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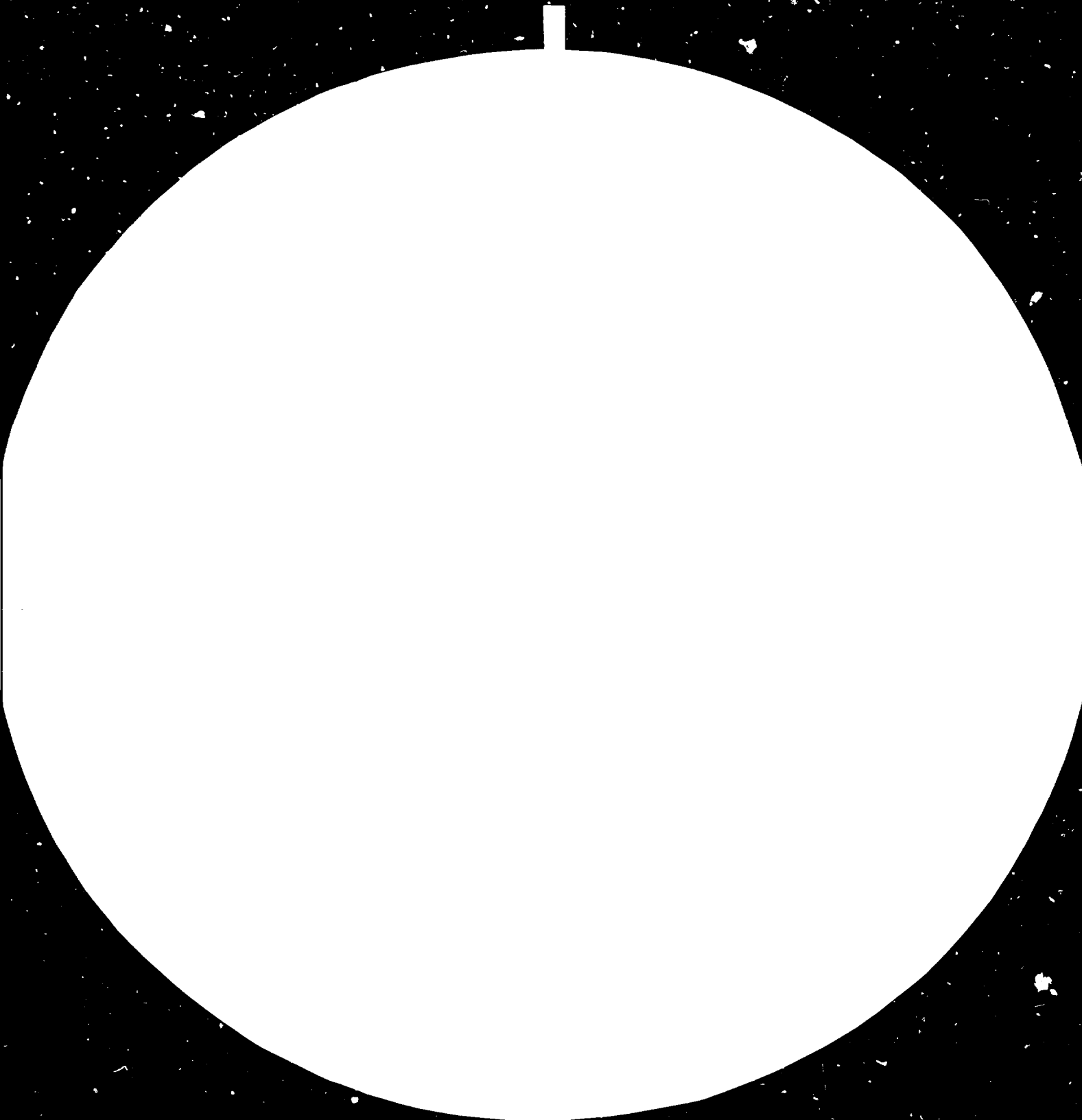
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1982

TECHNICAL DEVELOPMENT CENTER, PHASE II

DP EGY/77/008

EGYPT

Technical report: Noise Measurement and Control in Egyptian
Textile Mills

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

Based on the work of Peter Leach,
Consultant in Noise Control in Textile Mills

United Nations Industrial Development Organization
Vienna

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Acknowledgements

I would like to express my sincere thanks and appreciation to the officers of the Textile Consolidation Fund and UNIDO for the opportunity of visiting Egypt to survey noise levels in a part of the textile industry.

Also the chairmen and officers of:-

Mill No 5 Alexandria Spinning Co. Alexandria.

Mill No 10 Spinning Co. El-Fay El-Dakki.

Wadi el-Gara.

National Spinning & Weaving Co.

El-Harf Knitting and Crocheting Co. (KLECO)

El-Harf Jute & Selected Textiles Co. (STIA).

Mill Spinning & Weaving Co. Bahalla El-Kuwa.

El-Harf spinning, Weaving & Dyeing Co. Bahalla El-Kuwa.

for their interest and cooperation, specially to the director and staff of TDC, for their enthusiastic assistance and support throughout my mission.

1. Purpose of Mission

The mission was undertaken at the request of the Government of Egypt to draw attention of the Textile Industries Group to the importance being attached in many countries to the problem of excessive noise in the working environment, and to demonstrate what is required to measure and control noise in Textile mills.

1.1. Duty Station

Alexandria, with travel within the country.

1.2. Background Information

A Textile Development Centre has been set up over the past five years at the Textile Consolidation Fund in Alexandria where there already exists a Textile Testing and Quality Control Organisation, itself the result of an earlier UNDP Programme.

The purpose of the Textile Development Centre is to provide assistance to the Textile industry through applied research and development activities in all aspects of textile manufacture from fibres to finished garments.

The Centre when fully established will have the objectives of:

- a) Providing pilot plant and testing laboratories for work on industrial problems of immediate use to the Textile industry.
- b) Carrying out pilot plant studies of materials, particularly cotton and its blends, including fibres, dyes, finishes, machines and processes.
- c) Carrying out qualitative and operational studies on industrial processes in textile mills to increase productivity and efficiency.
- d) Provide technical consultancy in management and technological problems and introducing modern testing techniques to industry.

- e) Communicating to industry at all levels by organising seminars; conferences; symposiums, group discussions and training courses.
- f) Disseminating technical information to industry; and
- g) Assisting the industry to set and maintain standards.

1.3. Duties of the Consultant.

As a member of an international team assigned to the TDC, and under the direct supervision of the Project Manager the consultant is specifically expected to:

1. Conduct noise surveys in a range of textile mills covering, opening - preparation - spinning - weaving knitting and dyeing and finishing.
2. Instruct the staff of TDC, in the method of carrying out noise surveys and in the use of the instrumentation.
3. Give a seminar on the subject of "Noise Control and the Textile Industry". Outlining the physical properties of sound, its method of measurement, its effect on man and the various international standards which limit the noise dose; finally give examples of how noise control can be practiced in the textile industry.
4. Give practical advice on how the problems can be overcome.
5. Prepare a final report setting out the findings of his mission and giving his recommendations to the Government on further action which may be taken.

2. Activities

2.1. Measurement of Noise Levels in Textile Mills

Noise surveys were carried out in a number of textile mills, covering the processing of cotton and wool from the blowrooms to weaving and finally dyeing and finishing. A survey was also carried out in a knitting/setting mill.

In general only the spinning process, both ring and open-end together with weaving have levels significantly higher than the international standards.

Recommendations are given in the reports (Annex III to XII) on how a reduction in noise level may be achieved on a process by process basis for each mill.

2.2. Instruction of staff in noise surveys and reporting

Engineers from TDC were instructed at TDC on the techniques used in noise surveys. An engineer from TDC was present at each the surveys undertaken in the mills and further instruction was given.

2.3. Article for Textile Consolidation Fund Information Bulletin

An article " Noise and the Textile Industry" was prepared for the information bulletin. The article explains noise, its measurement, international standards on maximum levels and recommends ways in which the noise level can be reduced both in a general manner and specifically applied to textiles.

2.4. Seminar

A one day seminar " Noise Control and the Textile Industry" was given at TDC, on 5th September 1982. to an invited audience from the Egyptian Textile Industry and staff from the TDC.

Notes of the seminar are contained in annex II.

2.5. Noise measuring equipment

Recommendations for basic noise measuring instrumentation were made (annex III) based upon the experience of surveying the sample mills.

2.6. Books and magazines

The Textile Information Centre was supplied with a list of books and magazines covering noise control, it is recommended that these be purchased and subscribed to. (Annex V).

2.7. Measurement procedure for a noise survey

The requirements and method of carrying out a noise survey were explained to the counterparts so that a standard procedure would be adopted. (Annex II).

3. Recommendations

- 1) The TDC. should purchase noise measuring equipment and continue noise survey work in the Egyptian Textile Industry.
- 2) One mill, near to TDC., should be selected and noise control measures adopted by the mill, under instruction from TDC., to demonstrate what can be achieved in terms of noise reduction by applying standard techniques.
- 3) A hearing conservation programme be started in one section of a mill, preferably Miss Spinning and Weaving Co. at Mehalla El Kubra. Audiograms should be taken of the operatives hearing response and then re-checked at one year intervals. Personal hearing protection should be provided to this sample group and ensured that it is worn by all level of operators and management.

Upon the successful completion of this pilot scheme the programme should be enlarged in stages to include more and more operators whose hearing is at risk.

- 4) That the experts programme of work in Egypt is agreed and organised become the mission. This may involve the expert paying a short visit to Egypt a few weeks before the actual mission but it would allow him to meet his counterparts and organise plant visits and any detailed information required. His counterpart could collect this information for the expert prior to the mission.

Annex I

Work Programme

Post:

Name: Roger Leach.

August 1982.

15. Arrive Cairo.
16. Briefing at UNDP. Arrive Alexandria.
17. Arrive TDC.
18. Work programme with Eng. Magdi Elaref.
19. Visit TQC - TDC - TIC. reviewing facilities re equipment books etc.
21. Seminar for TDC - TQC. General aspects of noise, instrumentation standards, solutions.
22. With engineers from TDC training of counterparts in use of equipment in Spinning/Weaving Dept.
Counterparts Spinning Eng Salah Saber.
,, Weaving/Knitting Eng Mohamed El Shamy.
,, Dyeing & Finishing Eng Hassan El Kasrawy.
23. Survey at Alexandria Spinning & Weaving Co.
- 24.25.26 Survey at Misr Fine Spinning & Weaving Co.
28. Prepared report on Alexandria Spinning and Weaving Co.
29. Survey at Beida Dyers.
30. Prepared report on Misr Fine Spinning and Weaving Co.
31. Survey at Beida Dyers.
Prepared report on Beida Dyers.

September 1982.

1. Survey at National Spinning & Weaving Co.
2. Survey at El Masr Knitting and Clothing Co. (KABO)
3. Prepared report on National Spinning and Weaving Co.
El Masr Knitting and Clothing Co. (KABO).

4. Survey at El Nasr Wool & Spinning Textile Co. (STIA)
5. Seminar on "Waste Control and the Textile Industry"
6. Prepare report on STIA, prepare to travel to Melilla.
7. 19 Survey at High Spinning & Weaving Co.
El Nasr Spinning, Weaving & Dyers Co. Benalla El-Fouad.
8. Prepare report on Melilla.
11. " " " " " "
12. Prepare Final Report.
13. Travel to Cairo, Egypt. De briefing.
14. Travel to Vienna.
16. De briefing for Egypt
Briefing for China.
17. Depart Vienna.
Last day of service 17 September 1982.



