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ASSISTANCE IN THE START-UP OF A SMALL-SCALE GARMENT FACTORY

SI/SOI/89/801/11-51

SOLOMON ISLANDS

Technical report: Establishment of a garment factory*

Prepared for the Government of Solomon Islands
by the United Nations Industrial Development Organization,
acting as executing agency for the United Nations Development Programme

Based on the work M.C. Carreon,
Sewing machine mechanic

Backstopping officer: J.P. Moll,
Agro-based Industries Branch

United Nations Industrial Development Organization
Vienna

* This document has not been edited.

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INTRODUCTION

Following the work undertaken by UNIDO expert Ms. Beverley Cross earlier this year the first locally owned garment factory was established.

At the same time assistance had also been given to another smaller operation P.J. Brothers.

Whilst sewing and garment skills had been addressed in these companies there was a need to assist and train personnel in the maintenance and repair of the machines being operated. Most of which are second hand.

The Government, through the Ministry of Trade, Industry and Labour, seeks to promote local manufacture of garments to meet the domestic demand. It is assisted by the UNDP/UNIDO projects - Promotion and development of small and medium-scale industries (DP/SOI/88/002) and Small and medium-scale industry and entrepreneurship development in the Pacific (DP/RAS/86/075).

The assignment of the short-term consultant to this factory from 24 September to 9 November 1990 has been part of UN assistance to the pioneering effort.

JOB DESCRIPTION

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

U N I D O

9 August 1990

Project in the Solomon Islands

JOB DESCRIPTION
SI/SOI/89/801/11-52/J13102

POST TITLE: Sewing machine mechanic

DURATION: 1.5 man-months

DATE REQUIRED: September 1990

DUTY STATION: Honiara, Solomon Islands

PURPOSE OF MISSION: To bring machines in two factories into good working order, and to train a local counterpart(s)

DUTIES: The consultant will train the mechanics of the factory in all aspects of sewing machine maintenance and repair.

QUALIFICATIONS: Sewing machine technician, with extensive practical experience in the maintenance of the most common types and makes of sewing machines and associated equipment in the garment industry.

LANGUAGE: English

A. Participants/Factory or shop profiles

The consultant trained the sewing machines mechanics of the garment factory, Riat Fashionwear, and a tailoring shop, P.J. Industries.

Rita Fashionwear

Machines. Rita Fashionwear has the following machines, mostly second-hand:

- 1 buttonhole machine
- 1 keyhole machine
- 2 buttonsew machines
- 3 blindhemming machines
- 6 overlock machines
- 1 bartack machine
- 30 straight sewing machines
- 2 cutting machines

Personnel. The factory has the following personnel:

- 1 Manager/pattern maker
- 2 Supervisors, 1 for the cutting section and 1 for the sewing section
- 22 Sewing machine operators
- 1 Sewing machine mechanics
- 2 Cutters
- 2 Pressing machine operators/packers

Output. It has the following weekly production outputs:

- 260 Ladies' skirts
- 200 " dresses
- 30 Girls' dresses
- 300 Boys' shorts
- 200 Men's shirts
- 100 " shorts
- Towels
- Sheets

Machines. P.J. Industries has the following machines:

- 1 buttonhole machine
- 1 buttonsew machine
- 1 belt loop machine
- 1 waistband machine
- 1 elasticating machine
- 3 overlap machines
- 1 blind hemming machine
- 7 straight sewing machines
- 1 tag tacking machine
- 1 cutting machine

Personnel. It has the following personnel:

- 1 Manager/pattern maker/cutter
- 1 Supervisor
- 5 Sewing machine operators
- 1 Mechanic

Output. Its estimated weekly production output consists of:

- 100 Government uniforms

Strengths and Weaknesses

In both firms, morale among the employees is quite high. Both management and the rank and file share a common desire to reach production targets. The management of both firms has shown eagerness to improve performance and upgrade the skills of their respective workers. The workers have shown enthusiasm to know more about the machines they are handling.

In both firms, the machines are mostly second-hand and thus are not in perfect running conditions. The consultant and the mechanics had to resort to some improvisations to produce the spare parts needed. In general, the workers lacked full understanding of the machines they are handling; the mechanics, on the other hand, needed intensive training on repair and maintenance.

B. Topics Covered

The training covered the following topics:

- Familiarization with all machines used
- Disassembling procedures
- Adjusting procedures
- Trouble shooting
- Operating procedures
- Lubricating and other preventive maintenance

Methodology. The methodology used in dealing with these topics is as follows:

For each counterpart, a brief orientation on the machine he was handling was given by the consultant. Then the consultant would demonstrate the particular aspects of operations being taught about the machine. Later, under the consultant's supervision, the counterpart would perform some hands-on exercises with his machine until he gained mastery of the skills or techniques being taught.

Training aids. To facilitate understanding by each participant of the specific skill being taught, visual aids were prepared illustrating simple operations procedures for each machine used.

Spare parts and tools were procured by the consultant to replace worn-out parts and equipment so that each machine would be fully operational.

Assessment. Since it was on-the-job training, assessment of the training impact was immediate. A counterpart from each company was instructed to repair machines inside the factory in case of breakdown. The consultant would give pointers as the participant repaired the machine.

Orientation sessions. In addition to the specialized skills training of the sewing machines mechanics of the two firms, the consultant conducted individual orientation and consultation sessions with each worker handling a specific machines. How to operate the machines for better efficiency was taken up in these individual sessions. In return, the workers gave a history of the machines, the recurrent breakdowns and the measures adopted to correct any malfunction.

Likewise, the management of each of the firms was briefed on the machines and the specific needs to ensure smooth performance. The progress of the training was also reported to the management regularly as well as feedbacks from the workers and the mechanics on the machines they were using.

C. Problem Encountered

The problem encountered during the training activities was lack of tools and spare parts.

Lack of tools. Tools lacking were the following:

- bench vice
- bench grinder
- welding machine?
- drill press
- soldering iron
- working table

Lack of spare parts. Spare parts had to be procured during training. In some cases, the consultant had to produce the spare parts from available materials so that the machines could be fully operational. Importing the spare parts would require time.

The missing spare parts are as follows:

For the Brother blindhemming machine

- spreader or looper
- needle guide

For the Reece buttonholing machine

- cutting die
- cutting block

For the Union Special elasticating machine

- loopers
- needle guard

For the Singer straight sewing machines

- rotary hook
- take-up spring
- needle plate
- presser foot

For all the machines, Parts Book and Manual are missing. In addition, needles are needed for the following machines:

- Union Special belt loop machine
- Reece button hole machine
- Singer overlock machine

D. Recommendations

1. Conduct of follow-up training.

Some skills related to making production more efficient were not taken up during the training due to lack of time. These include:

- how to make folders and binders;
- how to set up machines with attachments.

2. Inclusion of other participants.

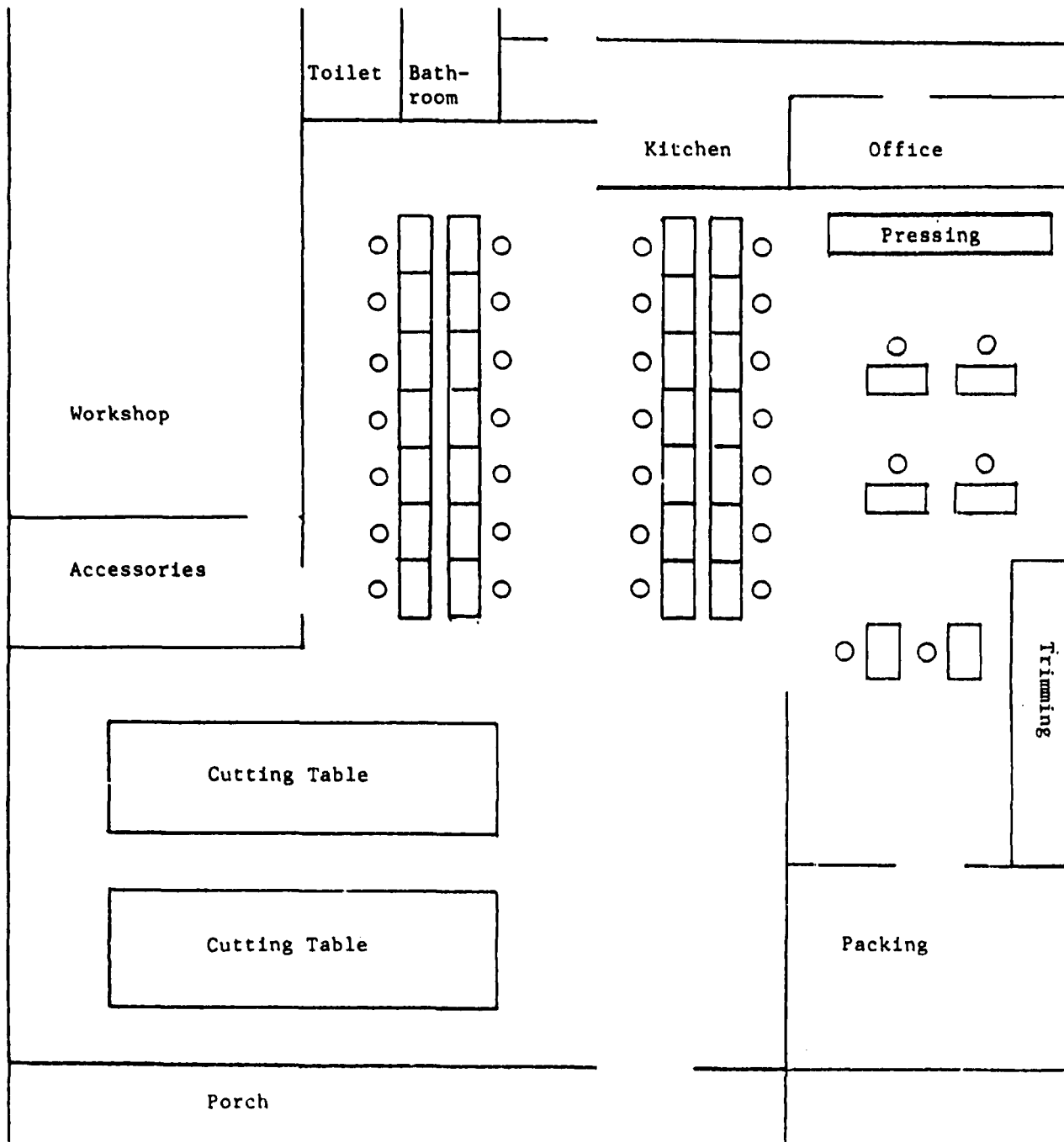
Other participants could be included from among the factory personnel so as to provide back up in case of leave or absence by the trained mechanic(s).

(Note: There was really no counterpart at P.J. Brothers. The person designated had difficulty in assimilating the skills. He is not a permanent employee).

E. Acknowledgements

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- Mr. John Allen
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Honiara, Solomon Islands
- Mr. Ronald Kevesi
Manager
Rita Fashionwear
- Mr. Paul Wale
P.J. Industries



LAY-OUT OF RITA FASHIONWEAR

APPENDIX I

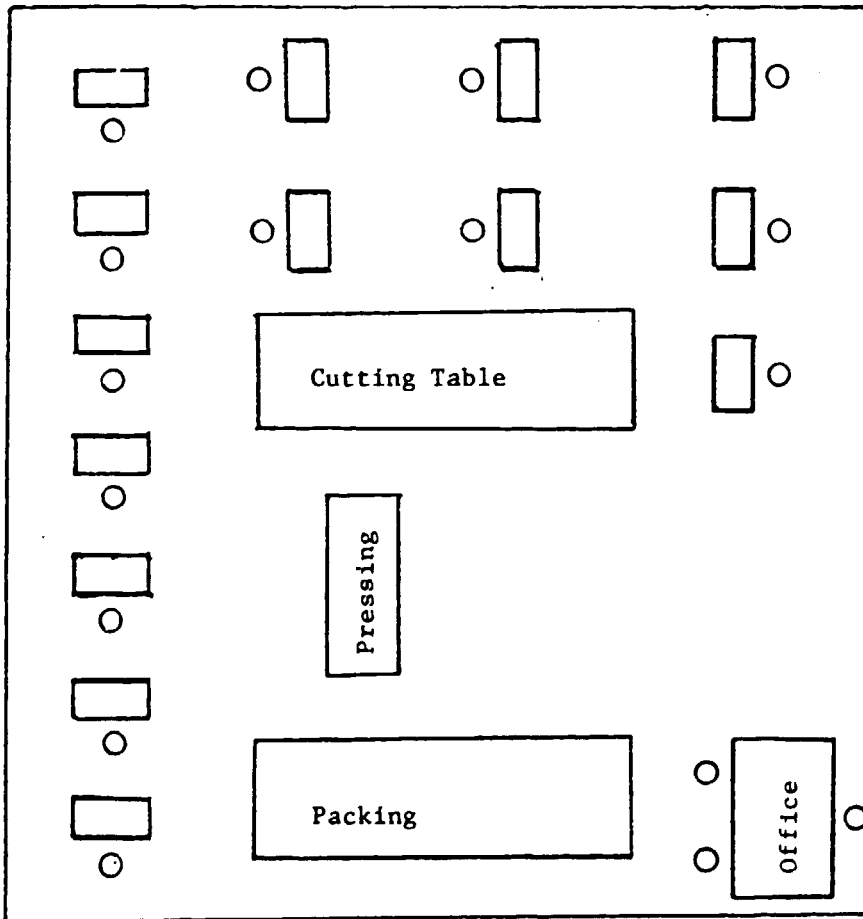
LEGEND

- Sewing Machine
- Chair

2200 sq. ft. Garment
Factory Area

APPENDIX II

LAY-OUT OF P.J. INDUSTRIES



LEGEND

- Sewing Machine
- Chair