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RESTRICTED

LEATHER RESEARCH AND TRAINING INSTITUTE, PENDIK/ISTANBUL (PHASE II),
DU/TUR/74/007

TURKEY,

Technical report: Assistance in footwear design.

Prepared for the Government of Turkey by the
United Nations Industrial Development Organization,
as an agency associated with the
Food and Agriculture Organization of the United Nations,
the executing agency for the United Nations Development Programme

Based on the work of K.H. Longman, consultant on footwear design

United Nations Industrial Development Organization

Vienna

id. 77-3893

Explanatory notes

The monetary unit in Turkey is the lira (LT). During the period covered by the report, the value of the lira in relation to the United States dollar was \$US 1 = LT 17.50.

A comma (,) is used to distinguish thousands.

LRTI is the Leather Research and Training Institute.

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ABSTRACT

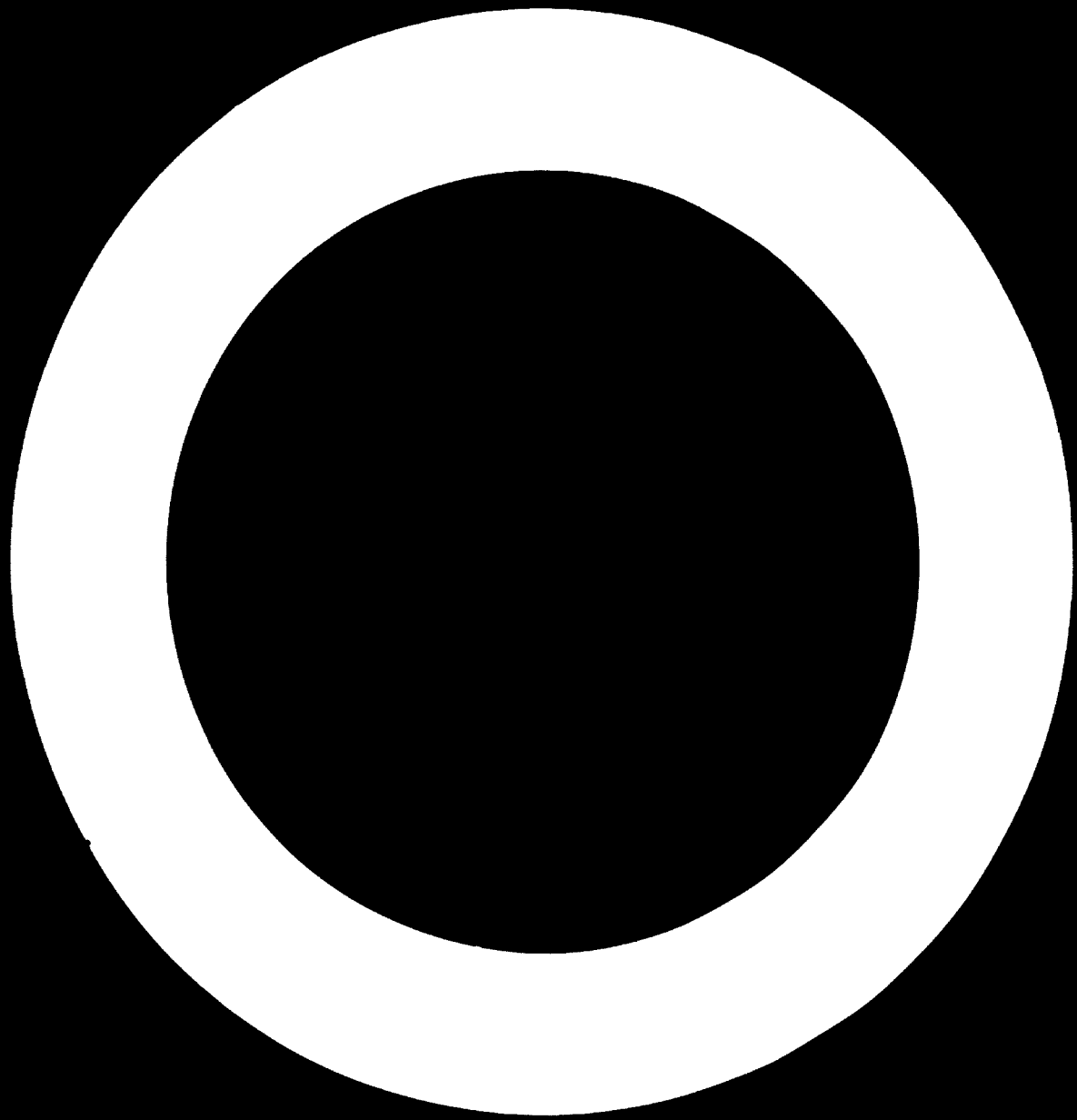
The Government of Turkey requested the United Nations Development Programme to assist in the organization and operation of the Leather Research and Training Institute (LRTI) at Pendik/Istanbul. The project (DU/TUR/74/007) is being executed by the Food and Agriculture Organization of the United Nations (FAO), with the United Nations Industrial Development Organization (UNIDO) acting as associated agency.

The current report concerns efforts to improve LRTI's ability to aid the Turkish footwear manufacturing industry. UNIDO assigned an expert in footwear design to the Institute for one month, to work under the supervision of the project manager. The expert arrived in mid-April 1977 and learned that his duties would differ considerably from his original job description. His new responsibilities comprised running a course for the students at LRTI and visiting footwear manufacturers to give on-the-spot advice and to determine what they required of the LRTI footwear department.

The Turkish footwear industry consists mainly of two types of unit. The first are small units, where most of the manufacturing and finishing operations are done by hand, the average number of workers is five and production is from 15 to 20 pairs of shoes a day. The other type of unit is more mechanized, and produces from 300 to 1,000 pairs of shoes a day. There is one large unit with 1,200 employees and a daily production of about 12,000 pairs of shoes.

Considerable scope exists for upgrading the Turkish footwear industry both in productivity and in quality, and it is here that the footwear department of LRTI could be immensely helpful. Nevertheless, LRTI must overcome many problems itself before it can assist the industry. One such problem is how to attract more students from the industry.

At the end of his assignment, the expert made a number of recommendations concerned with improving the technology of LRTI and varying the courses offered.



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INTRODUCTION

The Government of Turkey is receiving financial assistance from the United Nations Development Programme for the large-scale project "Leather Research and Training Institute" (DU/TUR/74/007), for which the Food and Agriculture Organization of the United Nations (FAO) is executing agency and the United Nations Industrial Development Organization (UNIDO) associated agency. As the footwear department of the Leather Research and Training Institute (LRTI) needed to be strengthened and more emphasis given to the leather consumer industries, UNIDO assigned an expert in footwear design and pattern cutting to the Institute for one month. He arrived in mid-April and left in mid-May. On his arrival he learned that his duties would differ considerably from those of his original job description, which were as follows:

- (a) To advise the footwear manufacturing industry on the principles of footwear design, relative to fashion and economic plant production;
- (b) To advise on fashion forecasting and the preparation of appropriate designs for both local consumption and potential export;
- (c) To conduct lectures or symposia in the above field and prepare suitable display equipment for this purpose.

Under his revised duties, the expert was expected to hold a course for the students attending LRTI, make plant visits to give on-the-spot advice, ascertain what the industry required from LRTI and advise the Institute accordingly.

The Turkish footwear industry consists mainly of two types of unit. The first are small units, where most of the manufacturing and finishing operations are done by hand, the average number of workers is five and production is from 15 to 20 pairs of shoes a day. The other type of unit is more mechanized and produces from 300 to 1,000 pairs a day. There is one large unit with 1,200 employees and a daily production of about 12,000 pairs of shoes.

During the assignment the expert visited about thirty of the small units, four medium-sized ones and one large factory at Istanbul and Izmir. The small units produce over half of the Turkish footwear, about 29 million pairs or 55% of the total production volume. The remainder is produced in the mechanized and semi-mechanized units.

From the visits the expert was able to form some idea of the Turkish shoe industry and its problems and to judge how the footwear department of LRTI could best serve the industry.

I. FINDINGS

The footwear-department workshop of LRTI is situated in a pleasant well-lit room with a floor area of 310 m², which should be large enough to house a very efficient operation. In addition, there are a number of class-rooms suitable for the necessary theoretical instruction.

Staff

One of the main problems of the footwear department is lack of staff. At the moment there are four persons that make up the total staff.

One of them teaches design, pattern cutting and the grading of patterns. She is described as a full-time, paid counterpart, but she cannot speak English, though she is taking English lessons two half days a week, and she is paid to teach a maximum of ten hours a week. If she teaches more than this, she is not paid for it. Therefore, she can actually be considered only a part-time teacher.

The counterpart who was assigned to the expert is also an instructor at LRTI. However, he is employed by the Simerbank shoe factory at Beykoz and is released by them for two days a week only if he can be spared. Again, he can be classed as only part-time help, paid out of pocket expenses.

The two other persons are classed as machine operators. Their duties are not well defined. Most of their time seems to be spent making batches of shoes on special order. The expert understands that they demonstrate the machinery to the students.

The expert's main problem was with the counterpart, who could be with the expert or carry out his own teaching duties at LRTI only at his employer's convenience. Consequently, he was able to join the expert for only five working days during the month's assignment.

Machinery

The machinery in the footwear department has been acquired from different countries and manufacturers. Some machines are old and out of date, others are modern and highly sophisticated. It is clear that very little planning went into their purchase. None of the machinery is of much use to the small footwear manufacturers in Turkey. Some of the machines are not working and

others are short of spare parts or components, such as rod thermo-plastic adhesive for the pull toelasting machine.

Courses

At the moment there are 14 students receiving instruction at the footwear department of LRTI. They are all from the Simerbank factory and are new to the industry. It is not known where the next batch of students will come from.

LRTI is offering only one course at the moment, a course of 36 weeks in general shoemaking. The weekly schedule is as follows:

	<u>Hours</u>
bottoms and uppers, practice	14
Design and pattern cutting, practice and theory	10
Footwear technology, bottoms and uppers, theory	8
Physical testing	2
Leather technology, theory	2
Factory management	2
Marketing	2
Total	<u>40</u>

One hour is actually 40 minutes, and holidays are included in the 36 weeks.

Accommodations and meals can be provided. For short-term courses there is no tuition fee but for long-term courses there is a charge of 3,500 Turkish lire, covering accommodations and so on. This can be a great obstacle to small manufacturers, who have limited resources.

Industry as a whole seems to take little interest in LRTI. Various people told the expert about different shortcomings at LRTI. One factory visited, Goya Shoes, produces 200 pairs a day of high-fashion, good-quality shoes that sell in their own shops for the equivalent of from 17 to over 20 pounds sterling¹ a pair. The owner stated that he would not send any of his staff to LRTI at the moment because his technology was higher than that of the Institute and his staff would learn nothing from it. The writer had to agree with him.

¹ During the period covered by the report, the value of the pound sterling in relation to the United States dollar was \$US 1 = £0.585.

Most of the criticism concerned the type of course LRTI is holding. It was felt that specialization should be emphasized rather than general knowledge. There should be short courses aimed at helping small manufacturers, an operators' course to give instruction on particular machines and other short courses on specific subjects.

LRTI's current course is general, and the expert feels that at the end of it students are not competent in any one subject taken. For instance, design and pattern cutting is taught to students new to the industry for 10 hours only. The students would not be able to cut good patterns on their own after that length of time. They would have only a basic knowledge of the subject and would be of little use to a manufacturer, particularly a small one.

Technological problems

With the exception of Goya Shoes, all the manufacturing plants visited were deficient in technology and product quality. This was also true of the Sünerbank factory, where the expert was able to offer advice such as that machine operators should work with their backs to the conveyer rather than at right angles to it so that they are not standing in their own light. In a number of cases, however, the expert's advice or questions met with a negative response.

Two examples are cited. In one of the lasting departments at Beykoz a modern pull toelasting machine and a tack seat laster were being used, but two men were employed hand lasting the waists. When asked why they did not use machines to do this operation, they told the expert they preferred to do it that way. But in another lasting room in the same factory machines were being used for the same operation.

The expert also noted that on a plain Oxford-type shoe three rows of stitching were used for vamping, whereas in Europe two rows are normal. Again, the expert was told that three rows were preferred to two.

On the whole the expert had a better response from the small units than from the mechanized ones.

II. RECOMMENDATIONS

The footwear department of LRTI needs upgrading in both staff and technology if it wants to help the Turkish footwear industry to improve, particularly if it wants to attract students from the various manufacturers. The following recommendations are therefore made:

1. LRTI must identify itself more closely with the leather consumer industries by changing its name to show that it is concerned with leather products as well as leather. A suggested name is Leather and Leather Products Research and Training Institute.

2. LRTI should offer more specialized training courses, with at least three courses running at the same time. Evening classes could also be considered. The courses might consist of:

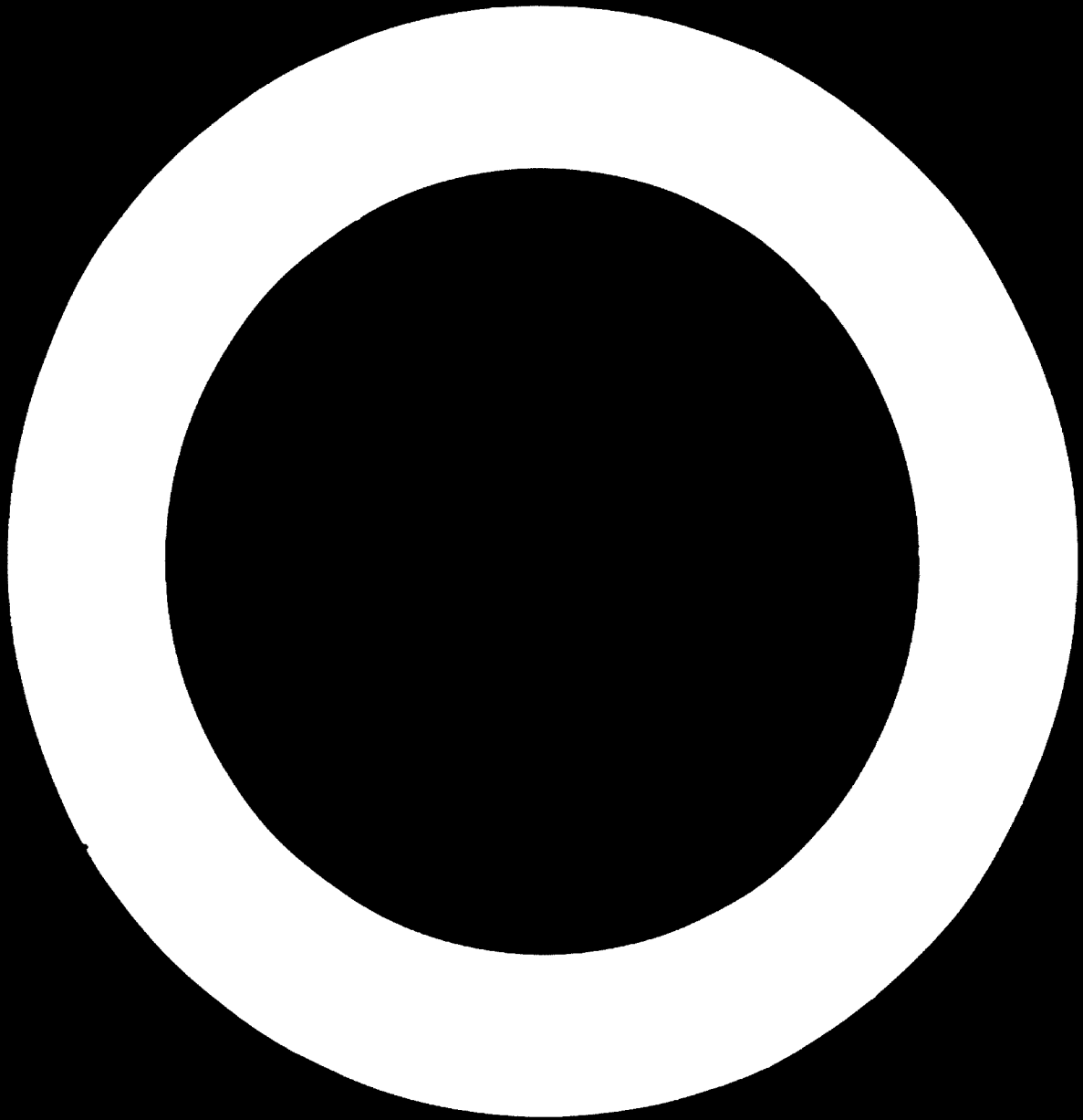
(a) A 36-week course during which at least 24 weeks were devoted to specialization. This might be design and pattern cutting, cutting and closing, or lasting and finishing. A student taking this course who specialized in design and pattern cutting would spend most of his time on his special subject but also 12 weeks on the other subjects to get an overall idea of shoe manufacturing;

(b) A three-month course of departmental training in which the student would study exclusively a particular process, e.g. closing or lasting, and learn to operate the machines in the department concerned;

(c) A course of two weeks or so during which a student would learn to operate one machine only.

3. It is suggested that some subjects included in the present 36-week course be dropped. These are physical testing, factory management and marketing. The reason is that there is not enough time in the course to cover subjects that are not specifically concerned with shoemaking. The time saved by this deletion could be spent on a specialized subject. Later, the dropped subjects could be reinstated in an evening course if demand was sufficient. Other subjects that should be considered for evening courses are costing and time and motion study. In addition, evening seminars could be held at LRTI, where problems could be discussed and help given.

4. The expert realizes that these recommendations would involve a considerable amount of expenditure. It would be necessary to recruit full-time staff who would teach at least 35 hours a week and who would have to be paid a salary comparable to that they could receive in industry in order to attract them from industry.
5. The footwear workshop should be divided into two sections. To take into account the importance of the small manufacturer in the industry, one section should be equipped with the type of machines he could use to increase his productivity and the quality of his products. The Graduate type of machine might be useful for this. The second section should be equipped with a complete range of modern machines for demonstrating modern developments. A student would be expected to go through both sections, so that he would be able to assist the industry regardless of the size of the unit he finally went to.
6. If more United Nations assistance is sought for the footwear department, LRTI should be sure to provide full-time counterparts and supporting personnel such as typists. The expert feels that too much time was wasted because the counterpart's schedule was uncertain and there was no typist.
7. At a later stage, consideration could be given to setting up a footwear testing laboratory, where manufacturers could send their footwear to be tested and advice could be given to the industry in general.
8. Inquiries should be made to see if LRTI can become a member of the Shoe and Allied Trades' Research Association, United Kingdom.
9. Although the expert saw about 35 units, he was not able to obtain a clear picture of the industry. Therefore, before any of the above recommendations are carried out, an intensive survey of the industry should be undertaken.

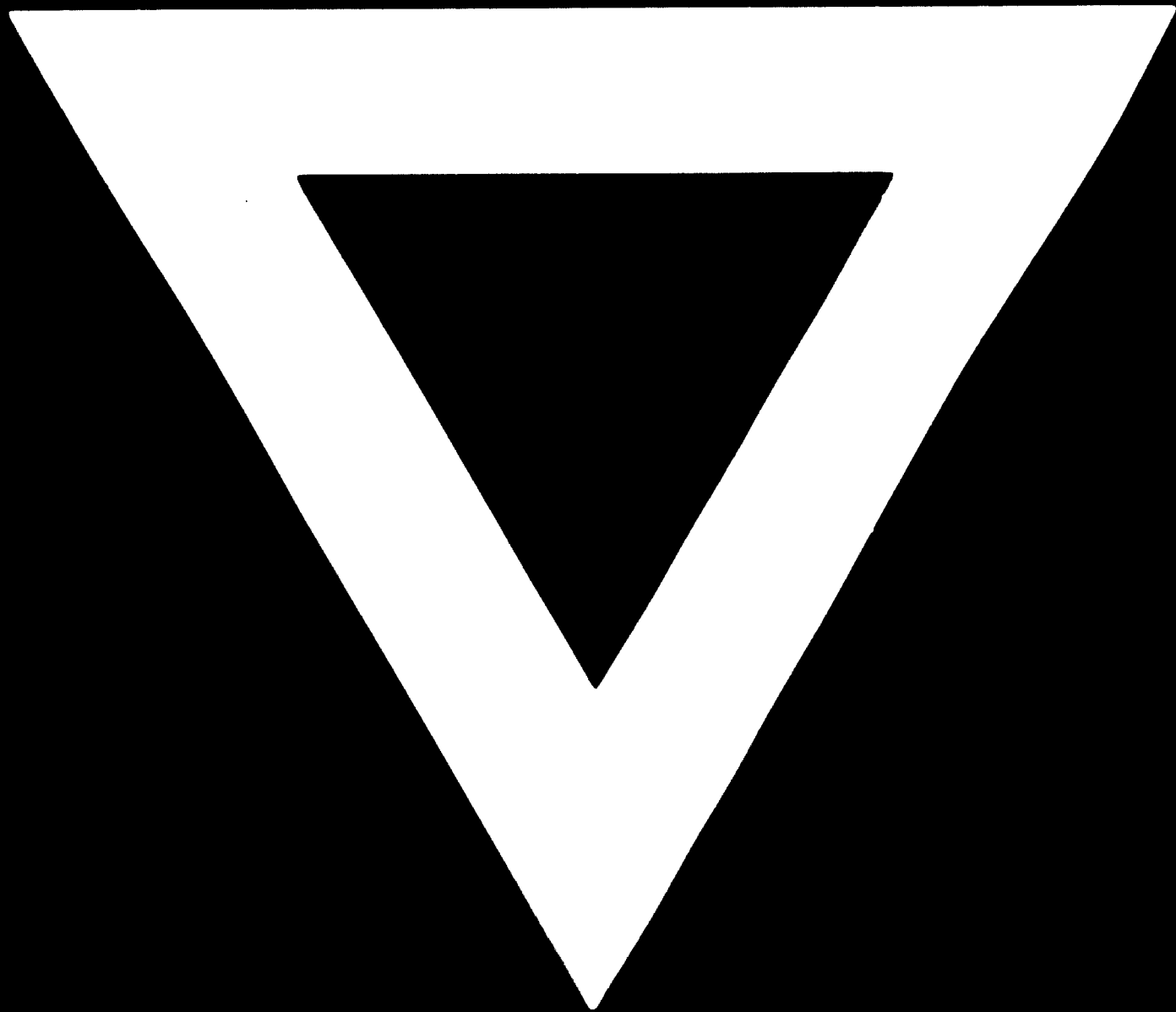


Annex

THE WORK PROGRAMME OF THE EXPERT

April 18 Arrived and took up duties
19 Spent day at Sümerbank shoe factory, Beykoz;
met Ibrahim Comuk, official counterpart
20 Spent day at LRTI observing a course in progress and dis-
cussing the programme
21 With counterpart visited Mata shoe factory at Istanbul, as
well as a free-lance designer and two small units
22 Began teaching course to students
23 Visited Beykoz, no counterpart, returned to Pendik
26 Visited Istanbul with translator, no counterpart; met Temel
Coruh, Chairman of the Istanbul Federation of Footwear
Manufacturers, and visited Goya Shoes
27 Visited Yesil shoe factory with Mr. Nemezes as translator,
no counterpart
28 Visited Sümerbank, no counterpart; translator provided
29 Course at Pendik with counterpart; course dropped owing to
lack of time
30 Travelled to Izmir with translator
May 2 Visited Safak shoe factory at Izmir;
visited Chambers of Commerce and Industry
3 Visited small units at Izmir
4 Returned to Istanbul
5 Visited small units at Istanbul with translator
6 Visited small units; met with Chairman of the Istanbul
Federation of Footwear Manufacturers
9 Visited Beykoz with counterpart to show how to cut
moccasin
10 Met with Chairman of the Federation again
11-16 Worked on report
17 Mission completed, left for Vienna

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