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SOUK EL-KHAMIS CEMENT FACTORY

SF/LIB/86/002/11-0A/32.1.A

LIBYAN ARAB JAMAHIRIYA

Technical report: Training programmes and training master plans
for the Libyan personnel*

Prepared for the Souk El-Khamis General Company for Cement and
Building Materials
by the United Nations Industrial Development Organization,
acting as executing Agency for the United Nations Development Programme

Based on the work of Hussein R. Ibrahim Bacha, training expert in
the cement industry

Backstopping officer: C. Rydeng, Chemical Industries Branch

*This document has not been formally edited.

LIST OF THE ABBREVIATIONS USED IN
THIS DOCUMENT

DOT	Dictionnary of Occupational Titles.
ILO	International organization for Work.
Q&SI	Inventory of Qualification and Skills.
F	Form.
TNs	Training Needs.
MROC	Management Replacement Organization Chart.
FTNs	Felt Training Needs.
PL	Training Sessions planning Sheet.

ABSTRACT :

This document is covering the results of the activities which were carried-out by Eng. Hussein R. Ibrahim Bacha, training expert, at Souk El-Khamis General Company for Cement and Building Materials in S.P.L.A.J.G. based on the Technical Co-operation Agreement on 17.01.1986, Project SF/LIB/002/11-0A/32.1.A.

The duration of the specific activity 32.A is 3 months, i.e. from 1.02.1987 till 30.04.1987. The purpose of the project is " To identify the training needs in the Souk El-Khamis Cement Plant and in consultation with local authorities initiate the necessary training ".

The assigned duties are the following :

- I- Establishing the methodology to collect the information and analyze the training needs of technical and managerial personnel.
- II- To establish, in consultation with the management, basic objectives and priorities for training activities.
- III- To develop a plan of action with clear indication of type training, number of participants and profiles, estimated duration, training methods and techniques, training institutions to be involved, etc., according to established priorities by top management.
- IV- Outline all infrastructure needed for execution proposed plan of action and specifying those which are not available locally.
- V - To elaborate a document for implementation of training programmes tailored to the specific needs of company.
the document should describe in detail :
 - a) Training objectives.
 - b) Plan of action.
 - c) All necessary infrastructure to carry-out the training programmes.
- VI- To prepare a final report setting out his finding and recommendations as well as his proposals for action which might be taken by the concerned authorities.

The activities of the training expert have resulted in elaborating a comprehensive training report for the development of the Libyan manpower. It includes complete designs of 100 emphasis training courses, 32 development courses for the management and supervisory levels, and 33 specific training courses; further more 3 training course selection charts referred to as "training matrix" (coloured in three different colours: blue = specific, red = development, and green = emphasis training) which will enable the training manager to read off the training profile for each post as well as candidates interested in certain training courses.

The report also contains an organigram of the Souk El-Khamis General Company for Cement and Building Materials, with statistical data on the manpower distribution by nationality, two "training master plans" for the years 1987 and 1988, as well as typical questionnaires and a proposal for the layout of the room and the technical library. These technical papers, which are available in Arabic only, have been issued as addendum 1 to 7 to the present report.

The training expert proposed an extensive list for training films and video-tapes.

The training expert made the following conclusions and recommendation :

A- CONCLUSIONS :

- 1- The company organization structure should be improved, in order to improve the company performance.
- 2- The theoretical number of the personnel is more than the required, in certain departments and sections.
- 3- the level of the existing Lybian personnel needs development from the managerial and technical point of view.
- 4- Some of local qualified personnel have to be involved in the training activities as INSTRUCTORS, after providing them with the necessary training, in particular Emphasis training.
- 5- The available Libyan-manpower is not sufficient to cover all the posts in the organization structure, and the management has difficulties in getting the required personnel (quality and quantity) .
- 6- The organization structure of the company has a training section which is attached to Personnel Department, which is a traditional solution, however the training expert believes that it would be better if it is attached to the Technical Department.
- 7- The basic infrastructure is available in the factory.

B- RECOMMENDATIONS :

- 1- A complete design of the JOB DESCRIPTION should be prepared.
- 2- An efficient recruitment activities should be done, and upgrading process should be carried-out in order to replace a part of foreign manpower.
- 3- Nominating the local instructors, and creating the proper conditions for their development.
- 4- Completing the TRAINING SECTION with the necessary personnel, and improving its performance.
- 5- Setting-up an improved sets of orders, instructions, rules, etc. which are aimed basically to facilitate the training processes.
- 6- The paper work and the procedures in training section should be improved.
- 7- Establishing a mini-training center or permanent training unit which is well equipped, this unit will be as training school attached to the training section.
- 8- To allocate the necessary areas, budget and facilities for the training process.
- 9- Developing the concept of the technical library in the factory and providing it with the necessary books and references.

- 10- Providing the required training material, texts and training documents, in Arabic, with the required numbers & quality.
- 11- Developing the production of training aids and demonstration drawings.
- 12- To provide a photocopying machine and epidoscope.
- 13- To provide the company with the DICTIONARY OF OCCUPATIONAL TITLES (DOT) .
- 14- To procure the recommended films & video tapes, in co-operation with other cement company in S.P.L.A.J.G.
- 15- To train some highly qualified Libyan engineers, in depth, or for certain skills & knowledge such as X-ray instruments, weigh feeders and computers. This group can serve all cement factories within S.P.L.A.J.G.

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I- INTRODUCTION :

The Souk-El-Khamis General Company for Cement and Building Material is located 57.5 km to the south of Tripoli, capital of S.P.L.A.J.G. , and it is 17 km far from Souk EL Khamis Khatneh area.

The company has two portland cement production lines of capacity 2x1500 TPD, dry process rotary kiln with cyclone preheaters and grate coolers. The contract has been concluded on 12.6.1974 with KHD-W. GERMANY.

The company has 2 lines for production quick lime and hydrated lime of capacity 200 000 TPA of hydrated lime. The quick lime is produced by rotary kilns with planetary coolers. The first line has been supplied by KHD/W.Germany and commissioned on 30.6.1976, while the second line delivered by BKMI/W.Germany and commissioned on 1.04.1985. The daily capacity of each kiln is 420 TPD of quick lime.

From the beginning the company is depending on the imported manpower, to operate and manage the productions lines.

On 17.01.1986 the company has concluded with UNIDO a Technical Co-operation Agreement. Based on the item V.3 of this agreement , the output should be " V.3 - A modular training plan for each post including as required introductory training, refreshing courses, upgrading training etc. , as a promotional system where personnel can enter at the level they are ready for " .

Also item VI.3 of the same agreement is stating " UNIDO specialists in mechanical and electrical maintenance as well as specialists in process and quality control will together with Libyan specialists design and organize, preferably in the Arab Language, group training and on the job training of local personnel either as refreshing courses for personnel already holding specific post or introductory courses and follow up training courses for newcomers.

Based on Item VII a-1 , of this agreement, UNIDO assigned Eng. Hussein R. Ibrahim Bacha, Training Expert, to work for Souk El Khamis Cement Plant, for a period of 3 months, starting from 1.02.1987 till 30.04.1987. The main purpose of this project SF/LIB/86/002/11-0A/32.1.A , is : " to identify the training needs in Souk El Khamis Cement Plant and with consultation with local authorities initiate the necessary training.

The following duties have been given to the training expert :

- To make diagnosis of training needs, and consequently recommend what course of action to be taken to enhance the capability of the national staff at the technical managerial level. In carrying out the assignment, the expert should always have a close consultation with the concerned authorities.
- Specifically the expert should carry out the following activities :
 - I- Establish the methodology to collect the information and analyse the training needs of the technical and the managerial personnel.
 - II- Establish , in consultation with the management, basic objectives and priorities for the training activities.
 - III- Develop a plan of action with clear indication of training, number of participants and profiles, estimated duration, training methods and techniques, training institutions to be involved, etc.... according with established priorities by top management.

- IV - Outline all infrastructure needed for execution proposed plan of action and specifying those which are not available locally.
- V - Elaborate a document for implementation of training programmes tailored to the specific needs of the company.
The document should describe in detail :
 - a) Training objectives.
 - b) Plan of action.
 - c) All necessary infrastructure to carryout the training programmes.
- VI - To report periodically to UNIDO , and to prepare a final report setting out his finding and recommendations as well as his proposals for action which might be taken by the concerned authorities.

So, the training expert prepared the attached document, in Arabic which is the mother-tongue of the client, which is covering the objectives of the project.

II - RECOMMENDATIONS :

The training expert would like to present the following recommendations :

- 1- In order to develop the company organization, the training expert recommend that a complete project for JOB DESCRIPTION for each post in the organization structure, should be designed. UNIDO can assign an expert for this job.
- 2- The plant management has to establish an efficient recruitment plans, in order to provide the necessary manpower. Certain activities can be carried-out in order to promote the recruitment.
- 3- Based on the inventory of skills and qualifications, the cement plant management should select some of qualified personnel and adopt them as LOCAL INSTRUCTORS. Those local instructors shall be subjected to development training courses.
- 4- The training section should be completed by a proper personnel; the training personnel should subjected to an intensive training in order to improve their performance. UNIDO can contribute effectively in this process.
- 5- The training expert believes that the available rules, instructions and orders which are governing the training process in the company should be improved.
- 6- The paper work and procedures of the training section should improved.
- 7- The training expert propose that the company has to set-up a mini-training center/school, to provide the necessary training and to develop the training programmes, to elaborate the training materials, etc. This school should be attached to the training section. UNIDO can give more details regarding this mini-center.
- 8- The training expert recommend that the necessary area/rooms, budget and facilities should allocated. Some proposals were discussed with the Chief of the people committee, for modifying some rooms in the new technical management building.
- 10- A technical library should be established, in such a way all technical documentations, books, references available in the plant will be collected and registered. UNIDO training expert already prepared the layout drawing for this library. UNIDO can assist the plant management in establishing a proposed list of technical books and references; also UNIDO can help in procurement of the books and references.

10 - In order to carry-out the training courses, the training materials should be written in arabic ; to do so the plant management has to discuss this point with UNIDO in order to reach an agreement for supplying the required texts.

11- The company has to plan for producing the training aids within the company itself ,e.g. elaborating the demonstration drawings , cross sections, slides for typical equipment or an important parts or typical worn items ; video-films can be prepared for major repairs such as cutting a part of the kiln shell or replacing the mill head etc. In any case the company should have a qualified draftsman(it is a must !).

12- UNIDO Training Expert is of opinion that no effective training can be done, unless a good photocopying machine and episcope are available!.

13- In order to improve the organization design, the training expert recommends that the company shall have a copy of the dictionary of occupational titles (DOT) , which is prepared and developed by Department of labor/USA. This document is a classification system; it provides a method for relating beginning jobs with positions available to experienced workers in the same field , a method for identifying workers in the same field, a method for identifying workers whose skills and abilities are similar to those needed in occupations where there is a shortage of workers, and a brief description of each occupation built on job-analysis reports.

UNIDO can assist the company in getting the DOT either from Department of Labor in USA or through some international organization e.g. ILO.

14- UNIDO training expert recommends that the films and video tapes recommended in this report shall be purchased in co-operation with other cement companies in S.P.L.A.J.G so the cost can be shared. The training expert recommends that Souk El Khamis Cement Plant has to send a copy of the list & video tapes etc. to all cement companies and to co-ordinate the procurement.

15- In order to improve the maintenance activities in the specialized area(s), such as computers, X-ray analyzer, and weigh feeders, the training expert recommends that the Libyans cement companies have to establish a common qualified team of Libyan specialists and to be trained in depth. This team shall work as mobile trouble-shooting team.

UNIDO can assist in establishing the training programmes for the above mentioned team also it can help in finding the training resources.

III- ACTIVITIES AND OUTPUTS :

In order to collect the required data related to the training needs in Souk El Khamis Cement factory , the training expert carried-out the following activities :

- 1- Elaborating the Organization Chart of Souk El Khamis Cement Plant, based on the client concept.
- 2- Inventory of the foreign manpower.
- 3- Inventory of skills and qualifications among the available Libyan manpower.
- 4- Survey of the Felt Training Needs . by the management and supervisors.
- 5- Elaborating the Deputising Chart of the key positions.
- 6- Identifying the problem areas, through daily discussions with maintenance and operation personnel.

- 7- Reviewing the available training facilities and commissioning them.
- 8- Analyzing the previous training activities.
- 9- Analyzing the existing training organization.
- 10- Arranging the training room, and the technical library.
- 11- Designing all the necessary questionnaires.
- 12- Starting/initiating two training courses on electro-mechanic and instrumentation & control engineering course.
- 13- Presenting a lecture on training for trainers & supervisors.
- 14- One-day training course on First Aids in case of electric shock.
- 15- Training course for local instructor on kiln operation subject.
- 16- Training course for kiln operators instructed by the instructor who trained locally.
- 17- Preparing a training course on safety and accident prevention during kiln operation.
- 18- Free discussions with the top management regarding cement plant management, organization, delegation, communication and spare parts .
- 19- Designing a "form for preparing the training session".
- 20- Designing a " form for recording the training activities by the trainee ", i.e. trainee's record.
- 21- Designing the training programmes.

IV- TRAINING PROGRAMMES :

The basic output is the Training Programmes Document which is attached to this report.

Based on the training needs identified by the training expert and the availability of the trainees & trainers, the training expert elaborate a comprehensive training programmes. This document is composed of (165) of training courses. these training courses are categorized into three categories, as described in the following :

- Category A : Emphasis Training Programmes, which are aimed at technical staff. The total number is 100 programmes.
- Category B : Management Training Programmes, which are aimed at management and supervisory levels (TML, MML, and LML). The total number is 100 programmes.
- Category C : Modular training Programmes or Specific Training Programmes , which are covering the specific equipment of Souk El Khamis Cement Factory & Lime factory , such as Raw-meal mill and grinding system , KHD Preheater , Rotary Kiln , Peters Inclined Grate Cooler , Electrostatic Precipetator , By-pass System . Spray Tower , Kiln Operation, Cement mill and finish grinding system, and Automation and Measurement in S.E.K. Cement Plant.

The training expert has used three different colours in the charts, so the green colour means emphasis training, blue colour means specific training, and red colour means management development courses.

Based on the above the training expert has prepared two master plans for 1987 & 1988 . Also the same colour codification has been applied here too.

V - QUALIFICATIONS AND SKILLS INVENTORY : (Q & S Inventory)

In order to develop the training process , UNIDO training expert designed the form F1 which is called Qualifications and Skills Inventory Form. This form has been forwarded to 41 applicants and the relevant data have been collected.

Q & S Inventory not only permit the cement plant management to make fullest use of the skills and abilities of the entire manpower but also can guide the training manager to an awareness of in-house deficiencies which can be corrected by training. A skill inventory, at a first glance, may be regarded as a compilation of technical skills and knowledges in the cement industries, but it is equally important on cataloging managerial experiences and abilities. When the aspirations of individuals are recorded , as well as their achieved skills, this Q & S Inventory can serve as assurance to each individual that the career goals are being considered as well as education and experience.

For this stage the form F1 has been used in the above purposes, also it is considered as a data base for identifying the potential local Instructors. UNIDO training expert recommends such form F1 should be kept alive and fresh all the time.

VI - MANPOWER PLANNING DATA :

In order to collect the necessary information for determining the training needs (TN) , UNIDO training expert has designed the form F2 which is a Management Replacement Organization Chart, sometimes this chart was prepared for the first time in S.E.K Cement plant ; the plant management has to make necessary decision regarding the nomination of the deputies.

This chart (MROC) should be prepared annually to give, overall indication of the need for trained individuals to replace the current management team. MROC is the organization chart of management levels, with the "backups", if designated being identified as to when they will be ready for the responsibilities toward which they being pointed.

UNIDO training expert would like to recommend that S.E.K.Plant should keep such document alive for the most of the key positions.

VII - CAREER PLANNING :

UNIDO training expert discussed this concept with some of the key personnel, however, it seems that this concept is out of consideration now.

VIII - PERFORMANCE PLANNING & REVIEW /PPR/ :

As a tool for improving the individual's performance and determining the TNs, UNIDO training expert prepared the form F3, which outlines the PPR technique, however the application of this technique, is quite advanced in this stage, some attempts have been carried-out to apply this form, but the out-put was so poor because of lack of interest.

UNIDO training expert believes this technique can be applied in the near future after improving some of the negatively influencing factors, such as high turn-over rates and foreign-manpower, etc.

IX - FELT TRAINING NEEDS (FTNs) :

In order to have the proposal of the "Brass", i.e. the requests for training from top management and key personnel, the training expert has designed the form F4. This form is an organized questionnaire which has been used to collect the requests for the training courses & per proposals of the key personnel and managers. In later stage UNIDO training expert carried-out the necessary evaluation for all requests.

X - TRAINING EXPERT PERSONAL OBSERVATIONS :

UNIDO training expert has depend on large extent on his long experience in the cement industry, to collect some of the required information for diagnosis the TNs. By having a walk through the cement factory, inspecting some of the major equipment, visiting the workshops, checking the spare-parts store and observing carefully the scrap yards, etc., the training expert collected a real impression and factual informations, which were used in proposing some valuable training courses.

XI - TRAINING PLAN (PL) :

In order to assist the potential in-house trainers, UNIDO training expert has designed a standard form for planning a systematic training sessions (PL), as it can be seen from the form F5. The training expert believes that the use of such form is a must for a successful training session, so he recommends the management to insist for using this form by all trainers and to provide them with sufficient quantities of PL.

XII - SURVEY OF THE FOREIGN MANPOWER :

UNIDO training expert has designed the form F6, which is intended to survey the existing foreign manpower in S.E.K. cement factory. So the training expert collected the data related to the nationalities, posts, qualifications, contracting periods. This form has fields to be filled with the potential Libyan substitutes, 1st candidate and 2nd candidate. However the plant management has to complete these forms and to keep them alive.

XIII - VIDEO-VISUAL TRAINING MATERIALS :

To this report the training expert has attached a comprehensive list of video tapes and other training materials. S.E.K. cement plant has TV & Video tape player of VHS system.

The training expert recommends that the Libyan cement industry has taken part in getting the proposed list of 16mm films and video tapes (a concept of common library) .

XIV - AUDIO-VISUAL AIDS & REFERENCES :

To this report the training expert has attached a proposed list for audio-visual aids references, and film libraries. However the cement plant management can use these informations freely, so they can contact these references directly or through UNIDO.

XV - TRAINING INFRASTRUCTURE :

To this report, the training expert has attached a comprehensive list of the training infrastructure. The available training infrastructure has been collected by the expert and arranged in a training room. All the available apparatus (OHP, 8 mm super film projector, and 16 mm movie projectors) have been operated by UNIDO expert, also the S.E.K. training manager has been instructed how to operate the same.

XVI - TECHNICAL LIBRARY & TRAINING ROOM :

The training expert prepared the layout drawing for the training room and the technical library. This drawing and the explanatory note have been attached to the report.

XVII - TRAINING COURSES :

The training expert initiated the following courses :

- a- Cement plant electromechanic.
- b- Training course for engineers, instrumentation & control engineering.
- c- First aids in case of electric shocks.
- d- Kiln operation training (self training under the supervision of training expert) .
- e- Kiln operation for rotary kiln operator.
- f- Practical test of the fire brigade.
- g- Training lecture for the managers and supervisors.
- h- Discussions about the concept of management and management techniques.

XVIII - TRAINING MATERIALS :

UNIDO training expert handed-over many training materials and references to the key people. Also he advised the management to get some technical publication from the Arab Union for Cement.

XIX - JOB DESCRIPTIONS:

In order to complete the training project, the training expert has prepared annex A-15 containing the descriptions of typical work in the cement industry.

Annex A-01

AUDIO-VISUAL AIDS AND FILM REFERENCES

COLLEGE AND UNIVERSITY AUDIO-VISUAL AID REFERENCES :

Brigham Young University, Audio-visual Aid Center, Provo, Utah - U.S.A.
Brown University, Brown Photo Laboratory, Providence 12, R.I.
Cornell University , Visual Aids Office , Roberts Hall , Ithaca , N.Y.
Dartmouth College Films , Fairbanks Hall , Hanover , N.H.
University of Florida , Dept.of Visual Instruction , General Extension,Chapaign,Ill
Indiana University , Audio-visual Center , Bloomington , Ind.
University of Michigan , Audio-visual Education Center , 4028 Administration Bldg.,
Ann Arbor Mich.
University of Minnesota , Audio-visual Education Service , Westbrook Hall,
Minneapolis 14, Minn.
University of Mississippi Dept.of TV , Film and Audio , University, Miss.
New York University Film Library , 26 Washington Pl., New York, 3 , N.Y.
Ohio State University , dept.of Photography, Brown Hall, Room4, Columbus 10, Ohio.
University of Southern California , Audio-visual Services, Dept.of Cinema ,
University Park , Los Angeles 7, Calif.

FILM LIBRARY REFERENCES :

Bailey Films , Inc. , 6509 DeLongpre Ave. Hollywood 28 , Calif.
Cornet Instructional Films, 65 E.South Water Street , Chicago 1 , Ill.
Educators Guide to Free Films , 23rd Annual Edition ; Educators Progress Service ,
Rendolph , Wis.
Encyclopaedia Britannica Films , Inc., 1150 Wilmette Ave. Wilmette , Ill.
McGraw Hill Book Co., Text Book Department , 330 W.42nd Str., New York 36 , N.Y.
Teaching Aids , Inc., P.O.Box 3527 , Long Beach 3 , Calif.

AUDIO-VISUAL AID REFERENCE :

The Audio-visual Equipment Directory, National Audio-visual Association, Inc.,
- 1201 Spring Street, Fairfax, Va. This is a fully illustrated guide to some
2,000 current models of projectors, recorders and all other types of audio-
visual equipment.

Annex A-02

LIST OF PROPOSED VIDEO TAPES AND FILMS

TRAINING VIDEO TAPES

1- Proper Installation & Maintenance of Rolling Element Bearings :

- VT 1 - Introduction to rolling element bearings.
- VT 2 - Narrated film, "Caring for bearing".
- VT 3 - SKF rolling bearing handbook.
- VT 4 - Continuation of handbook.
- VT 5 - Seals and shields-Tri-Ply, Taconite seals, etc.
- VT 6 - Duplexing and preloading.
- VT 7 - Mounting of bearing, shaft/housing fits.
- VT 8 - Failure analysis & internal clearances.
- VT 9 - Pillow blocks, flange units, lubrication, safety.
- VT 10 - Loctite and bearings, trouble shooting.

CODE : TV 800 US Dollars 2500.

Supplier : Lineal Publishing Co.

2425 E. Commercial Blvd.

Ft. Lauderdale, FL 33308-4003 U.S.A.

Telex 522-265 Lineal Co. FL

TV Training Safety programs (or 16 mm Film) :

- TV 513 Chemical safety I/Proper Handling.
- TV 514 Chemical safety II/Health Hazards.
- TV 515 Chemical safety III/Fire and explosion.
- TV 517 Minimizing Back Strain.
- TV 518 Slips and falls.
- TV 510 Arc Welding Safety.
- TV 512 Electrical Safety.
- TV 900 Programmable Controllers (7 video tape series).
- TV 902 Control Devices. Lesson 2
- TV 901 Automatic control systems. Lesson 1
- TV 903 PC Hardware & Ladder Logic. Lesson 3
- TV 904 PCS : Specialized computers.
- TV 905 Number systems.
- TV 906 Troubleshooting PCS, part I.
- TV 907 Troubleshooting PCS, part II.
- TV 516 Troubleshooting SCR motor controls.
- TV 100 Basic terms of maintenance.
- TV 200 Basic Electricity, part I.
- TV 201 Basic Electricity, part II.
- TV 202 Motors, part I.
- TV 203 Motors, part II.
- TV 300 Valves.
- TV 301 Centrifugal Pumps, part I.
- TV 302 Centrifugal Pumps, part II.
- TV 400 Bearings.
- TV 401 Couplings.
- TV 402 Coupling Alignment, part I.
- TV 403 " " " " II.
- TV 404 Gearings.
- TV 405 V-belts.
- TV 406 Brakes and clutches.
- TV 409 Conveyor Components.
- TV 410 Reducers and Gear Motors.
- TV 500 Oxyacetylene Safety.
- TV 501 Grinding Wheel Safety, part I.
- TV 502 " " " " II.

- TV 601 The physical world of the machine.
- TV 602 Hydraulic transmission of force and energy.
- TV 603 Operation at the suction side of a pump.
- TV 604 Hydraulic actuators.
- TV 605 Control of hydraulic energy.
- TV 606 Check valves, accumulators and cylinders.
- TV 607 Flow control valves.
- TV 608 Directional control valves.
- TV 609 Pressure control valves.
- TV 610 Pilot-operated pressure control valves.
- TV 611 Hydraulic pumps.
- TV 612 Hydraulic motors.
- TV 613 Fluids, reservoirs, coolers and filters.
- TV 701 Solid state electronic theory.
- TV 702 Transistors, semiconductors, diodes, half-wave rectifiers.
- TV 703 Full wave rectifiers, heat sinks, filters and special-purpose diodes.
- TV 704 Transistor amplifiers.
- TV 705 Amplifier applications.
- TV 706 Oscillators, modulators and demodulators.
- TV 707 Four special-purpose semiconductors.

The supplier for the above mentioned TV (or 16 mm films) is :
LINEAL PUBLISHING COMPANY
2425 East Commercial Blvd.
Ft. Lauderdale, Fl 33308 U.S.A.
Tel. 305-776-7308
Telex: 522-265 LINEAL CO FL

Annex A-03

TRAINING MATERIALS FOR MANAGEMENT DEVELOPMENT

A- Audio Cassette Programmes :

The programme is consisting of one/two cassette with workbook.

We recommend the following programmes:

- 1- Appraisals (SP B14).
- 2- Communication (SP B 10).
- 3- Conducting a Meeting (SP A6).
- 4- Conference Leadership (SP B 9).
- 5- Control (SP B 11).
- 6- Decision Making (SP B 12).
- 7- Delegation (SP A1).
- 8- Effective Speaking (SP B 13).
- 9- Giving Orders (SP A4).
- 10- How to instruct (SP A7).
- 11- Maintaining Discipline (SP A 3).
- 12- Management by Objectives (SP B 16).
- 13- Motivating People to do Willing Action (SP C 1).
- 14- Overcoming Resistances (SP B 21).
- 15- Producing Results (SP A 5).
- 16- Report Writing (SP B 15).
- 17- Supervision & Leadership (SP B 20).

B- Film Workshops :

"The Systems Approach to Management" is a set of four 15-minute (American) colour movie films. Each set includes a leader's guide and twelve participants workbooks (containing questions, case studies and role plays). They are available in 3/4 in. video cassettes format.

- 1- Escape from the Activity Trap.
- 2- Management by Anticipation.
- 3- Management by Commitment.
- 4- Performance Review and Appraisal.

C- Test and Instruments :

Instruments are materials which involve the feedback of questionnaire results to facilitate change, learning or appraisal. The following diagnostic instruments are suitable for use in management and supervisory training, selection, coaching, organisational development, organisational diagnosis and consulting.

We propose the following items :

- 1- Communication knowledge Inventory.
- 2- Communication Sensitivity Inventory.
- 3- Management Change Relations.
- 4- Management Coaching Relations.
- 5- Self Actualisation Inventory.
- 6- Supervisory Change Relations.
- 7- Supervisory Coaching Relations.
- 8- Supervisory Communication Relations.
- 9- Supervisory Human Relations.
- 10- Supervisory Job Discipline.
- 11- Supervisory Job Instruction.
- 12- Supervisory Job Safety.
- 13- Supervisory Potential Test.

The supplier for the above mentioned training materials is:

Management Games Ltd.,

2/11 Woburn, Ampthill, Bedford, MK 45 2 HP, ENGLAND

Telephone : Ampthill (0525 - 404860)

Annex A-04

VISUAL AIDS FOR COMMUNICATION SUBJECT

VISUAL AIDS FOR COMMUNICATION SUBJECT :

Legend :

- MP Motion Pictures (in minutes). 16 mm.
FS Film Strips (in frames). 35 mm.
ADL Anti-Defamation League of Binai Brith, 515 Madison Ave. New York 22.
ASSN Association Films Inc., 347 Madison Ave., New York 17.
Coronet-Coronet Instructional Films, Coronet Bldg. Chicago 1.
EBF Encyclopaedia Britannica Films, Inc., 1150 Wilmette Ave., Wilmette Ill.
GE General Electric Co., 1 River Rd., Schenectady 5, N.Y.
GM General Motors Corporation, 3044 W.Grand Blvd., Detroit 2, and
405 Montgomery Str., San Francisco 4.
McGraw-McGraw-Hill Book Co., Inc. Text Film Dept., 330W.24d Str, N.Y. 36, USA
MMA Museum of Modern Art, 11 W.53d Str., New York 19.
SchC Schauffler College of Religious and Social Work, 5115 Fowler Ave.,
Cleveland, Ohio.
Strauß -Henry Strauß & Co., 668 Fifth Ave., New York 19.
USC University of Southern California, Los Angeles.
USIA U.S.Information Agency, Washington 25, D.C. (Films distributed in the
United States by United World Films, Inc.).
- 1- All I Need Is a Conference (MP,GE / Strauß, 1954, 30 min.).
2- Bridges for Ideas (MP,USC,1951, 28 min.).
3- Communications (MP, MMA, 1954, 22 min., colour).
4- Getting yourself across (MP, McGraw-Hill, 21 min.).
5- How not to Conduct a Meeting (MP, GM, 1941, 10 min.).
6- How to Conduct a Discussion (MP, EBF, 1953, 23 min.).
7- How to conduct a Meeting (MP, USIA/UWF, 1950, 20 min.).
8- How to give and take Instructions (MP,Coronet, 10 min., colour).
9- How to Think (MP, Coronet, 1951, 10 min., colour).
10- Is There Communication When You Speak? (MP, McGraw-Hill, 17 min.).
11- Making Yourself Understood (MP, EBF, 1954, 14 min.).
12- Parliamentary Procedure (MP, Coronet, 1952, 11 min., colour).
13- Room for Discussion (MP, EBF, 1952, 25 min.).
14- Rumour Clinic (FS, ADL, 1948, 34 fr with script).
15- Say What You Mean (MP, McGraw-Hill, 20 min.).
16- Unconscious Motivation (MP, Assn, 1949, 38 min.).
17- Supervisory Problems in the Office (FS series, McGraw-Hill, sound).

Annex A-05

TRAINING FACILITIES

TRAINING FACILITIES :

1.0 Overhead projectors :	
3M Model 213 with Side table	Available
3M Roller attachment for Model 213 Triplet of ref.No.1008	n.a.
35 mm. Slide Adaptor ref.1013	n.a.
Replacement lamps (8 pcs.) 360 watt.	n.a.
Projector/Recorder/Playback (1 pc.), ref.1040	n.a.
Kodak Carousel SAV 2000, ref.1115	n.a.
Kodak retinar lens :	
28 mm.	
35 mm.	
60 mm.	n.a.
70 - 120 mm. Kodak vario-retiner zoom lens	n.a.
Remote control with 4 m. cable	n.a.
Screen 3M Vaiaprojekion	Available
Write-on Films :	
Acetate Sheets (A4)	"
Cellofilm (A4), 50 micron thickness,Qty 2x1000	n.a.
Acetate Layout Pad (50 Sheets A4)	n.a.
Di-Acetate Rolls (A4), L 15 m, 50 pcs.	n.a.
Adding Colour & Lettering :	
Rapitherm Thermal Lettering Sheets 10 mm.	n.a.
Ditto, 5 mm. 2 x 10 Sheets	n.a.
Colour Adhesive Film (2 Packs of 20 sheets size A4)/ red, blue, green, yellow	n.a.
Colour Adhesive Tapes, 4 of each colour (red, blue, yellow & black)	n.a.
Water-based pens wallets of four assorted colours (blue, red, black & green) :	
fine point (10 sets)	n.a.
medium point (10 sets)	n.a.
bold point (10 sets)	n.a.
Spirit-based pens wallets of four assorted colours (blue, red, black & green) :	
fine point (10 sets)	n.a.
medium point (10 sets)	n.a.
bold point (10 sets)	n.a.
Eraser to remove water and spirit based inks from acetate (10 Packs = 50 pcs.)	n.a.
A.V.Pens, for writing and drawing a constant line width on acetate sheets, with cartridge refill system, red (fine, medium & broad), 5 pcs. of each :	n.a.
blue, ditto	n.a.
green, ditto	n.a.
black, ditto	n.a.
A.V.Compass for use with A.V. pens (2 pcs.)	n.a.
Drawing board (size A3), 4 pcs.	n.a.
Lettering Guides, H 2.5, 3.5, 5.0, 7.0 and 10 mm. (2 pcs. of each size)	n.a.
Drawing pens, Line thickness 0.25, 0.35, 0.5, 0.7, 1.0 mm. (4 pcs. of each)	n.a.
Drawing ink, bottle 23 cc., black, 10 pcs.	n.a.

Printed basic transparencies :

1.0 Packet (of 20 sheets) of 5 mm. square	n.a.
1.0 Packet (") isometric scale	n.a.
1.0 Packet (") 1/2 and 1 cm graph ruling	n.a.
Opasym roll (acetate) , 2 pcs.	n.a.
Roller attachment for the above , 1 pc.	n.a.
Opasym kit. 1 set (for full range of movement)	
(left to right flow lines, right to left flow lines, vertical upward flow lines, vertical downward flow lines, random-gaseous movement and rotary turbulent movement, extended area of vertical upward movement and extended area of vertical downward movement, extended area of horizontal right hand movement & extended area of hori- zontal left hand movement	n.a.
3M Transparency maker model 45 DB, 1 unit	n.a.
Replacement lamps, 10 pcs.	n.a.
Silk screen carriers, 10 pcs.	n.a.
Plastic screen carriers, 10 pcs.	n.a.
Infra-red films, medium wtg., image black on clear size A4, 100.0 pcs.	n.a.
Dry photo copier, size A3, with zoom device, 220 V, lens holder is the moving part, 1 unit	n.a.
Photo copy paper 100.0 Boxes of 500 sheets each A4	n.a.
Transparency storage book, size A4, 20 pcs.	n.a.
Photo copy paper 50.0 boxes, 500 sheet each, size A3	n.a.
35 mm. storage system for slide/drawer units of capacity 200 slides in each drawer	n.a.
Audio cassettes, 45 min. 100 pcs.	n.a.
Cleaning cassettes, 5 pcs.	n.a.
Video cassettes, 50 pcs.	n.a.
Cassette recorders, 5 pcs.	n.a.
Filmstrip projector, lens F/2-8 4in/100 mm., lamp 24 V, 250 watt, power supply 220 V.format: single & double frame	n.a.
Episcope, type VU-LYTE III, or similar (Transart)	n.a.
Spare bulbs for the above, 5 pcs.	n.a.
Video camera SONY or similar, 1 pc.	n.a.
Copying cassette recorder, SONY or similar, 1 pc.	n.a.
Telescoping tilting projector, stand 450x600 mm., with adjustable h 940/1500 mm., 1 pc.	n.a.
16 mm.Cine projector, with built in speaker, spare spool, spare bulbes etc., 1 unit	n.a.
8 mm.Cine projector, with built in speaker, ELMO	Available
Blackboards, wall type, 900x1800 mm., 3 units	n.a.
Blackboard paint tin 500 ml, 10 pcs.	n.a.
Plastic blackboard compass with suction cup point, 2 pcs.	n.a.
Blackboard ruler, 100 cm.long, 5 pcs.	n.a.
Set squares 60 deg. & 45 deg., 5 pcs.	n.a.
Protractors, 4 pcs.	n.a.
Typewriter, Arabic keys, IBM Type, 1 pc.	Available
" , English keyboard, IBM, 1 pc.	"
Paper cutting apparat, manual, 1 pc. (size A4)	n.a.
Cartoon paper size A0, 200 pcs.	n.a.
Shear, 150 mm. for paper, 2 pcs.	n.a.
Knife cutter, with spare blades, 4 pcs.	n.a.

Annex A-06

TRAINING ROOM AND TECHNICAL LIBRARY ROOM

TRAINING ROOM & TECHNICAL LIBRARY ROOM

- OBJECTIVES** : To develop the training process in the S.E.K. General Company for Cement & Building Materials there is a need to establish a well equipped and furnished training room and to set-up a technical library to accommodate the available technical documentations, engineering drawings, references, commercial leaflets, prepared technical documents and other training materials.
- BASIC CONCEPTS** : The available room for the library & training room have been arranged as per the layout drawing attached with this document.
&
SPECIFICATIONS The surface area of the proposed library has been divided into bays, and the room should be furnished with metallic shelves, the equivalent length is 65 m., which can accommodate 926 technical documents of 70 mm. width; or 650 documents of 100 mm. width. The arrangement of the illumination fixtures has to be modified to be parallel with the shelf bays.
In order to make use of the available surfaces, we propose to modify the area B by adding a single flap door D, so one can have a reasonable area to accommodate the library keeper.
In the attached layout, one can see the proposed arrangement for the training room. This solution permits accommodation of 18 trainees. The room been already equipped with the following items which are the minimum requirement :
- 1- Flap board ;
 - 2- Screen ;
 - 3- Trainers table ;
 - 4- Trainees tables 0 pcs. ;
 - 5- Chairs 18 ;
 - 6- OHP ;
 - 7- Films :8mm projector/16 mm projector ;
 - 8- Metallic cabinets 3 - 5 pcs.

مخطط قاعة التدريب والتطوير والمكتبة الفنية

LAYOUT OF TRAINING & TECHNICAL LIBRARY ROOMS

