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FINAL REPORT

ON THE

TWELFTH

IN-PLANT GROUP TRAINING

PROGRAMME ON SYNTHETIC FIBRES

APPLICATION OF SYNTHETIC FIBRES IN

TEXTILE PROCESSING

(BLENDING AND QUALITY CONTROL)

Project No. US/IMT/65/0.7

12th In-Plant Group Training Programme

On Synthetic Fibres,

"Application Of Synthetic Fibres In Textile Processing"

(Blending and Quality Control)

Höhere Bundes-Lehr- und Versuchsanstalt für
Textilindustrie Wien V.,
Spengergasse 20, A-1050 Vienna, Austria

Österreichisches Chemiefaserinstitut
Plößlgasse 8, A-1040 Vienna, Austria

Director: OSTR Mag. A. Berger
Managing Director: R. Katschinka

Twelfth In-Plant Group Training Programme on Synthetic Fibres.

Organized by the United Nations Industrial Development Organisation (UNIDO) in co-operation with

the Government of Austria,
Austrian Federal Chamber of Commerce,
Association of Austrian Industrialists,
Höhere Bundes-Lehr- und Versuchsanstalt für
Textilindustrie, Wien V, and
Österreichisches Chemiefaserinstitut, Vienna

Held in Vienna, Austria
from 30th September to 25th October 1985

Final Report by L. MACHHERNDL
Executive Manager

C O N T E N T

Introduction

1. Acknowledgements

The Höhere Bundes-Lehr- und Versuchsanstalt für Textilindustrie Wien V and the Österreichische Chemiefaserinstitut wish to express their appreciation to the UNIDO for organizing this traininig programme and for the excellent and successful co-operation.

Our thanks are specially directed to

Mr. A. Vassiliev (Director of Industrial Operation Division, UNIDO)

Ms. A. Tcheknavorian-Asenbauer (Acting Head, Chemical Industries Branch, Division of Industrial Operations)

Ms. I. Lorenzo (Head, Training Branch, Industrial Operations Division, UNIDO)

Mr. V. Bysyuk (Chemical Industrial Branch, UNIDO)

Mr. M. Youssef

Mr. K. Sepic (Head, Agro-Industries Branch)

Mr. M. Minke (Agro-Industries Branch)

Mr. D. Gardellin (Head, Purchase and Contract Service)

Ms. H. Schindlauer (UNIDO, Chemical Industries Branch)

At the same time we give our thanks to the Austrian authorities and corporations, whose aid, preparatory work, valuable aid and understanding enable us to achieve a remarkable effect of the training programme.

Austrian Federal Chancellery

Ms. B. Dekrout Mr. U. Stacher

Austrian Federal Ministry for Foreign Affaires

Mr. H. Miltner Mr. F. Schmid

Austrian Federal Ministry for Educations and Art

Mr. W. John Mr. O. Tischler

Austrian Federal Chamber of Commerce

Mr. H. R. Seidl

Mr. K. Haas

Mr. G. Tscherne

Association of Austrian Industrialists (VÖI)

Mr. P. Kapral

Mr. H Krejci

Höhere Bundes-Lehr- und Versuchsanstalt für Textilindustrie

Mr. A.Berger (HBLVAT)

We also are indebted to the Austrian Companies which we visited to complete our training programme.

2. Background and Objectives

1. The programme, organized by the United Nations Industrial Development Organization (UNIDO) in co-operation with the Government of Austria, is one of a series of UNIDO Training Programmes on specific sectors of industry for engineers from developing countries. The programme will be carried out by the Federal Institute for Higher Education and Research for Textile Industry (Höhere Bundes-Lehr- und Versuchsanstanlt für Textilindustrie - HBLVAT), a leading technological institute in the field of textile technology The programme is the twelfth in a series of programmes implemented annually since 1974.

2. The trend of training activities in the field of production and applicaiton of synthetic fibres is characterized by increasingly sophisticated nature of the training programme requiring high level experts, consultants and modern specialized equipment. Consultation meetings at plants and companies to deal with specific technological problems are also an iportant feature of current training activities.

3. UNIDO implemented some technical assistance projects and held meetings in the field of synthetic fibres and this experience can be available for the developing countries through the training programme.

4. Over the past few years, man-made fibres, particularly synthetics, have again accounted for most of the growth in world fibre production. The ratio of man-made fibres to natural fibres at the present time is approximately 1 to 1. The increase in the production of cellulosics was marked but on the whole, however, developments show a shift in the structure of man-made fibres production towards synthetic fibres whose share of world output is more than 75 %.

5. Of the man-made fibres developed to date, four pricipal types namely polyester, polyamide, polyacrylnitrile and cellulosic fibres, dominate the market at present. This situation will not change substantially in the near future, although olefin fibres have alredy become important in certain areas of application. Special fibres, including inorganic fibres, carbon fibres are still very expensive and will for the present continue to be produced only in small quantities.

6. On the whole, the trend is towards modified man-made fibres based on more basic polymers and extensive knowledge of production and conversion techniques. Chemical modification is effected essentially by: copolymerization, introduction and additives, polymer combination, treatment by irradiation, introduction of reactive groups. Physical modification is possible by four principal methods: changing the fibre cross-sections or spinning hollow fibres, mixing elementary of various types, texturing, increasing the number of elementary filaments of synthetic filaments while reducing the general titre.

7. Generally, the following trends are apparent in man-made fibres production:

- the reduction at process stages e.g. for quasi-textiles, technology or by film production;

- the integration of textile treatment stages in the process of fibres, e.g. warping, stretch-texturizing, dyeing, converting;

- rapid spinning methods, combined shaping, stretching and winding or rapid shaping and winding for polyester and polyamide fibres;

- extrusion spinning;

- simultaneous stretch-texturizing;

- increasing the degree of automation in fully automatic production.

8. The developing countries as a result of the increasing demand from the internal and external markets for synthetic fibre products and the availability of comparatively cheap labour, have established synthetic fibre industries which are rapidly expanding. A number or these countries lack the required raw materials, financial resources and know-how to start fibre synthesis in order to meet the growing needs of the industry; but in general they have a relatively well developed industry for processing of synthetic fibres, for which the aquisition and introduction of new technical developments in this field are important.

9. The objective of the programme is to up-grade the knowledge and professional skills of the participants and to assist them in performing their duties more efficiently and solving their problems encountered in their daily work in the field of man-made fibre technologiy and application.

10. The programme has received the support of the Austrian Federal Chancellery, the Austrian Federal Ministry of Foreign Affairs, the Austrian Federal Ministry of Education and Fine Arts, the Austrian Federal Economic Chamber and the Association of Austrian Industrialista. HBLVAT will conduct the training on its premises, utilizing its laboratories and equipment for this purpose. The intitute has a staff of higly qualified specialists.

3. Descripiton of the Training Programme

This Year's training was focused on "Textile Production - Blending and Quality Control". It consisted of a theoretical part designed to up-date the participants' knowledge on synthetic fibre technology and laboratory and in-plant studies to familiarize them with the latest developments in production and processing equipment and techniques.

The programme took place in Vienna, Austria from 30th September to 25 th October 1985. (See appendix I for the time table)

The programme covered the latest technological developments in the field of application synthetic febres in textile processing and consisted of a theoretical part designed to update the participants's knowledge on synthetic fibre technology and laboratory and in-plant studies. The main emphasis of the processing technology including fibre engineering, testing and identification and on the application of synthetic fibres for various purposes.

The Höhere Bundes-Lehr- und Versuchsanstalt gave full cooperation in running the theoretical and practical courses on its premises utilizing its laboratories and equipment for this purpose. (See appendix II for details of lectures and appendix III for equipment used in the practical classes.)

The institute's staff of higly qualified specialists took full charge of the lectures, demonstrations, laboratory work, dicussions, in-platn training programme and plant visits. (See appendix IV for list of staff members who participated in the training programme.)

In addition to the course conducted at the Institute plant visits in Austria were arranged to privied an opportunity for the participants to see some new developments in materials, processes and applications, to exchange technical information with experts as well as to study the possibilities of obtaining licenses and know-how on processes as well as equipment. (See appendix V for details of in-plant training and plant visits.)

The training programme was attended by participants each from the following countries: Bolivia, China, Egypt, Ethiopia, Malaysia, Vietnam, Yemen,P.D.Rep., and Zambia, Uganda.

During the course of the training programme individual appointments were arranged for interested participants to discuss with UNIDO staff members problems affecting the development of synthetic fibres and blending and quality control in the participants home country.

A programme of social activities was organized by HBLVAT and other sponsors for the benefit of the participants. (See appendix VII for details of social activities).

Home countries of participants in the training programme on the produciton and application of Synthetic Fibres 1974, 1975, 1976, 1977, 1978, 1979, 1980, 1981, 1982, 1983, 1984, and 1985 see appendix VIII.

Appendix I

Agenda and programme of work

Opening Ceremony: 30th September 1985, Conference Romm III,VIC

10:00 Chairman pro tem: Ms. A. Tcheknavorian-Asenbauer
Acting Head
Chemical Industries Branch
Division of Industrial Operations
UNIDO

Opening speech: Mr. A. A. Vassiliev
Director

Division of Industrial Operations
UNIDO

Speeches by: Ms. B. Dekrout
Counsellor
Austrian Federal Chancellery

Mr. G. Tscherne
Technical co-operation with Developing Countries
Austrian Federal Economic Chamber

Mr. H. Hubeny
Director
Laboratorium für Kunststofftechnik,
LKT-IGM (Laboratory for Plastics Technology)

Mr. R. Katschinka
Director
Österreichisches Chemiefaser-Institut
(Austrian Man-made Fibre Institut)

Closing speech: Ms. A. Tcheknavorian-Asenbauer

Monday, 30th September - Friday 25th October 1985

09:00 - 12:00 and 14:00 - 17:00	Lectures at Höhere Bundes-Lehr- und Versuchsanstalt für Textilindustrie In-plant training and plant visits, laboratory work

Thursday, 24th October 1985

14:00 - 17:00	Final Session at HBLVAT, Vienna Discussion about national problems
19:00	Farewell Party at Ober St. Veit

Appendix II

Details of Lectures

Subject

Man-made Fibre Trends, Raw Materials and the Environment
W. Albrecht, Prof. Dr., Head of Textile Technology Institute of Enka Glanzstoff AG, Wuppertal, FRG

Selection of Fibres and Yarn Constructions for Textiles
W. Albrecht, Prof. Dr., Head of Textile Technology Institute of Enka Glanzstoff AG, Wuppertal, FRG

Processing of Synthetic Fibres and Blends, Fibre-Blends and their Properties
J. Hördler, Dipl.Ing. Member of the staff of the Höhere Bundes-Lehr- und Versuchsanstalt für Textilindustrie, Vienna

Cotton, one of the major agricultural Products of this world and some reflections on development and Industiralization
G. Grünwald, Ing., UNIDO Textile Expert

Yarn Making - Yesterday - Today - Tomorrow
K. Schnaubelt, Ing., Member of the staff of the HBLVAT, Vienna

Spinning Quality Yarns from Pure cotton and Blends spun on conventional Systems
K. Schnaubelt, Ing., Member of the staff of the HBLVAT, Vienna

Application of Polypropylen fibres in Nonwovens
Gerhard F. Huettner, Hörst Peter Supanz, Chemie Linz AG, Linz Austria

Polypropylen Fibres
Peter Horst Supanz, Gerhard F. Huettner, Chemie Linz AG, Linz, Austria

Chemistry and Technology of Cellulosic Staple Fibres and Filaments
R. Färber, Dipl.-Ing., Enka Austria AG St. Pölten, Austria

Physical Methods of Fibre Modification
W. Herzog, Dipl.Ing., Member of the staff of the Höhere Bundes-Lehr- und Versuchsanstalt für Textilindustrie, Vienna

Fibre Fineness, Micronaire Reading of Cotton Fibres
J. Hördler, Prof.Dipl.Ing., P. Schrefl, Prof.Dipl.Ing., Dr., Members of the staff of the HBLVAT, Vienna

Introduction to Polyester-Fibre Production and Equipment
W. Peters, Dir.Dr. Austria Faserwerke, Lenzing Austria

The TREVIRA Sortiment - its Properties and Fields of Application
H. Zimmermann, Dr., Farbwerke Hoechst AG, Frankfurt, FRG

Process Planing and Practical work
N. Mach, Dipl.Ing.Dr., Member of the staff of Chemiefaser Lenzing AG, Lenzing Austria

Viscose- and Modal Fibres in Blended Fabrics
H. Krässig, Doz., A.O.Univ.Prof.Dipl.Ing.Dr., Director of the Research Department of Chemiefaser Lenzing AG, Lenzing Austria

Special Blends, i.e. Viscose, Polyester, Viscose/Cotton and Viscose/Acrylic Fibres
J. Lenz, Dir.Doz., Chemiefaser Lenzing AG, Lenzing Austria

Physiological Aspects with Fabrics Made of Blends
P. Schrefl, Dr.techn.,Dipl.Ing., Member of the staff of the HBLVAT, Vienna

Dyeing of Synthetic Fibres and Blends
W. Lebensaft, Prof.Dr., L. Machherndl, Prof.Dr., Members of the staff of the HBLVAT, Vienna

The Burning Behaviour of Textiles - Textile Floor Covering
H.P. Bauer, Ing., Austrian Textile Research Institute, Vienna

Advanced Drycleaning Technology
P. Panrok, Böwe-Maschinenfabrik, Augsburg, FRG

The Laundry in Theory and Practice
R. Hetzer, Ing., Member of the staff of HBLVAT, Vienna

Blended Fabrics
P. Koppenburg, Sulzer Rüti Machinery Works Ltd.
Rüti, Switzerland

Top Weaving from one Supplier
B. Christen, Sulzer Rüti Machinery Works Ltd.
Rüti, Switzerland

Yarn Preparation for Weaving Machines
H. Mall. Sulzer Rüti Machinery Works Ltd.
Rüti, Switzerland

Organisation of a Modern Textile Plant, Part I and II
B. Strang, Sulzer Rüti Machinery Works Ltd.
Rüti, Switzerland

Mercerisation and Aftertreatment
H. Lass, Dipl.Ing., Dr., Prof. Member of the staff of the HBLVAT, Vienna

Review of aims of winding
N.N., Schlafhorst & Co., Textile Machinery,
Mönchengladbach, FRG

Build of spinning bobbin - requirements for good unwinding conditions
N.N., Schlafhorst & Co., Textile Machinery,
Mönchengladbach, FRG

Unwinding of the spinning bobbin and build-up of the wound package
N.N., Schlafhorst & Co., Textile Machinery,
Mönchengladbach, FRG

Packages for Beaning
N.N., Schlafhorst & Co, Textile Machinery,
Mönchengladbach, FRG

Packages for shuttleless Looms
N.N., Schlafhorst & Co, Textile Machinery,
Mönchengladbach, FRG

Packages for knitting
N.N., Schlafhorst & Co, Textile Machinery,
Mönchengladbach, FRG

Packages for dyeing
N.N., Schlafhorst & Co, Textile Machinery,
Mönchengladbach, FRG

Transfer of Chemical Technology in Developing Countries
K. Czeya, Doz., Dr., Dipl.Ing., Vienna

The Textile Industry from an International and National Point of View
H. Huber, Dr., Hauptgeschäftsführer des Fachverbandes der Textilindustrie, Vienna

The Economic and Technical Future of Man made Fibres
H. Krässig, Doz., A.O.Prof.Univ., Ing., DDr.habil, Formerly Director of the Reseach Department of Chemiefaser Lenzing AG, Lenzing

Appendix III

Equipment for Testing Fabrics and Man-made Fibres

Programme at HBLVAT Vienna

VIBROSKOP, linear density of fibres
MICRONAIRE, linear density of fibres
AIR-FLOW, linear density of fibres
JOHANNSEN-ZWEIGLE, fibres length distribution by array method
USTER, fibre length and length distribution automatically working
INSTRON, breaking-strength and elongations yarns, fabrics
USTER-DYNAMOMETER, breaking-strength and elongations yarns, automatically working

ZWICK-TESTIMAT, breaking-strength and elongations yarns, automatically working
ZWICK-Tearing-Tester
TWIST-Tester
PRESSLEY-Tester, strength of fibres, bundle method
BURSING-Tester, VEB Rauenstein
THICKNESS-Gage
USTER-Tester equipment (Uneveness of textile strands)
ABRASION-Tester
AIR-PERMEABILITY-Tester
RANDON tumble pilling Tester
ACCELERATOR
SCANNING ELECTRON MICROSKOP, PSEM 500, Philips
PRETEMA-Spectromat FS 3 A (Filterspectrophometer) Colour masurement, Pretema, Switzerland
FIXOTEST
XANOTEST, Original Hanau Quarzlampengesellschaft, BRD
LINITEST
PRAXITEST

LABOR-STENTER, LABOUR-PADDING Machine, E. BENZ, Switzerland
EPRECHT THEOMAT 15 Contraves, Switzerland
FLAMETESTER, Ahiba, Basel Switzerland
INFRARED-SPECTROPHOMETER 197, Perkin Elmer
GASCHROMATOGRAPH SIGMA 3 Perkin Elmer
SPECTROPHOMETER PM Q II, C. Zeiss, BRD
ELERPHO, Zeiss, BRD
HT-Dyeing apparatures, Scholl, Switzerland
HT-Dyeing apparatures, Ochsner, Austria
HT-Yet Dyeing machine, Then, BRD

Appendix IV

Staff of the Training Programme

Director. Mr. OSTR.Mag. A. Berger
Managing Director: Dr. R. Katschinka
Executive Manager: Prof. Dr. techn. Dipl.-Ing. L. Machherndl
Scientific Adviser: Univ. Prof. Dr. W. Albrecht
Doz.A.O.Univ.Prof.Dipl.-Ing. DDr. habil H. Krassig

Public Relations and social Engagements: Ing. R. Hetzer
Plant Visits: Dr. R. Katschinka

Lectures: Prof. Dr. W. Albrecht
Ing. H. P. Bauer
Doz. Dr. Dipl.-Ing. K. Czeja
Dipl.-Ing. R. Färbar
Dipl.-Ing. W. Graninger
Ing. G. Grünwald
Prof. Dr. M. Hackauf
Prof. Dipl.-Ing. W. Herzog
Ing. R. Hetzer
Prof. Dipl.-Ing. J. Hördler
Dr. H. Huber
Dipl.-Ing. G. Hüttner
Ing. F. Kneubühler
Doz.A.O.Univ.Prof.Dipl.-Ing.DDr. habil H. Krässig
Prof. Dipl.-Ing. Dr. H. Lass
Prof. Dr. D.M.Sc. W. Lebensaft
Dir. Doz. Dr. J. Lenz
Ing. H. Locher
Dipl.-Ing. R. Mach
Prof. Dipl.-Ing. Dr. L. Machherndl
Dr. G. Peters
Ing. H. Pfister
Dr. L. Puchegger
Ing. R. E. Rebsamen
Ing. H. P. Supanz

Dir. Ass. R. Schlie
Ing. K. Schnaubelt
Prof. Dipl.-Ing. Dr. P. Schrefl
Ing. H. Strauß
Ing. B. Streng
Dipl.-Ing. H. Tamas
Dr. H. Zimmermann

Assistance and Preparation: Ass. G. Jessner, Ass. G. Schneider

M. Fried
S. Friedl
G. Gschmeidler
A. Luger
E. Neufingerl
H. Neufingerl
R. Nothelfer
J. Pichler

Appendix V

In-Plant training and plant visits

To the special interest of the participants inplant training at fibre producing companies and plant visits to fibres-using companies during the four week course were organized.
The selection of the companies gave an regional and technical survey on the Austrian man-made fibre-producing and using industry:

1) Chemiefaser Lenzing AG Pulp, Viscose Staple fibre, Acrylic, staple fibres, Paper, Sodiumsulfate, Sulphuric acid, Synthetic sheets and foil strips, Machinery for processing Synthetic sheets, Laboratories.	A-4860	Lenzing
2) Austria Faserwerke GesmbH	A-4860	Lenzing
3) Linz Textil AG Spinning and weaving mill	A-4020	Linz
4) Tumfart Comp., Weaving Mill	A-4183	Traberg
5) Baumann, Textile Printing Factory	A-3950	Gmünd
6) Schiel Seide AG	A-3813	Dietmanns
7) Triumph International AG	A-2700	Wr. Neustadt
8) Salesianer-Laundry	A-2700	Wr. Neustadt
9) Chemie Linz AG Filaments, Spun Fibres, Sheets Non-wovens, Fertiliizers, Pharmaceuticals, Laboratories	A-4020	Linz
10) Becker & Söhne, Spinning Mill	A-4614	Marchtrenk
11) VOEST-Linz AG	A-4020	Linz

Appendix VI

LIST OF PARTICIPANTS

Country	Name	Adress
Bolivia	TEDESQUI, Mr. Jorge B.	Produciton Manager ASEA Ltda. Fabrica de Tejidos Punto P.O. Box 6676 La Paz
China	ZHANG, Mr. Weimin	Beijing Textile Industrial Corp. 33, No 3 Lane Dongdan Beijing
Ethiopia	BEKELE, Mr. Eshetu	Asst. Production Technical Head Debre Berhan Wool Factory P.O. Box 24 Debre Berhan
"	GIRMAYE, Mr. Eshetu	Ethio-Japanese Synthetic Textiles P.O. Box 2184 Addis Abeba
Malaysia	MUHAMED, Mr. Harun	Asst. Manager- Spinning Mill Kima Sendirian Berhad P.O. Box 3 Sg. Chua Kajang, Selangor
Uganda	SASAGA, Mr. John M.	Spinning Manager African Textile Mill Ltd. P.O. Box 242 Mbale
Vietnam	DANG DE, Mr. Le	Chief of Laboratory Textile Industry Institute 326 D Minh Khai Street Hanoi
Yemen, People's Dem. Rep.	LARDI, Mr. Amir Salim	General Technologica Supervisor Ministry of Industry (Textile Industry) POB 1188 Tawahi, Adem

Zambia	SUMBWE, Mr. Berrinas M.	Mulungushi Textiles (Z) Ltd. P.O. Box 81091 Kabwe

Participating at Company expense

Egypt	EL KHYAT, Mr. Rashad Ahmed	Mill Manager Cairo Silk Cairo
"	HANAFY, Mr. El Sayed Mohamed Shihata	Production Manager Societe Misr pour La Rayonne Kafr El-Dawar

Appendix VII

Social Activities

1. Trip to the Wachau, Visit to the Monastery of Melk and Dürnstein
2. Sight-Seeing Tour in Vienna
3. Visit to the Opera
4. Visit to the Empiral Chapel (Hofburgkapelle)
5. Visit to the Monastery of Klosterneuburg
6. Visit to the Spanish Horse Riding School
7. Visit to the Monastery of St. Florian
8. Farewell Party at Ober St. Veit
9. Private Invitations
10. Visit to the "Schatzkammer"
11. Visit to the Museum of Arts
12. Visit to the Museum of Arms

Appendix VIII

Home countries of Participants

	74. 1.	75. 2.	76. 3.	77. 4.	78. 5.	79. 6.	80. 7.	81. 8.	82. 9.	83. 10.	84. 11.	85. 12.	Total
Afghanistan									1				1
Argentina	1				1								2
Bangladesh	1		1		1	1			3				7
Bolivia				1			1					1	3
Brazil	1				1		1	1	1				5
Bulgaria	1								1				2
Burma											1		1
Burundi											1		1
China							1	1				1	3
Colombia				1		1							2
Costa Rica		1											1
Egypt	1	1	1	1	1	1	1		2			2	10
Ethiopia				1	1			1				2	5
Ghana			1	1		1	1				1		5
Guyana										1			1
India		1			2					1			4
Indonesia		1	1	1					1				4
Iran	1												1
Iraq		1	2	2	2	1		1					9
Jamaica		1			1								2
Kenya						1							1
Korea		1								1			2
Lybia		1		1				1					3
Malaysia												1	1
Mexico	1			1									2
Mozambique								1					1
Nepal											1		1
Pakistan		1		1									2
Peru		1							1				2
Philippines	1	1		1			1						4
PLO							1						1
Poland						1	1						2
Romania	1		1		1								3
Singapore	1	1	1										3
Somalia										1			1
Sri Lanka				1		1							2
Sudan									1				1
Syria			1			1	1						3
Tanzania								1		1	2		4
Thailand				1	1	1	1						4
Turkey	1		1			1		1					4
Uganda										1	1	1	3
Uruguay			1										1
Vietnam												1	1
Yemen A. Rep.									1				1
Yemen VR										1		1	2
Yugoslavia	1												1
Zambia									1		1	1	3
Zimbawe											1		1
	12	11	12	14	12	11	10	8	12	8	9	11	130

The UNIDO in Vienna has to be congratulated in bringing about this Training Programme and we want to express our appreciation to all UNIDO-members who have contributed to the realization of this project.

We hope that we could fulfill the intentions of UNIDO by giving the participants as much as possible of insight, knowledge and experience.

We also want to give our thanks to the participants for their co-operation and wish tem an effective evaluation in their native countries.