather products field in India.

20. V.A. HASEEB AND CO., MADRAS:

(Exporters of leather goods)

The expert observed that in this company a large stock of very nice leather is available for making leather goods.

This factory does not have sufficient equipment to produce leather goods of an acceptable quality for export. If they intend to enter the business, they must be prepared to buy the necessary machinery for this purpose.

21. A. RAFIQ AHMED AND CO., MADRAS:

This is one of the largest tanneries in Madras. They have extensive production of shoe uppers in various models, which they export worldwide. Their equipment is up to date.

Recently they have started the production of leather goods. For this section it should be advisable to bring a skilled person from abroad for six months or more to help them with the setting-up of this fabrication and fashion, otherwise it will take years before they will be able to produce some goods acceptable for export.

22. M. BILAL HUSAIN AND CO., MADRAS:

This tannery makes very good products from finished cow leather at a competitive price.

If they can find a partner in Madras with experience of fabrication of leather goods and the machinery for the production, especially of ladies' shoulder-bags and travel goods, then they may be able to enter the export market for leather products. For a good fashioned product there are always customers.

23. A.V. THOMAS LEATHER AND ALLIED PRODUCTS LTD., MADRAS:

Here the expert observed that this is one of the best equipped factories for leather goods in the country.

The expert noticed that this is the only factory which produces its own banded cutting knives for the clicking press, which gives an advantage of flexibility of bulk production.

The young Production Manager does not have the required experience for the production, but is willing to learn. It will be advisable to send him for six months training abroad to work in a well organized leather goods factory. It will not be easy to find a factory abroad willing to give this service, but a special arrangement could be made. The expert offered his sincere help in this matter.

Mr. Dhingra, the Manager of this factory, has good business sense. In good co-operation with a company abroad, it would be possible to build up a strong and profitable export business.

24. ONWARD TRADING CO., MADRAS:

They are the producers of good quality wallets and purses. They are able to make much more than what they can sell on their local market.

The owner disclosed that he will make a tour of Europe to find customers for his products.

The prices are acceptable in the European market. The best way to sell his products will be to participate in the European leather goods fairs, but this will take some time, before the customers abroad gain confidence in Indian producers. Some of them did not have good experience with the import of Indian leather goods.

25. MADRAS SKIN AGENCY, MADRAS:

This factory situated at 114, Vepery High Road, is one of the largest exporters of leather from the country, and is well known for its leather in Europe.

In addition to their activities in leather selling, they have a unit for the production of leather garments also. The quality of their leather garments is excellent. Their output is mainly for export.

Now they feel they are in a position to start on the production of leather goods as well.

For setting up their production they should bring a skilled person from abroad to train the workers in their factory for about six months and to make careful use of the costly machinery.

SHAFEEQ SHAMEEL AND CO., MADRAS:

They are the producers of shoe uppers of a very good quality for export in large quantities.

The expert has not seen their Works. Therefore, he is not in a position to give his opinion about their working system.

27. THE REPTILE HOUSE
THE CRAFTSMAN (PTV) LTD., MADRAS:

The owner, Mr. R. Muralidharan, is a skilled, intelligent and hard working man, open to advice and willing to learn.

It would be advisable if he could have a person skilled in bulk production for a short period from abroad.

Mr. Muralidharan who has passed the tanning course in Madras, is able to give a much better look to his leather products from cheap leather after dyeing and buffing.

The expert spent half a day with the owner to go around his factory. All his advice in connection with gluing, folding, stitching and finishing was noted down by Mr. Muralidharan, so that he can make use of it in future.

The expert had an interesting discussion about the calculations and overheads with the owner and was willing to give some advice concerning this matter.

28. NAMASTE LEATHER GARMENTS (PTV) LTD., BANGALORE:

One of the best organized production units for leather garments in India was visited by the expert. They have 120 workers employed. The factory is well equipped with specialized machines for the production of leather garments.

The production is organized in such a way that their output has standard quality, which is most important for export production.

The fabrication is being supervised by a Turkish couple who are well experienced in their job.

The expert was impressed with the fact that they had organized such smooth production of leather garments.

The owner, Mrs. Bhat, wants to set up leather goods production as well.

The expert has made a list of machines with some estimates of prices for setting up this unit. He discussed several details related to the leather garment production with Mrs. Bhat.

If they want advice in future in connection with the setting up of their leather goods production, the expert is willing to co-operate.

29. WILLIMACH AGENCY, BANGALORE:

This company is a producer of leather garments of medium quality at competitive prices from goat leather. They need to invest more in modern sewing machines to produce standard quality products.

The owner, Mrs. Pankaj Desai, wants to start also leather goods manufacturing. For setting-up this section she intends to invest more in equipment as a first step.

30. EKS-KWI-ZIT SKINWEAR, BANGALORE:

A competitive producer of leather garments, especially leather trousers made from sheep skins.

Their machinery is not up to date, which creates difficulties in the standardisation of their products.

The customer from abroad wants exactly the same quality as what they have seen in the samples.

The samples which were shown to the expert were of good quality. The expert was not in a position to check the quality of their output.

31. HARSHA EXPORT, BANGALORE:

A hotel owner in Bangalore wants to set up leather goods production. The advice of the expert was to employ a skilled person in the factory, purchase second-hand equipment for leather goods from abroad and start with very few designs, but try to lower cost for the goods so that there will always be a market for their exports.

32. SUPREME OVERSEAS, BANGALORE:

A company with good management. In spite of their old equipment, their products are of good quality.

During the visit of the expert they were extremely busy with an order for jackets from a Dutch buyer. They are already working for the new fashion line of leather trousers. The samples shown to the expert were of very good design. To make better use of their waste leather from the leather garments, they were trying to make samples of patchwork for shopping bags.

The expert gave some advice on how to produce these items in bulk production and how they could make a profit by selling these bags.

33. S.A.O. SOUTH ASIAN OVERSEAS, BANGALORE:

A new establishment at the first phase of sample-making.

Their designs in leather garments are very good from the point of view of fashion but when they start their production, they will face some difficulties. The training of their workers will take some time, and for some of the operations on their garments they will have to buy some special machines to produce standard quality products.

The look of their samples in leather goods is up to date. Now they are going to start production and have to find customers for their products.

34. TAFKA TANNERY AND SHOE MANUFACTURERS, KANPUR:

One of the oldest tanneries in the country.

Their shoe production section is producing 800 pairs of shoes per day with 30 workers. These figures were given to the expert by the production manager.

The equipment they are working with is antique - some of the machines are more than 100 years old.

In spite of their old machinery they are able to produce good quality finished shoes, but it will be very difficult to make a profit on their operation if their overheads are included in the cost of production.

Many of their workers have long experience in leather products because they are saddlers. For the last few years Tafka are also the manufacturers of saddles and harnesses.

Now they are keen to start the production of leather goods. The Director showed the expert a photocase for which they can get a good order, but they have some difficulties in some particular operations of this case. To solve these problems, the expert advised them to contact T.D.A. in New Delhi and arrange for a second visit of the expert so that he could spend more time with them.

This company has a chance to make leather goods in bulk production. They are tanning the leather themselves, they have adequate work space, and many skilled workers.



