



TOGETHER
for a sustainable future

OCCASION

This publication has been made available to the public on the occasion of the 50th anniversary of the United Nations Industrial Development Organisation.



TOGETHER
for a sustainable future

DISCLAIMER

This document has been produced without formal United Nations editing. The designations employed and the presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations Industrial Development Organization (UNIDO) concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries, or its economic system or degree of development. Designations such as “developed”, “industrialized” and “developing” are intended for statistical convenience and do not necessarily express a judgment about the stage reached by a particular country or area in the development process. Mention of firm names or commercial products does not constitute an endorsement by UNIDO.

FAIR USE POLICY

Any part of this publication may be quoted and referenced for educational and research purposes without additional permission from UNIDO. However, those who make use of quoting and referencing this publication are requested to follow the Fair Use Policy of giving due credit to UNIDO.

CONTACT

Please contact publications@unido.org for further information concerning UNIDO publications.

For more information about UNIDO, please visit us at www.unido.org

22061

**UNITED NATIONS INDUSTRIAL DEVELOPMENT
ORGANIZATION**

Project of the Government of the Slovak republic

FINAL REPORT

Project identification:

Project number: TF/INT/97/001
Project title: UNIDO - Slovak Republic Joint Programme for Cooperation,
Metallic Industries
Project site: Slovak Republic, Košice
Host and
implementing agency: VSŽ Konzult s r.o., Košice
Contract number: 97/217P

Initial total budget: UNIDO input in cash USD 56.000

Project duration: 12 months

Development objective of subcontracting

To provide a framework for UNIDO support of the growth and self-sustainability of the metallic and related basic industries in the developing countries, as well as the countries in transition to meet their industrialization targets and to maximize utilization of their raw-materials, energy and human resources in the increasingly competitive global trade conditions.

Background and justification

The cooperation between UNIDO and Slovak Republic is based on the Memorandum of Understanding signed on January 20, 1994 and the follow-up decision of the Slovak Government dated 21 February 1995 regarding the establishment of the Joint Programme for Cooperation with UNIDO in metallic industries located in Košice.

The UNIDO - Slovak Republic Joint Programme for Cooperation in Metallic Industries was established in cooperation within the East Slovak Steelworks VSŽ Group in Košice based on the metallurgical and engineering competence of the Group and the experience in training and technical cooperation with the developing countries of various regions. The main activities of JPMI focused on human resource development, technical cooperation, transfer of know-how and technology in metallurgy, engineering, mining and other basic industries in the developing countries.

Introduction

The original JP UNIDO – SR project proposal in metallic industries for 1997 was prepared in October and November 1996 and signed by UNIDO in the beginning of April 1997. Project was realized on the basis of Trust Fund Agreement approved by the Slovak Government at the end of June 1997. Proposal for Provision of Services was prepared in August 1997 based on Request for Proposal and Terms of Reference from July 1997. Contract between UNIDO and VSŽ Konzult s.r.o was signed in October 1997. A short delay in project realization resulted from the above mentioned in comparison with the original Work plan. Original Work Plan was modified in the beginning of February 1998 according to the actual status right after discussions on Progress Report I with Mr. Kroužek, BSO.

Immediate objective, outputs and activities of the project

Immediate objective:

To assist specialist and industry representatives from developing countries engaged in metallurgical, engineering and other basic industries in improving their knowledge and know-how through exposure to Slovakia's experience in the above industrial sectors with the aim of initiating new business relations.

Output 1

Four group study tours for five participants each (in total 140 man-days), from the developing countries, in the following fields:

1.1. New refractory materials and their application in metallurgy, engineering and other basic industries.

(Attendance at international conference on refractory materials Kermetal '97, industrial visits to production plants of refractory material e.g. magnesite, fireclay, heat resistant concretes, as well as visits to field applications)

Planned starting/completion date: August – October 1997

Actual status:

Aide Memoire was prepared and distributed to 5 developing countries in July 1997. Out of 6 invited participant (5 + 1 alternate) 3 participants from 2 countries took part in the study tour.

ST was realized in Košice (International conference KERMETAL '97) and VSŽ KERAMIKA Košice, SMZ Jelšava, SLOVMAG Lovinobaňa, ŽIAROMAT Kalinovo in October 8 – 14, 1997.

ST Evaluation report was attached to Progress Report I.

Brief characteristics of visited firms and institutions are in the Annex.

1.2. Advances in metallurgy with special regard to environmentally sustainable production. (Industrial visits to integrated steel works, steel mini-mill, copper works, aluminium works, ferro-alloys plant)

Planned starting/completion date: January – April 1998

Actual status:

Aide Memoire was prepared in February 1998 and distributed to 6 developing countries in the beginning of March. Invitation letters were sent in the beginning of April to 6 participants. Out of 6 invited participant, 4 participants from 3 countries took part in the study tour.

ST was realized in VSŽ OCEL Košice, KOVOHUTY Krompachy, OFZ Istebné and Široká, METALSINT Dolný Kubín, SLOVALCO Žiar nad Hronom in May 4 – 7, 1998.

ST Evaluation report was attached to Progress Report III.

Brief characteristics of visited firms and institutions are in the Annex.

- 1.3. Engineering manufacturing development for small and medium size enterprises. (Industrial visits to production plants of dividing, forming and tool machines, road and building machines, cranes, wagons, vessels, tractors, motor-cycles, storage tanks and tank cars, pumping devices, boilers, air-condition devices, bridges and steel structures, castings and forgings, etc.)
Planned starting/completion date: February – May 1998

Actual status:

Aide Memoire was prepared in February 1998 and distributed to 8 developing countries in the beginning of March. Due to a small number of nominees (2 from Egypt) the Study tour was in the beginning of April cancelled.

After consultations with partner Slovak firms and institutions a new program of ST was prepared on agriculture supporting engineering industries. Aide Memoire was distributed to 11 developing countries in May. Out of 11 invited participant, 9 participants from 3 countries took part in the study tour.

ST was realized in Nitra (International fair AGROKOMPLEX 98), VZT VZDUCHOTECHNIKA Nové Mesto nad Váhom, PEVIZ Nové Mesto nad Váhom, WUSAM Zvolen, IDOS Slovenská Lupča, SLOVPUMP Závadka nad Hronom, ZĽS TEES Martinské strojárne Martin, VSS Košice, SOPK Košice in August 17 – 25, 1998. ST Evaluation report is attached to Final Report.

Brief characteristics of visited firms and institutions are in the Annex.

- 1.4. Water resources management for rural communities and local metal working industries. (Industrial visits to underground and surface water sources, water reservoirs and treatment plants, water system of integrated metallurgical plant, waste water purification plants, water dams and water-works)
Planned starting/completion date: March – June 1998.

Actual status:

Aide Memoire was prepared in March 1998 and distributed to 9 developing countries in the beginning of April. Out of 7 invited participant, 4 participants from 2 countries took part in the study tour.

The ST was held in VSŽ OCEL Košice, PBaH Košice, VVaK Košice, VODNÉ DIELO Žilina, INGENIO Žilina, Trenčín (International exhibition AQUA 98) and VÚVH Bratislava on June 8 - 12, 1998.

Evaluation report was attached to Progress report III.

Brief characteristics of visited firms and institutions are in the Annex.

Output 1 Summary:

4 study tours were realized with the total number of participants 20 (14 men/6 women) from 7 developing countries (total 16 firms and institutions) with the total duration 140 man-days. Participants visited 23 Slovak firms and institutions in different branches (geology – 1, metallurgy – 6, engineering industry – 7, refractory materials – 4, water management – 4, regional chamber - 1), 1 international conference, 1 international exhibition a 1 international fair. Brief characteristics of visited firms and institutions are in the Annex. During industrial visit in VSS Košice direct business contacts rose with Head of Kenya association of micro, small and medium entrepreneurs.

Study tours proved to be positive especially due to:

- *The knowledge of technical and technological level of individual industrial sectors and sub sectors*
- *Continuous modernization of machines and equipment and their maintenance*
- *Implementation of progressive trends in production technologies, reduction of raw materials and energy consumption*
- *Experience from computer implementation in technological processes management and in information systems*
- *The need of continuous human resource development for industry.*

Even though the realized study tours could be described as first contact activities between partners, it is necessary to continue. Further cooperation requires bigger financial sources that would enable a comprehensive assistance, i.e. investment promotion, transfer of know-how and human resource development at the same time.

Output 2

At least four technical assistance project proposals in various fields of metallurgical, engineering and other basic industries, in accordance with the requirements of developing countries/regions, as a result of four diagnostic, problem mapping, consultancy, technical assistance and project formulation missions of 8 Slovak experts/consultants/advisers:

- 2.1. Mission to Egypt and Mauritania to prepare proposal of long-term agreement on cooperation in human resource development for AISU members (based on request of Arab Iron and Steel Union representatives).

Planned starting/completion date: August – December 1997

Note:

In original project document, prepared in October 1996, a mission to Egypt and Libya was thought about, which was reflected in TOR. Based on conclusions from the meeting with AISU representatives and Mr. Kroužek in February 1997 in Košice it was decided to realize mission to Egypt and Mauritania first. This change was not included in TOR, but in our Proposal from August 1997 the mission to Egypt and Mauritania was already included.

Actual status:

Mission to Egypt and Mauritania was realized in March 15 – 23, 1998. Program of the mission corresponded with the results of the meeting held during official visit of AISU representatives (Mr. Lachgar, Secretary general and Mr. Hussein,

director of regional office in Cairo) in Košice at the end of February 1997.

Report was attached to Progress report II.

Based on Report's conclusions the requirements were discussed with partner Slovak firms and institutions. It resulted in prepared offers and suggestions that were sent to EISCO/AISU and SNIM in April/May 1998 – see output 3.

- 2.2. Mission to Zimbabwe to develop projects to upgrade ZISCO (Zimbabwe Iron and Steel Company) rolling mill process control and overall process automation.
Planned starting/completion date: March – June 1998

Actual status:

Mission was realized in June 29 – July 7, 1998.

Report from mission is attached to Final report.

- 2.3. Mission to selected steel plants of Latin American countries and ILAFA Secretariat to identify technical cooperation projects in the region, based on UNIDO and ILAFA priorities.
Planned starting/completion date: February – June 1998

Actual status:

Mission to Chile and Argentina was realized in May 16–26, 1998.

Report from mission was attached to Progress report III.

- 2.4. Mission to China to pursue the upgrading of management information and control systems for Ministry of Metallurgical Industries with special regard to Wuhan Iron and Steel Company (WISCO) and Anshan Iron and Steel Company (AISCO) and to participate at the international symposium on steel industry and development.
Planned starting/completion date: January – May 1998

Actual status:

As it was stated in Progress Report II a diagnostic mission to Kenya or Zambia was recommended instead of that one to China. Mission to Kenya was realized from June 29 - July 9, 1998 together with the mission to Zimbabwe.

Report from mission is attached to Final report.

Output 2 Summary:

Diagnostic missions to 6 following countries were realized:

- *Egypt*
- *Mauritania*
- *Chile*
- *Argentina*
- *Kenya*
- *Zimbabwe*

Offers and proposals prepared with reference to their requirements, identified during the missions are listed in Output 2 and 3 Summary.

Output 3

At least four proposals of Slovak technology and transfer of know-how (including deliveries of equipment and services) to the developing countries as a follow-up of missions and study tours, and publish them afterwards.

Proposals will be prepared as in-kind input of the missions mentioned in Output 2.

Activities for output 3

- To work out specific offers/proposals of Slovak technology and transfer of know-how, deliveries of equipment or providing of services for developing countries as per UNIDO and Slovak Government priorities.
- To follow-up of materialization in the field, based on their evaluation.

Outputs 2 and 3 Summary:

With reference to realized diagnostic missions the following offers for transfer of know-how and technologies were prepared so far:

a) For Mauritania according to SNIM requirements the following offers seminars in French language were prepared:

- *Mining operations and iron ore treatment*
- *Iron ore sampling and quality analysis*
- *Blasting techniques*
- *Mining topography*
- *Maintenance*

Also theoretical and practical daily training for working professions for COMECA and SAFA at apprentice school in Slovakia (following 1-year Slovak language course).

To illustrate this SNIM required specification and a part of an offers are attached.

b) For Egypt based on EISCO Helwan requirements the following offers were specified:

- *Implementation of static and dynamic model of computerized system in converter steel making shop.*
- *Quality improvement of production and rolling of deep drawing and extra deep drawing steel (see in the Annex)*

c) VSŽ INŽINIERING prepared general offers of products and services for missions organized in African countries (see in the Annex).

d) ZŤS TEES Martinské strojárne, Martin prepared technical and business specification for delivery of tractors to:

- *CIDEF, Argentina*
- *COAFI, Argentina*
- *DERCO, Chile.*

e) During realized Study tours the following technical specification and price lists for deliveries were prepared for Kenyan participants on their requests:

- *eccentric presses from VSS, Košice*
- *syringes and needles from CHIRANA, Stará Turá.*

Majority of specified requirements, presented by the representatives of individual firms and institution from developing countries is oriented towards human resource development for industry and towards expert assistance. African countries often ask for assistance in mapping their local raw material and energetic sources as well as in preparation of development studies and plans due to the shortage of their own experts.

To improve their position in global market it is necessary to increase value added level in all their products. To achieve this it is necessary to develop local raw material exploitation, to achieve higher level processing, more effective energy production and consumption as well as to develop infrastructure, especially in transport sector. Due to limited financial sources these countries expect foreign investments with the only possible way of paying off loans being raw materials and agricultural products.

To make the help effective these countries need complete development projects based either on local raw material sources or agricultural products. Such complete projects must solve investment promotion, transfer of know-how, technical assistance, development of necessary infrastructure, environmental issues and adequate human resource development at the same time. Partial projects, e. g. one machine or equipment delivery, implementation of a new technology, training of a certain profession, etc. can be an asset only for a small company.

In this aspect the cooperation of Slovak firms and institutions with developing countries is according to our opinion possible in two ways:

- *small scale direct cooperation between firms*
- *integrated assistance programs under particular industrial sectors/sub-sectors, coordinated at Government level, together with UNIDO assistance.*

Realization of proposals/offers mentioned in points a – c is conditioned by disposable sources in further cooperation program.

Output 4

Internet/Intranet Information and Documentation System of UNIDO-SR JP, MI created and continuously updated.

VSŽ Konzult in-kind input.

Activities for output 4

- To create and maintain Internet link
- To implement Intranet Information and Documentation System providing relevant information on UNIDO-SR JP, MI
- To create and continuously update computer databases of Slovak companies, institutions, and experts/consultants participating in JP-MI.

Actual status:

Information and documentation system based on Intranet was gradually built for internal project management needs. It includes hardware, software and databases. Internet network connection was not realized yet and it depends on further VSŽ Košice participation in the cooperation program between UNIDO and Slovak republic.

Output 5

Promotional publications concerning UNIDO–SR JP, MI prepared and published.

VSŽ Konzult in-kind input.

Activities for output 5

- To prepare selected publications concerning activities of UNIDO-SR JP, MI
- To publish selected publications
- To distribute the publications within the developing countries.

Actual status:

Brief information material on Joint Programme UNIDO – SR was prepared for the presentations during diagnostic missions in developing countries and for study tour participants organized in Slovakia. The material was distributed to all partners during mission meetings as well as to all study tour participants (see in the Annex).

At the same time brief information materials on all Slovak companies in the following industrial sectors were distributed: metallurgy (steel mills and non-ferrous metallurgy), engineering industry, refractory materials and geological quest. All the materials included reference to Joint Programme UNIDO – Slovak Republic (see in the Annex).

During diagnostic missions also information materials on selected Slovak firms were distributed to our partners.

During industrial visits to individual Slovak firms and institutions all participants received detailed information on their production program and applied technologies. In Regional office of Slovak Chamber of Commerce and Industry in Košice all participants also received a complete catalogue of chamber members, their products and services.

Reporting

Progress Report I described activities realized from October to December 1997.

Progress Report II described activities realized from January to March 1998.

Progress Report III described activities realized from April to June 15th 1998.

Activities realized from June 15th 1998 are described in attachment to this final report.

Conclusions

The project aims were fulfilled.

Practical application of contacts created in developing countries and in Slovakia within this project, realization of the needs/requirements raised by developing countries, is a matter of next cooperation between Slovak republic and UNIDO as well as availability of financial sources of all partners. It is vital to maintain maximum continuity of the cooperation and to reflect these requirements into the next project activities.

Attachments:

- Report from mission to Kenya and Zimbabwe
- Study tour evaluation report
- Work plan 1997-1998
- List of Study tours participants
- Short range training needs of SNIM, SAFA and COMECA
- Proposals for Mauritania (in French language)
- Fax information for Mr. Mohamed Ould Khouna, SNIM, Mauritania
- Proposal for Egypt
- Fax information for Mr. Adel Hussein, AISU, Egypt
- VSŽ Inžiniering offers
- Network of cooperating Slovak companies and institutions (with brief characteristics)
- Joint Programme UNIDO-SR, Brief description
- Leaflets on Slovak metallurgy, engineering, refractory materials, geology

JOINT PROGRAMME UNIDO – SLOVAK REPUBLIC

**Mission to
KENYA and ZIMBABWE**

July 4 – 14, 1998

BUSINESS REPORT

Košice

Mission to Kenya and Zimbabwe

Member of the mission: Mr. Augustín Pullmann, JP UNIDO - SR, director

Date of the mission: July 4 – 14, 1998

Program of the mission:

- July 4 (Sat) Flight from Košice to Nairobi via Prague and Zurich
- July 5 (Sun) Arrival to Nairobi
Accommodation in a hotel
Meeting with Mr. Lysák, Embassy of the SR in Kenya representative, program specification
- July 6 (Mon) Meeting with Mr. F. van Rompey, UNIDO representative
Meeting with KAM representatives (Kenya Association of Manufacturers), Messers. M. Chandaria (Head) and S. Ihiga (policy analysis)
- July 7 (Tue) Meeting with the Ministry of Industry Development representative, Mr. M. M. Nzomo
Meeting with KOSME representatives (Kenya Organization of Micro, Small and Medium Enterprises), Mr. H. A. Ndungu (Head) with his team
- July 8 (Wed) Meeting with Mr. M. M. Saboke, NWCP representative (National Water Conservation and Pipeline Corporation)
Meeting with Messers. A. K. Chesoni (Equity Manager), E. M. Shako (Principal Projects Officer) and W. W. Ngoi (Deputy Manager), ICDC representatives (Industrial and Commerce Development Corp.)
- July 9 (Thu) Meeting with Mr. Zachar, Ambassador of the SR in Kenya
Departure to Nairobi via Dar es Salaam
Arrival to Harare, hotel accommodation
Meeting with Mr. Jančík, Embassy of the SR representative, program specification
- July 10 (Fri) Meeting with Mr. B. B. Maposa, ZNCC representative (Zimbabwe National Chamber of Commerce)
Meeting with Messers. S. Utsunomiya (SA RR), T. Mpofu (Program Coordinator) and I. Higa (ESU), UNDP representatives (United Nations Development Programme)
Meeting with Mr. A. J. Ross, CZI representative (Confederation of Zimbabwe Industries)
Meeting with Mr. J. Maringa, ZIC representative (Zimbabwe Investment Center)
Meeting with Mr. Podstavka, Embassy of the SR representative
- July 11 (Sat) Business report preparation
- July 13 (Mon) Visit to ZISCO (Zimbabwe Iron and Steel Company) in Redclif
Meeting with Messers. C. Pasi (Training Manager), C. G. Chingono (Process Development Manager), R. S. Marawanyika (Divisional Manager), R. Shopera (PP/PC) and D. I. Nhukarume (TS), ZISCO representatives
Departure from Harare to Košice via Frankfurt and Prague
- July 14 (Tue) Arrival to Košice

Report from the mission to Kenya and Zimbabwe during July 4 – 14, 1998

Objective of the mission:

The aim of the mission was to identify possible fields of cooperation in Kenya and Zimbabwe in accordance with UNIDO priorities and with interests and possibilities of the Slovak industry. The mission to Kenya was realized instead of the mission to China. The aim of the mission to Zimbabwe was, according to the original plan, to prepare projects for the development of management technological processes in rolling mills and an overall automation development in ZISCO – Zimbabwe Iron and Steel Company. In accordance with the new UNIDO business plan and priorities the mission was aimed more broadly, especially to the development of small and medium enterprises, agriculture supporting industries, environmental problems solving and investment promotion.

Mission to Kenya

Meeting with UNIDO representative, Mr. Fran van Rompaey (Program Officer). The aim was to inform about JP UNIDO – SR activities, possible fields and forms of cooperation and about proposed future orientation to the IPS area. Mr. Rompaey presented realized development programs in Kenya and UNIDO intentions in this part of Africa. Nairobi office coordinates activities in Uganda and Rwanda Burundi. Priority areas they need help in are: development of agriculture – based industry: processing of agricultural commodities, leather, textile, wood and simple production in small shops (agricultural tools). In the area of industrial development, the most important are: cleaner production, energy conservation and effective energy development, technical and managerial training. The development of IPS activities, industrial governance and export support is expected.

Meeting with KAM representative (Kenya Association of Manufacturers), Messers. M. Chandaria (Head) and S. Ihiga (policy analysis). The aim was to inform about our interest and possibilities in cooperation under JP UNIDO – SR, direct contacts of firms and associations as well as about prepared transformation of the center to IPS. KAM representatives briefly presented their members, production programs and areas they need foreign assistance in. The main bottleneck of the development is insufficient infrastructure, especially roads and railways, where big foreign investments are necessary (World Bank with government guaranties). Development of power energy is a necessity (small water power stations, utilization of geothermal energy, etc.), water supply for the North areas, development of post offices and telecommunications. Their intent is the development of the production in small and medium private enterprises suitably interconnected with big state-owned companies. It concerns also cooperation with neighboring countries: Uganda, Rwanda Burundi and Tanzania. They need complete studies for which Kenya does not have neither experienced experts nor capacities. Both foreign help and loans are necessary. At present the following countries provide their help: Japan in metal industry, USA in agriculture and food industry, Germany in export support. There are no local capacities for complete geological quest, mining of minerals and their treatment. It is also necessary to solve environmental problems in the production and questions of quality (application of ISO standards). There is no system

of maintenance and repair of machines and equipment, they do not have any spare parts, no worker professions, especially in metal industry and in service organizations. Production development of simple tools is requested as well as new working opportunities for women. The optimal form of cooperation they suppose joint ventures in small and medium enterprises. The main export commodities are coffee and tea.

Meeting with the Ministry of Industry Development, Messers. M. M. Nzomo and S. O. Mogaka. During the meeting they gave us official government material on Kenya transformation to 2020, signed by the minister of commerce and industry. The material describes industrial development strategy with the aim include Kenya to NIC (newly industrialized countries) by 2020. The strategy outlines 2 main ways: local market and production development, restructuring towards higher effectiveness and competitiveness of export commodities. Development of employment is necessary mainly through the development of SME, especially in the field of processing industry, production and services which presupposes relevant technology and human resource development. The material provides ideas suitable for Slovak entrepreneurial subjects for entering various sectors and sub-sectors in Kenya. It is, though, necessary to prepare integrated conception of coordinated entering. Kenya in cooperation with UNIDO prepares so called Country Programme and ministry representatives would welcome our ideas how could Slovakia participate in this program. An international fair of agricultural machines in Nairobi is under preparation by Agricultural Society of Kenya, where they would welcome also Slovak firms. An important information is the preparation of common African market of COMESA countries (Common Market of Eastern and Southern Africa) with 21 countries at present.

Meeting with KOSME representative (Kenya Organization of Micro, Small and Medium Enterprises), Mr. H. N. Ndungu with his team. We briefly informed ourselves about aims of JP UNIDO – SR, structure and orientation of KOSME, the questions of SME in Kenya were broadly discussed. Especially promotion of small family firms with simple equipment was strongly stressed out not only in the cities but also in rural areas, especially on agricultural basis: Food (milk, corn, fruits, bakery products), beverages (small breweries), leather, wood, stone, etc. Also production of simple agriculture tools is required together with small installing materials, shoe and textile production. They also need small mills, stone treatment machinery, water pipelines, river ships. There is also possible assembly of bicycles and motorcycles in agglomerations.

Meeting with NWCPC representative (National Water Conservation and Pipeline Corporation), Mr. M. M. Saboke who participated in study tour on Water management in Slovakia in 1997. The aim of the meeting was to resume his knowledge and experience from this study tour and to look for possible specific cooperation. Mr. Saboke informed about overall situation in water sources, NWCPC position and about further water management development. Main problems are in the field of air monitoring and water sources quality. They would greatly benefit from mobile monitoring stations and laboratories. The help in building of water treatment and sewage plants for industry, cities and rural areas is also needed. The north of Kenya lacks water sources, it is necessary to look for new ground water sources (wells). To create competitive environment in pumping devices market would be an asset together with possible import of tanks. Mr. Saboke will prepare specification of newly prepared projects and will send it via our Embassy in Nairobi so the Slovak companies can prepare their deliver and service offers.

Meeting with ICDC representatives (Industrial and Commerce Development Corporation), Messers: A. K. Chesoni (Equity manager), E. M. Shako (Principal Project Officer) and W. W. Ngoi (Deputy Manager). The aim was to inform about our interest and possibilities in cooperation under JP UNIDO – SR, direct contacts of firms and associations as well as about prepared transformation of the center to IPS. ICDC is a private company with various activities and contacts. They are interested in cooperation in all fields, especially with private sector. According to their opinion metallurgical and chemical production is sufficiently developed. Development of rural areas has the top priority. Training of entrepreneurs, managers and specialized technical professions is needed. The most suitable form of the training is long-term stays in firms. It is necessary to build non - existing maintenance system. Joint ventures are according to their opinion the most suitable form of cooperation with foreign companies. They will prepare detailed specification of their needs together with their proposals and send it via their forthcoming August study tour participant.

Meeting with Slovak ambassador in Kenya, Mr. Zachar. I informed him about JP UNIDO – SR activities and about the meetings with our partners in Kenya. According to Mr. Zachar's opinion, the cooperation possibilities with Kenya are not as broad as they could be. Kenya has to solve its social problems together with raising employment and qualification structure. This opens the possibility to implement simple, financially not demanding production technologies that still exist in Slovakia. Our mutual business can be developed through bartering. Kenya is rich in its high quality coffee, tea and other agriculture products and various industrial raw materials. Similar situation is also in neighboring countries. Entering the market in this region will be effective especially from the long term point of view.

Mission to Zimbabwe

Meeting with ZNCC representative (Zimbabwe National Chamber of Commerce), Mr. B. B. Maposa (Trade Development and Information Manager). We briefly informed ourselves about aims of JP UNIDO – SR, structure and orientation of ZNCC and the questions of present development in Zimbabwe were discussed. Mr. Maposa informed about privatization problems, cross border investment activities, business development centers establishment and traffic problems solving in Harare. Their interest is according to his opinion especially in the development of agriculture sector, engineering industry environmental problems and investment development of small and medium enterprises.

Meeting with UNDP/UNIDO representatives in Harare, Messers. S. Utsunomiya (Special Assistant to Resident Representative), T. Mpofu (Program Coordinator) and I. Higa (Environmental Specialist). The aim was to inform about JP UNIDO – SR and about possible fields and forms of cooperation as well as about prepared transformation to IPS Center. UNDP representatives informed that the office in Harare is temporarily closed and all agenda would be probably administrated in Lusaka. They provided list of UNDP and UNIDO projects in Zimbabwe and the following issues were discussed in detail: cleaner production systems, pollution monitoring systems (water and air), reduction of waste in industry, energy savings, environmental issues in tanneries and cement production. Also financing of development projects from various sources was discussed.

Meeting with CZI representative (Confederation of Zimbabwe Industries), Mr. A. J. Ross (Chief Executive). The aim was to inform about our interest and possibilities in cooperation under JP UNIDO – SR, direct contacts of firms and associations as well as about prepared

transformation to IPS Center. Mr. Ross informed that CZI member base represents approximately 75% of Zimbabwe industrial production and includes especially SME, services and transport. As for the development, their orientation is towards: environment, labor, women employment, expertise, interconnection programs of small entrepreneurs, replacement of imported products, replacement of old technologies and machines by innovation and modernization, development of competitive abilities. Development of aluminium industry, exhalation monitoring, solid waste treatment and water recycling in industry is thought as very important. The cooperation is possible in all above mentioned areas. It is necessary to look for financial sources for the activities. In the past the financing of UNIDO projects was coordinated through the Ministry of Industry and the Ministry of Finance.

Meeting with ZIC representative (Zimbabwe Investment Center), Mr. J. Maringa (Senior Executive – Marketing). The aim was to inform about JP UNIDO - SR and possible fields and forms of cooperation as well as about prepared transformation to IPS Center. Mr. Maringa informed about preparation of IPS center in Zimbabwe and about the orientation of new investments to the following areas: food industry, exploitation and processing of local minerals (40 kinds), exploitation and processing of wood, textile and clothing industry, production of exotic shoes, detergent production, replacement of old production technologies and equipment by new ones, infrastructure development for tourist industry. They would welcome foreign cooperation in all above mentioned areas.

Meeting with ZISCO representatives (Zimbabwe Iron and Steel Company) in Redclife, Messers. C. Pasi (Training Manager), C. G. Chingono (Process Development Manager), R. S. Marawanyika (Divisional Manager), R. Shopera (PP/PC) and D. I. Nhukarume (TS). ZISCO is at present undergoing a massive equipment and technology modernization in metallurgical primary production and a modernization of rolling mills is being prepared. With reference to that a gradual increase of qualification and expert supervision not only with production approaching but also during operation of new technologies is necessary. Their effort is to gain ISO standard certificates in quality and environment. The company is undergoing privatization, therefore the state is not providing neither financial assistance for modernization activities nor guarantees for banks. For the successful restructuring the company needs long term expert's assistance in the following: coke plant, agglomeration, blast furnaces, converter steel plant, continuous casting, maintenance and repair, spare parts production. Their role would be in in-plant personnel training directly in the plants and also they would act as supervisors in production process. Environmental issues, water purification and recycling, energy savings are very important, too. Computer application in process control and MIS implementation are limited to selected areas and assistance is also needed. Expert help is also needed in education where a complete system according to ISO standards is required together with training of management trainers. ZISCO will during August prepare detailed specification of their requests for expert help in production and education and will send it either directly or via our embassy in Harare.

Meeting with embassy representative in Harare. During the absence of the ambassador, Mr. Voderadský the meeting was held by his deputy, Mr. Podstavka, who was informed about the aims and results of the mission. On behalf of the embassy we were promised their help in developing our cooperation with Zimbabwe and neighboring countries. More complete market entering for Slovak firms was proposed which could be interesting from a long term point of view.

Summary, conclusions and recommendations

With reference to the meetings with the representatives of UNIDO in Nairobi, UNDP in Harare, the Ministry for Industry Development in Kenya together with the representatives of other 8 associations and corporations in Kenya and Zimbabwe and our embassy representatives in those countries the following fields of cooperation or market entering are possible:

1. Infrastructure development

- Roads and railways
- Post offices and telecommunications
- Tourism
- Mining and treatment of raw materials
- Preparation of complete development studies and programs

2. Utilization of material and power sources

- Complete geological quest of minerals
- Local mining development and treatment of minerals
- Development of effective power sources (small water power stations, lower grade fuel combustion, geothermal energy utilization, etc.)
- Energy saving in industry

3. Water management development

- Localization and utilization of water sources (well drilling, water pipelines and sewage systems)
- Sewage treatment plants for industry and residential districts
- Water recycling in industry

4. Processing of agricultural products

- Milk
- Corn
- Fruits
- Coffee, Tea
- Leather
- Wood
- Textile

5. Development of production, services, micro and small enterprises

- Development of micro and small enterprises based on agricultural products and local mineral sources
- Development of services
- Development of women employment

6. Export of Slovak products and production capacities

- Agricultural tools and machinery
- Machines for manufacturing of small agricultural tools
- Small mills for food industry
- Dryers and smoke houses

- Machines and equipment for milk processing and production of soft drinks and beer
- Machines and equipment for filling, preserving and packing of food and drinks
- Packaging glass
- Machines and equipment for bread and bakery products
- Machines and equipment for leather, wood and stone processing
- Machines and equipment for shoe and textile production
- Machines and equipment for production of small installation material and plastic products
- Pumping devices and water tanks
- Sewage treatment plants for industry and residential districts
- Mobile monitoring stations and laboratories for air and water
- Assembly lines for bicycles and small motorcycles

7. Human resource development

- Industrial governance
- Practical technical and managerial training
- Long-term stays in Slovak companies for managers and specialists
- Practical in-plant training for workers
- Training of trainers
- Experts help as supervisors in metallurgy (complete production cycle), engineering industry, etc.

8. Transfer of know-how

- Know-how in metallurgy (ferrous and non-ferrous materials) and in engineering production
- Preparation and implementation of ISO standards in quality and environmental issues
- Implementation of process control and management information systems in industry
- Implementation of maintenance systems in industry, transport and agriculture
- Spare parts production (incidentally renovations)
- Treatment/abolition of solid waste in industry
- Ecological problem solving in tanneries and cement plants

9. Participation in UNIDO Country Program for Kenya

- Offers for Slovak participation in the UNIDO Country Program for Kenya

10. Participation of Slovak companies in an international fair of machines and equipment for agriculture and food industry in Nairobi

- To consider/propose participation of Slovak companies in an international fair of machines and equipment for agriculture and food industry in Nairobi



Mr. C. Pasi
Training Manager
ZISCO STEEL
Fax: 00 263 55 68666

Váš list značky/zo dňa
Your ref./dated

Naša značka
Our ref.

Vybavuje/linka
Attended by/ext.


Dátum
Date

Mgr. Kalinová / 6227237 04.09.1998

Dear Sir,

With reference to my visit to ZISCO STEEL and to your fax dated July 22, 1998 I would like to ask you to send us the promised submission which is needed for UNIDO Vienna to present.

With regards,


Augustín Pullmann
JP UNIDO - SR



SPOLOČNÝ PROGRAM SLOVENSKÁ REPUBLIKA – UNIDO
JOINT PROGRAMME UNIDO – SLOVAK REPUBLIC



Mr. C. Pasi
Training Manager
ZISCO STEEL
Fax: 00 263 55 68666

Váš list značky/zo dňa
Your ref./dated

Naša značka
Our ref.

Vybavuje/linka
Attended by/ext.

Dátum
Date

Mgr. Kalinová / 6227237 29.09.1998

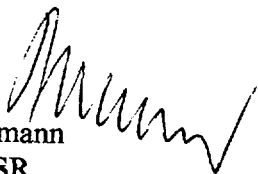
Dear Sir,

With reference to our previous contacts I would like to urgently ask you to send us the submission of your requirements on the following.

- Technical assistance of foreign experts in ZISCO production areas.
- Education and training, especially in training of trainers.
- Study tour/fellowship for you in educational and training center in Slovakia.

This submission is urgently needed for UNIDO Vienna.

With regards,


Augustín Pullmann
JP UNIDO - SR

JOINT PROGRAMME UNIDO - SLOVAK REPUBLIC

Study tour on
**AGRICULTURE SUPPORTING ENGINEERING
INDUSTRIES**

August 17 – 25, 1998

EVALUATION REPORT

Košice

STUDY TOUR OBJECTIVES

The objectives of the Study tour were:

- To present progressive trends in agriculture and food industry mechanization and automation
- To present actual machinery and equipment for agriculture and food industry and production technologies applied in selected engineering plants in Slovakia
- To look for proper development of small and medium size enterprises and joint ventures
- To specify possible cooperation in transfer of know-how, technologies and in human resource development.

The objectives of the Study tour were achieved.

STUDY TOUR PARTICIPANTS

The Study Tour has been designed to address managers and specialists in the field of mechanical engineering production supporting agriculture and food industry. Out of 11 invited participants, 9 participants from 3 countries took part in the study tour.

List of participants

China	Chu Weiwen	China Agricultural Machinery Testing Center
	Wang Xinying	China Agricultural Machinery Testing Center
	Tu Budong	Agricultural Machinery Bureau, Henan Province
	Wang Bing	Agricultural Machinery Bureau, Hunei Province
	Zhang Ligang	Nanjing Institute for Agricultural Mechanization
Kenya	Luruti Stanley Mbaabu	Kenya Organization of Micro, Small and Medium Enterpr.
	Ndungu Henry Njuguna	Kenya Organization of Micro, Small and Medium Enterpr.
	Mungume Erasto Shako	Industrial and Commerce Development Corp.
Zambia	Kaenga John	Ministry of Agriculture, Food and Fisheries

STUDY TOUR PROGRAMME

17.8.1998	Mon		Arrival to Bratislava, accommodation in hotel Kyjev
18.8.1998	Tue	07,30	Departure to Nitra
		09,00 - 16,00	International exhibition AGROKOMPLEX 98, Nitra
		16,00	Departure to Piešťany, accommodation in hotel Magnólia
19.8.1998	Wen	09,00	Departure to Nové Mesto nad Váhom
		09,30 - 11,30	Industrial visit – VZDUCHOTECHNIKA, Nové Mesto n/V.
		12,00 - 13,00	Lunch
		13,00 - 15,00	Industrial visit – PEVIZ, Nové Mesto n/V.
		15,00	Departure to Banská Štiavnica, accommodation in hotel Grand
20.8.1998	Thu	08,00	Departure to Zvolen
		08,45 - 10,45	Industrial visit – WUSAM, Zvolen
		10,45	Departure to Závadka nad Hronom
		12,00 - 13,00	Lunch
		13,00 - 15,00	Industrial visit – SLOVPUMP, Závadka n/Hr.

	15,00	Departure to Banská Bystrica, accommodation in hotel Lux
21.8.1998 Fri	08,00	Departure to Martin
	09,30 - 12,00	Industrial visit - ZŤS TEES Martinské strojárne, Martin
	12,00 - 13,00	Lunch
	13,30	Departure to Košice, accommodation in hotel Slovan
22.8.1998 Sat		Social programme
23.8.1998 Sun		Social programme
24.8.1998 Mon	09,00 - 11,00	Industrial visit – VSS, Košice
	11,30 – 12,30	Meeting with representatives of Regional Chamber of Industry and Commerce, Košice
	13,00 - 14,00	Lunch
	14,00 – 15,00	Study tour evaluation
25.8.1998 Tue		Departure for home countries

STUDY TOUR VENUE

The Study Tour was realized in Nitra, Nové Mesto nad Váhom, Zvolen, Závadka nad Hronom, Martin and Košice from August 17 to 25, 1998.

STUDY TOUR EVALUATION

Study Tour participants obtained UNIDO Evaluation Form “Evaluation – Group training programmes” which all 9 participants filled up and handed in. The results of the evaluation are as follows:

I. Pre-course information:

- 1) All 9 participants rated the aim, content and level of the program as “sufficient”.
- 2) Study tour participants received information about program 6 – 4 weeks beforehand and acceptance letter 4 weeks beforehand.

II. Program content and organization:

- 3) Out of 9 participants 4 thought the total duration of the course was just right, 5 suggested the total duration 2 or 1.5 weeks. Longer duration would enable them to practically get acquainted with the equipment as well as with management system of visited companies.
- 4) The daily schedule was rated just right by all 9 participants.
- 5) China participants proposed to include visits to another companies which produce machinery and equipment for food industry into the program. African participants did not propose any changes.
- 6) 6 participants felt that the programme corresponds to their professional needs to a sufficient extent, other 3 to a very large or large extent. China participants appreciated the stress laid on quality certificates and management system in Slovak companies. African participants appreciated good exposure.
- 7) African participants thought industrial visits were very relevant, interesting and encouraging. Visit to international exhibition Agrokomplex 98 requires according to their opinion longer time due to number of exhibits shown. Chinese participants suggested longer study tour with more industrial visits to companies producing machinery and equipment for food industry

- 8) All participants rated the general level of the study tour as adequate. African participants rated the level of the training as good overview. At the same time they thought the right companies were included into the program.
- 9) There were slight differences between the two group as to what was the most valuable. African group appreciated visits to manufacturers. Chinese group appreciated the possibility to discuss also changes in organizational structure and management procedures with reference to market economy and also questions concerning business and marketing in new conditions.
- 10) No subjects were found by participants as least valuable.
- 11) According to African group there were no relevant subjects that were not covered adequately, according to Chinese group not adequately covered were machines and equipment for food industry.
- 12) As far as methods of instructions are concerned no changes were recommended. African group appreciated good layout and presentation all through, Chinese group preferred more team work and demonstrations.
- 13) 8 participants rated instructors' command of English as very good and 1 as fair. Methods of instruction were rated by all 9 participants as fair.
- 14) African group thought they had sufficient time for professional exchange of views with the program staff as well as with fellow participants. Communication with Chinese group was limited by their lower command of English, therefore the lectures and communication were translated into Chinese and vice versa.
- 15) African group benefited from both above mentioned exchanges to a great deal or much and Chinese group somewhat.

III. Relevance and applicability:

- 16) Participants opinion on the contents of the study tour program relevant to the conditions in their company varied: 5 participants thought to a sufficient extent, 2 to a very great extent, 1 to a great and 1 to a small extent.
- 17) By participating in this training program 5 felt they have benefited to a sufficient extent, 2 to a great extent, 1 to a very great extent and 1 to a small extent.
- 18) 5 participants thought they will have an opportunity to apply newly acquired knowledge to a sufficient extent, 2 to a small extent and 2 to a very great extent. Problems are expected due to the prices of the machines and equipment.
- 19) Ability to transfer acquired knowledge to others in their home country is closely connected with previous point which is with the opportunity to apply them.
- 20) The way of transfer will be mainly in a day-to-day work to colleagues and subordinates, partly also by training activities. Difficulties with transfer are expected due to bureaucratic procedures.

IV. Social aspects of the program:

- 21) Leisure time activities were rated as good organized and coordinated. Chinese group would have wanted to know more closely the history and culture of Slovakia. 1 African participant would have appreciated official Slovak representatives participation.
- 22) No comments were raised.

CONCLUSIONS AND RECOMMENDATIONS

1. Original study tour program was oriented towards a broad spectrum of engineering production in Slovakia. Due to a low interest the original program was cancelled and substituted by a new one. The new orientation to agriculture supporting engineering industries proved to be very vital and also approved correctness of new UNIDO priorities.
2. Based on the requirement of a Chinese Ministry of Agriculture a 6-member group of Chinese representatives was invited to participate in the study tour. Therefore two groups of participants were created – Chinese and African that varied in their interests notably.
 - With regard to a long term cooperation with former Czechoslovakia the Chinese group tried to gain as much information as possible on development and present situation in Slovakia, especially about the changes in organizational structures, management and business activities in individual firms with a connection to market economy transfer. The most interested products and technologies for them were various categories of tractors and also machinery for food processing.
 - African group was interested in particular ways of cooperation, deliveries of various equipment and ways of financing.
3. In a final discussion all participants confirmed vitality and positive aspects of the study tour. Continuation of business contacts is expected on different levels directly between firms or under JP UNIDO – SR. It was proposed to consider a possibility of a so called walking exhibition of machinery and equipment with a particular expert orientation in selected centers in developing countries. This would enable a broader group of customers to get acquainted with the display and at the same time to create suitable conditions for making direct contracts.

WORK PLAN 1997 - 1998

<u>Project activities</u>	<u>Starting/Completion Dates</u>
1. Activities for output 1	
1.1. Group Study Tour on refractory materials	August – October 1997
1.2. Group Study Tour on advances in metallurgy	January – April 1998
1.3. Group Study Tour on engineering manufacturing	February – May 1998
1.4. Group Study Tour on water resources management	March – June 1998
2. Activities for output 2	
2.1. Mission to Egypt and Mauritania with proposals	August – December 1997
2.2. Mission to Zimbabwe with proposals	March - June 1998
2.3. Mission to selected Latin American countries and ILAFA Secretariat with proposals	February - June 1998
2.4. Mission to China with proposals	January – May 1998
3. Activities for output 3	
3.1. Preparation of Slovak technology and know-how transfer proposals	January – June 1998
3.2. Presentation of proposals	June – July 1998
4. Activities for output 4	
4.1. Database information services	February 1998 onwards
5. Activities for output 5	
5.1. Preparation of selected publications	January – May 1998
5.2. Publishing of selected publications	May – June 1998
5.3. Distribution of publication to developing countries	May – July 1998

Reporting:

Progress Report I	December 1997
Progress Report II	March 1998
Progress Report III	May 1998
Final Report	July 1998

Notice:

Original Work Plan was modified in the beginning of February 1998 according to the actual status, right after discussions on Progress Report I with Mr. Kroužek, BSO.

JOINT PROGRAMME UNIDO – SLOVAK REPUBLIK

List of Study Tours participants

October 1997 – August 1998

Country	Company/Institution	Participant
Bulgaria	Kremikovtzi Co. Kremikovtzi Co. Kremikovtzi Co. RMO – Metalurgremont	Raina Maltcheva Koussarova Irena Savov Nikolai Teodor Atanasov
China	Agricultural Machinery Bureau, Henan Province Agricultural Machinery Bureau, Hunei Province China Agricultural Machinery Testing Center China Agricultural Machinery Testing Center Nanjing Institute for Agricultural Mechanization	Tu Budong Wang Bing Chu Wei Wen Wang Xinying Zhang Ligang
Egypt	Egyption Ferro Alloys Co. Egyptian Company for Refractory Materials Helwan Iron Foundries	Yousry M. El Nashar Mohamed Kahla Houeya El Sabaie
India	Ministry of Urban Aff. And Empl. Tamil Nadu Newsprint and Papers	Yogendra Tripathi Sathiyamoorthi L. S.
Kenya	Industrial and Commerce Development Corp. Kenya Organiz. of Micro, Small and Medium Enterpr. Kenya Organiz. of Micro, Small and Medium Enterpr. Steelmakers Ltd.	Mungume Erasto Shako Luruti Stanley Mbaabu Ndungu Henry Njuguna Subrata Gupta
Zambia	Ministry of Agriculture, Food and Fisheries	Kaenga John
Zimbabwe	Zimbabwe Iron and Steel Co.	Dunmore I. Nhukarume

Countries: 7

Companies: 16

Participants: 20 (14m, 6f)

الشركة الوطنية للصناعة والمناجم



HUMAN RESOURCES DIVISION

P.O.BOX 42
NOUADHIBOU
MAURITANIA

SHORT RANGE TRAINING NEEDS

SNIM - Société Nationale Industrielle et Minière
au Capitale de : 11.459.500.000 UM
R.C. Nouakchott N° 4579
Siège Social & Direction Générale Nouadhibou BP 42
Télex 426 MTN - Téléphone (Standard) 45092
45090 - 45091 - 45174 - Lignes groupées
Téléfax : 45396 - Direction Générale
Téléfax : 49039 - Direction Financière
49 013 - 49 027 - 49 065 - Département Achats
République Islamique de Mauritanie

سنيم الشركة الوطنية للصناعة والمناجم
رأس مالها: ... ١١ ٤٥٩ ٥٠٠
س.ت. رقم ٤٥٧٩
المقر الرسمي & مقر الإدارة العامة انواذيبو
ص ب ٢٤ تليكس ٤٢٦ م.ت.ن - موزع الهاتف
٤٥٠٩٢ - ٤٥٠٩٠ - ٤٥٠٩١ - ٤٥١٧٤ خطوط مجموعة
تلفاكس: ٤٥٣٩٦ - الإدارة العامة: ٤٩٠١٣ - ٤٩٠٢٧ - ٤٩٠٦٥
تلفاكس: ٤٩٠٣٩ - الإدارة المالية
قطاع المشتريات - الجمهورية الإسلامية الموريتانية



HUMAN RESOURCES DIVISION

SUBJECT : SHORT RANGE TRAINING NEEDS

This paper deals only with training needs for the next two years (1998-2000), for the benefit of the company's management staff (Engineers, Upper level technicians, Supervisors). Other papers available from the Division of Human Resources of SNIM deal with mid and long range training needs and idea for development at SNIM and it's affiliates.

1. Training Needs of SNIM

SNIM's training needs are divided into five main areas :

A Mining operations, iron ore treatment, sampling, and analysis.

Recommended number of sessions :

Training sessions : 05 (five)

Number of participants : 50 (fifty)

B Maintenance of electromechanical equipement

- Iron ore transport trucks
- Electric shovels
- Drills
- Bulldozers
- Crushers
- Conveyor belts
- Grinders
- Hydraulic equipment
- Electrical motors
- Miscellaneous electronic equipment
- Miscellaneous electromechanical equipment
- Train tracks
- Locomotives
- Excavators for storage and loading of ore

- Recommended number of sessions : 05 (five)

- Number of participants : 90 (ninety)

C. Human Resources Management

- Recommended number of sessions : 02 (two)
- Number of participants : 03 (three)

D. English language and Management training

- Recommended number of sessions : 02 (two)
- Number of participants : 20 (twenty)

E. Total quality - ISO certification - Project management

- Recommended number of sessions : 06 (six)
- Number of participants : 75 (seventy five)
- Total recommended training sessions : **20**
- Total number of participants : **238**

2. Training needs of SAFA (SAFA is an affiliate of SNIM which produces steel for reinforced concrete)

SAFA's training needs are divided into three main areas :

A. Iron ore casting

- Recommended number of sessions : 05 (five)
- Number of participants : 17 (seventeen)

B. Steel production

- Recommended number of sessions : 01 (one)
- Number of participants : 03 (three)

C. Miscellaneous

- Recommended number of sessions : 03 (three)
- Number of participants : 09 (nine)

Total recommended training sessions : **09**

Total number of participants : **29**

APPENDIX 1 : SNIM

AREAS	FORMATS	NUMBER OF PARTICIPANTS	LOCATIONS	LENGTH
A <u>Mining operations</u> <u>Iron ore treatment, sampling analysis</u>	Seminar led by a mining expert with extensive operations experience	20	Zouérate (MAURITANIA)	1 week
	Seminar on sampling and quality analysis of iron ore	10	Zouérate (MAURITANIA)	1 week
	On-site visits to mine	05	Other mining sites around the world	1 - 2 months
	Seminar on mining topography	10	Zouérate	1 week
	Seminar on blasting techniques	05	Zouérate	2 - 4 days
B. <u>Maintenance of mechanical equipments</u>	Visits of technical staff to similar installations	20	Others installations around the world	1 -3 weeks
	Short-term training in universities	20	Engineering schools and/or specialized centers	2 -3 Months
	Consultation from an expert in Electronics		Nouadhibou & Zouérate	6 Months
	Maintenance seminar	30	Nouadhibou & Zouérate	2 Weeks
	Maintenance of railway equipment	20	Nouadhibou and operating locations along the railway	2 -4 Weeks
C <u>Human Resources Management</u>	Visits to another training center	02	Mining company centers	1 - 2 Months
	Short term training for H.R.	01	Specialized centers	15 days-1 month
D. <u>Language / Management</u>	Fluency in English	10	An English-speaking country	1-2 Months
	Management Training	10	Universities or Centers	1 -2 Weeks
E. <u>Total Quality - Certification - Project</u>	Consultation on ISO 9000 standards		Nouadhibou & Zouérate	1 Month
	Consultation in GMAO		Nouadhibou & Zouérate	1 Month
	Total Quality Seminar	40	Nouadhibou & Zouérate	2 Weeks
	Seminar on training methods	20	Nouadhibou	1 Month
	Consultation on pelletization	05	Nouadhibou	1 Week
	Seminar on project management	10	Nouadhibou	1 Week

Plan du programme d'entraînement instructif pour la société nationale Industrielle et Minière (SNIM) en Mauritanie

1. PROGRAMME D'ENTRAÎNEMENT AU COURS:

Extraction et traitement du minerai de fer

Les conférenciers:

- Prof. Ing. Ondrej DOJČÁR, CSc.
(comme professeur il a travaillé 3 ans en Algérie - 1984-1987)
- Doc. Ing. Josef LUKAČ, CSc.
(Il a travaillé en Tunisie 4 ans comme professeur et 4 ans comme expert)
- Doc. Ing. Viliam BAUER, CSc.

Traducteur professionnel:

- Doc. Ing. Zdeno BUBNIAK, CSc.
(Il a exercé la fonction d'attaché économique en USA)

Conditions préalables de l'étendue des cours:

- durée des cours - 5 jours
- nombre total des heures de cours - 30 h
- nombre d'heures par jour - 6 h
- nombre des assistants au cours - 20

Contenu du programme d'entraînement:

- * *Analyse de base de la situation de gisement de la mine en plein air*
 - les caractéristiques qualitatives et quantitatives du gisement
 - les stocks qu'on peut extraire
 - les sources de production d'entreprise d'extraction au gisement
- * *Processus de production de l'exploitation du gisement*
 - les étapes et sous-étapes du processus de production
 - l'entreprise d'extraction sur le gisement
 - les principaux indicateurs d'exploitation en rupture
- * *L'analyse technique et technologique de la mine en plein air*
 - les systèmes techniques de rupture (système de transport, puisement d'eau, système de déblaiement etc ...)
 - les méthodes d'exploitation et de ségrégation (outillages)
 - autres opérations technologiques d'exploitation en rupture
- * *Planification, gestion et mise en projet du procédé de l'extraction en rupture*
 - le modèle technico-économique
 - les propositions alternatives d'exploitation
- * *Évaluation économique de l'exploitation à ciel ouvert*

- * *Les aspects écologiques d exploitation et le projet de liquidation de la rupture*
- * *Concassage et classification du minerai de fer*
 - méthodes et technologie
 - outillages et le dispositif d élaboration
- * *Broyage du minerai de fer*
 - disposition technologique de base
 - analyse du processus de broyage
- * *Séparation magnétique du minerai de fer*
 - basse intensité magnétique de séparation
 - haute intensité magnétique de séparation
- * *Processus technologiques d essaie du fer concentré*
 - technologie du pelotage
 - technologie du briquetage

Assurance financière prétendue des cours:

- * *Frais de voyage*
 - aller-retour Košice (Slovaquie), Nouakchott (Mauritanie) pour 5 personnes
- * *Hébergement et nourriture durant le séjour en Mauritanie*
 - indemnité journaliere
- * *Assurance des conférenciers et du traducteur*
 - transport et logement
- * *Charges financières d une heure de cours*
 - pour le conferencier 50 USD x 30 h = 1500 USD
 - pour le traducteur 50 USD x 20 h = 1000 USD

REMARQUE:

Pour l assurance optimale des 3 cours demandés, (extraction et traitement du minerai de fer, technique des travaux fulminants, Analyse et échantillonnage du minerai), nous proposons d envoyer un groupe de cinq conferenciers avec un traducteur pour la langue française.

En cas de besoin, il est possible de préparer et d établir la documentation et le materiel nécessaire.

Košice 8.4.1998

Traité par: Doc.Ing. Viliam BAUER, CSc.
directeur KDLaG

Prof.Ing. Ondrej DOJČÁR, CSc.
garant de l orientation des études
Extraction des gisements minéraux
au KDLaG

Plan du programme d'entraînement instructif pour la société nationale Industrielle et Minière (SNIM) en Mauritanie

3. PROGRAMME D'ENTRAÎNEMENT AN COURS: Méthode d'échantillonnage et d'analyse

Conférencier: - Ing. Jana JABLONSKÁ, CSc.
(elle a travaillé plusieurs fois à l'université Sophia Antipolis de Nice, des séjours scolaires dans différentes universités: à Paris, Orléans et Lyon)

Conditions préalables de l'étendue des cours:

- durée des cours - 5 jours
- nombre total des heures de cours - 30 h
- nombre d'heures par jour - 6 h
- nombre des assistants au cours - 20

Contenu du programme d'entraînement:

- * *Principes de recherche et d'investigation des gisements*
 - méthodes de recherche
 - investigation des gisements des matières minéralogiques
 - système d'investigation de sondage et minière
- * *Documentation géologique*
 - documentation des sondages
 - documentation des ouvrages miniers
 - documentation matérielle
- * *Les principes généraux de prise d'échantillons*
 - méthodes de prise d'échantillons
 - documentation des échantillons
 - préparation des échantillons
- * *Détermination de la densité des travaux d'investigation*
 - disposition générale et particulière
- * *Calcul du stock des minéraux productifs*
 - les méthodes de calcul du stock
- * *Classification du stock*

Assurance financière prétendue des cours:

- * *Frais de voyage*
 - aller-retour Košice (Slovaquie), Nouakchott (Mauritanie) pour 1 personne
- * *Hébergement et nourriture durant le séjour en Mauritanie*
 - indemnité journalière
- * *Assurance des conférenciers et du traducteur*

- transport et logement

* *Charges financières d'une heure de cours*

- conférencier 50 USD x 30 h = 1500 USD

REMARQUE:

Pour l'assurance optimale des 3 cours demandés, (extraction et traitement du minerai de fer, la technique des travaux explosifs, Analyse et échantillonnage du minerai), nous proposons d'envoyer un groupe de cinq membres avec un traducteur en langue française. En cas de besoin, il est possible de préparer et d'établir la documentation et le matériel nécessaire.

Košice 8.4.1998

Traité par: Ing. Jana JABLONSKÁ, CSc.

Plan du programme d'entraînement instructif pour la société nationale Industrielle et Minière (SNIM) en Mauritanie

4. PROGRAMME D'ENTRAÎNEMENT AN COURS: Topographie minière

Conférencier: - Prof. Ing. Ladislav KUNÁK, CSc.

Conditions préalables de l'étendue des cours:

- durée des cours - 5 jours
- nombre total des heures de cours - 24 h
- nombre d'heures par jour - 5 h
- nombre des assistants au cours - 10

Contenu du programme d'entraînement:

- * *Les éléments de base cartographiques et topographiques des plans de mine*
 - sortes de projections
 - systèmes de coordonnées
 - méthodes de projection en levé topographique minier
- * *La technologie de mesure et de fabrication des plans de mine*
 - expression du milieu minier sur les cartes
- * *Le contenu informel des plans de mine*
 - banque de données
 - documentation de mesure pour mine
- * *Fabrication d'original des plans de mine*
 - systèmes automatiques cartographiques et topographiques
- * *Les bases de la reprographie et de la technique reproductrice en cartographie de mine*
- * *Archives, recensement et entretien de la documentation de mesure de mine*
 - échantillons des plans de mine
 - réglementation de mesure en mine

Assurance financière prétendue des cours:

- * *Frais de voyage*
 - aller-retour Košice (Slovaquie), Nouakchott (Mauritanie) pour 1 personne
- * *Hébergement et nourriture durant le séjour en Mauritanie*
 - indemnité journalière
- * *Assurance des conférenciers et du traducteur*
 - transport et logement
- * *Charges financières d'une heure de cours*
 - conférencier 50 USD x 30 h = 1500 USD

Plan du programme d'entraînement instructif pour la société nationale Industrielle et Minière (SNIM) en Mauritanie

2. PROGRAMME D'ENTRAÎNEMENT AU COURS: La technique des travaux fulminants

Conférencier: - Prof. Ing. Ondrej DOJČÁR, CSc.
(comme professeur il a exercé 3 ans /1984-1987/ en Algérie à l'École Nationale Polytechnique)

Conditions préalables de l'étendue des cours:

- durée des cours - 4 jours
- nombre total des heures de cours - 24 h
- nombre d'heures par jour - 6 h
- nombre des assistants au cours - 5

Contenu du programme d'entraînement:

- * *Les explosifs et les moyens de la technique explosive*
 - les critères de choix aux conditions données
- * *Théorie fondamentale du mécanisme d'effet de l'explosion dans un milieu rigide*
 - les facteurs principaux influençant ce processus
- * *Les méthodes de calcul des charges explosives*
- * *Projection des méthodes de travaux explosifs en cas de rupture*
 - les effets néfastes des travaux explosifs
 - les méthodes de minimisation des effets néfastes
- * *Les méthodes des creux commandés*

Assurance financière présumée des cours:

- * *Frais de voyage*
 - aller-retour Košice (Slovaquie), Nouakchott (Mauritanie) pour 1 personne
- * *Hébergement et nourriture durant le séjour en Mauritanie*
 - indemnité journalière
- * *Assurance des conférenciers et du traducteur*
 - transport et logement
- * *Charges financières d'une heure de cours*
 - conférencier 50 USD x 24 h = 1200 USD

REMARQUE:

Pour l'assurance optimale des 3 cours demandés, (extraction et traitement du minerai de fer, technique des travaux fulminants, Analyse et échantillonnage du minerai), nous proposons d'envoyer un groupe de cinq membres avec un traducteur en langue française. En cas de besoin, il est possible de préparer et d'établir la documentation et le matériel nécessaire.

Košice 8.4.1998

Traité par: Prof. Ing. Ondrej DOJČÁR, CSc.
garant de l'orientation des études
Extraction des gisements minéraux
au KDLA G

Plan du programme d'entraînement instructif pour la société nationale Industrielle et Minière (SNIM) en Mauritanie

5. PROGRAMME D'ENTRAÎNEMENT AN COURS:

Entretien des machines et de l'installation

Les conférenciers:

- Prof. Ing. Dušan MALIDŽAK, CSc.
- Prof. Ing. Ján BOROŠKA, CSc.
- Prof. Ing. Ján FABIAN, CSc.
- Ing. Josef HIRČKO

Traducteur professionnel:

- Doc. Ing. Zdeno BUBNIAK, CSc.
(Il a exercé comme attaché économique
3 ans en USA)

Conditions préalables de l'étendue des cours:

- durée des cours - 10 jours
- nombre total des heures de cours - 60 h
- nombre d'heures par jour - 6 h
- nombre des assistants au cours - 15-20

Contenu du programme d'entraînement:

- * *Definition de la maintenance*
- * *Analyse de situation de la maintenance*
 - méthode SWOT
 - analyse des charges pour l'entretien
- * *Les méthodes et les degrés de la maintenance*
 - fiabilité
 - méthodes d'entretien
 - répartition du dispositif en classe selon les méthodes d'entretien
 - le niveau de l'entretien
- * *Les systèmes d'organisation de la maintenance*
 - les types d'agrégation de la maintenance
 - les types de débitage de la maintenance
 - les sortes d'échange de la maintenance
 - le système complexe de la maintenance
 - les suppositions
 - les buts globaux
- * *Les formes d'organisation des activités de la maintenance*
 - forme d'organisation fondamentale
 - forme d'organisation non fondamentale
 - forme d'organisation intégrée
 - forme d'organisation combinée
- * *Planification et administration de la maintenance*
 - planification de la maintenance
 - administration de la maintenance
 - stratégie d'administration
 - administration opérationnelle
- * *Approvisionnement et stockage en maintenance*

- * *Optimalisation en maintenance*
 - détermination de l'étendue de la maintenance
 - fonction de critère de l'optimalisation
 - analyse d'attitude entre ses propres capacités et celles achetées
 - optimalisation des charges en maintenance
- * *Evaluation de l'efficacité de la maintenance*
 - critères de l'efficacité
 - les indicateurs de l'efficacité
 - le problème d'optimalisation
- * *Systemes d'information en maintenance*
 - les systemes diagnostiques
 - systemes d'information
- * *Les modeles de reconstruction*
 - modeles de reconstruction du dispositif
 - reconstruction des parties ratées
 - les modeles de fiabilité
- * *Réalisation de la maintenance*
 - entretien des machines pour l'extraction en plein air
 - le dispositif de transport, de chargement et de perçage
 - fabrication et achat des pièces de rechange
 - l'influence des influences externes à l'état des machines et du dispositif

Assurance financière prétendue des cours:

- * *Frais de voyage*
 - aller-retour Košice (Slovaquie), Nouakchott (Mauritanie) pour 2-4 personnes
- * *Hébergement et nourriture durant le séjour en Mauritanie*
 - indemnité journalière
- * *Assurance des conférenciers et du traducteur*
 - transport et logement
- * *Charges financières d'une heure de cours*
 - pour le conférencier 50 USD x 60 h = 3000 USD
 - pour le traducteur 50 USD x 40 h = 2000 USD

REMARQUE:

Pour l'assurance optimale des cours demandés, nous proposons d'envoyer un groupe de 2 à 4 membres avec un traducteur en langue française.

En cas de besoin, il est possible de préparer et de mettre en évidence des fascicules et le matériel nécessaire.

Košice 8.4.1998

Traité par: Prof. Ing. Dušan MALINŽAK, CSc.
 Prof. Ing. Ján FABIAN, CSc.
 Ing. Josef HIRČKO



SPOLOČNÝ PROGRAM SLOVENSKÁ REPUBLIKA – UNIDO
JOINT PROGRAMME UNIDO – SLOVAK REPUBLIC



Mr. Mohamed OULD KHOUNA
Chef du Centre de Formation
SNIM
Fax: 00 222 2 45 396

Váš list značky/zo dňa
Your ref./dated

Naša značka
Our ref.

Vybavuje/linka
Attended by/ext.

Dátum
Date

Mgr. Kalinová / 6227237 20.07.1998

Dear Sir,


With reference to our previous contacts concerning training and educational activities for SNIM, SAFA and COMECA I would like to inform you about a present situation.

New contract on cooperation between the Government of the Slovak Republic and UNIDO is under preparation. The signature is expected in September 1998 and the realization of the project is expected from February 1999.

As you have been already informed during my visit, UNIDO approved new business plan and new priorities, therefore individual educational and training projects will not be financed. At the end of May 1998 new UNIDO General Director announced termination of all joint programs and establishment of a model Investment Promotion Center for cooperating countries. This transformation is a part of a new contract and will be reflected in a new project. Based on a present stage of the contract preparation and project we do not expect a possibility to finance with allocated financial sources the educational and training activities you required.

If it is possible to use your financial sources, the realization is possible in a short time. Our possibilities will be definitely clear by the end of 1998 or in the beginning of January 1999.

With best regards,


Augustín Pullmann
JP UNIDO - SR

IMPROVEMENT OF THE QUALITY OF DEEP DRAWING STEELS

Proposal of advance for help offering to integrated steel plant HADISOLB Egypt in the range of UNIDO programme.

For the elaboration of set of measures and quality management system it is necessary to know the technical ability of production aggregates, technological part of production and quality management and control. It will be necessary consistently analyse and evaluate the present time level of production. The following topics are especially important:

1) Evaluation of technical level of pig iron and steel production.

- Preparation of pig iron (*quality of pig iron, pig iron desulphurization*),
- Preparation of scrap charge (*scrap quality, scrap classification and selection*),
- Production of steel in B.O.F. furnace (*level of steel refination and slag treatment, chemical composition of steel*),
- Tundish - secondary metallurgy (*quality of process, accuracy of additives and alloying elements charging, heat analyses*),
- Continual steel casting (*temperature and velocity control, tundish powders, secondary oxidisation, cooling system, quality of surface of produced slabs*),
- Control of slabs quality and cleaning of produced slabs.

2) Evaluation of technical level of hot rolling mill.

- Reheating of slabs in pushing type furnaces (*control of reheating temperature, time and composition of furnace atmosphere, uniformity of heating*),
- Roughing train of H.R.M. (*reduction plans, surface cleaning*),
- Finishing train of H.R.M. (*reductions, strip geometry, thermo-mechanical treatment, quality of control, rolling speeds, finishing temperatures, strip tolerances*),
- Coiling of strip (*keeping of finishing and coiling temperatures, control of strip cooling*).

3) Evaluation of technical level of cold rolling mill.

- Pickling of the strip (*strip decoiling, scale breaker, chemical composition and bath temperature, speed control, quality control of pickled surface, surface protection*),
- Cold rolling of strip (*reduction plans, rolling velocity, strip geometry, tolerances and strip thickness control, rolls preparation, rolling emulsions*),
- Strip annealing at batch furnace (*annealing advance, temperature, time, furnace atmosphere, strip surface quality control*),
- Skinpass - temper rolling of (*reduction plans, rolling emulsions, rolls preparation, micro geometry of strip surface*),
- Strip slitting and cutting and strip protection (*parameters of slitting and cutting lines, control of dimensional tolerances and surface quality, oiling machines*),
- Technical control, testing of mechanical properties and releasing of final products for shipment.

4) Evaluation of the level of quality management system

All above mentioned production aggregates are crucial for the production of steel strip for deep drawing. Besides the technical level of single production aggregates and process quality at single production aggregates it is inevitable to know and control:

- Technical documentation and its preparation,
- Level of research and development,
- Quality management and quality control systems,
- Production planning and logistics,
- Co-operation with final customer, claims.

5) Time schedule.

With the regard to the extend of steel production advance we propose following schedule:

1st stage

		Time
1.	Overall knowledge of the Hadisolb integrated Steel plant.	1 day
2.	Production of pig iron and steel.	1 day
3.	Hot rolling of strip	1 day
4.	Cold rolling of strip	1 day
5.	Production planning, logistics, technical control and releasing of finalised production.	1 day
6.	Technical organisation of production, technical documentation.	1 day
7.	Quality management system, production quality control.	1 day
8.	Preparation of preliminary technical report and technical consultations at the Hadisolb plant.	3 days
	Total - stay of two specialists	10 days
9.	Elaboration of final technical report up to two months after visit at Hadisolb	

2nd stage - study and evaluation of the technical report from Hadisolb - one month.

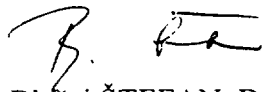
3rd stage - realization of proposed measures. Stay of one specialist at Hadisolb ca. 3 months.

Proposed specialists for 1st stage: Dipl. Ing. Blažej ŠTEFAN, DrSc. - director of Research and Testing Institute, VSŽ Ocel' s.r.o.
RNDr. Vladimír Kokarda, PhD. - head of Orders Control Dep., Quality Management Division, VSŽ Ocel' s.r.o.

Proposed specialists for 3rd stage: RNDr. Vladimír Kokarda, PhD.

Prepared by: Dipl. Ing. Blažej ŠTEFAN, DrSc.
RNDr. Vladimír Kokarda, PhD.

Date: 27.4.1998


Signed by: Dipl. Ing. Blažej ŠTEFAN, DrSc.



Mr. Adel Hussein
Director
AISU Regional Office
Fax: 00 202 337 4790

Váš list značky/zo dňa
Your ref./dated

Naša značka
Our ref.

Vybavuje/linka
Attended by/ext.

Dátum
Date

Mgr. Kalinová / 6227237 07.08.1998

Dear Mr. Hussein,

With reference to your fax dated July 29, 1998 I would like to inform you about a present situation.

Ongoing JP UNIDO - SR project will be terminated in August '98, therefore all disposable financial sources will be exhausted.

At the end of May '98 the new UNIDO Director General, Mr. Magariños, decided to stop cooperation under JP. Uniform way of cooperation – Investment Promotion Service Center – will be implemented for all countries.

A proposal of the contract with UNIDO on IPS Center was submitted to the Government of the Slovak Republic. After approval of this concept by the Government and UNIDO representatives a project proposal together with a work plan for 1999 will be prepared during 4th quarter of 1998. Establishment of the IPS Center is proposed in January '99 with a gradual start of the activities from February '99. Individual educational activities such as study tours, conferences, seminars, workshops, expert group meetings etc. will not be organized. This could only be possible based on customer order (outside of official project) and paid from other sources.

Also our partners in Mauritania were informed about this new situation (see enclosed fax) to whom an offer of wide range activities was sent in May '98.

I would like to ask you to express your opinion to our proposal for EISCO Helwan which was sent in May and we did not receive any answer so far.

Best regards

Augustin Pullmann
NPD, UNIDO

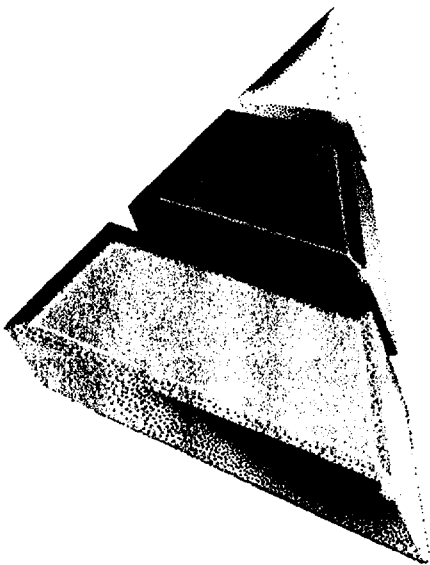
VSŽ HOLDING Inc.,

is a supranational company and the biggest manufacturer of sheet metal products in Slovakia. The share on the Slovak GNP is approximately 8-10 %.

VSŽ Holding Inc. belongs to the enterprises with the export efficiency representing approximately 20 % of the Slovak Republic foreign currency income.

VSŽ INŽINIERING Ltd.,

is a part of a supranational company VSŽ Holding Inc. The company is the second largest in the group in size, turnover and number of employees. It provides construction of investment units and development of metallurgy base within the VSŽ group since 1960. Besides these activities VSŽ Inžiniering Ltd. undertakes in the field of civil engineering, engineering, maintenance and engineering metallurgy, spare parts production for metallurgy, engineering, power engineering, chemical industry and controls and organizes machine industry in the territory of East Slovakia.

VSŽ INŽINIERING consists of following companies:**VSŽ INŽINIERING Ltd.****VSŽ MOSTÁREŇ Ltd.****VSŽ ZLIEVÁRNE Ltd.****LABSTROJ Ltd.****VSŽ UNICORN TORNALÁ Ltd.****VSŽ KOVOSTROJ Ltd.****VIHORLAT Inc.****ZEST Inc.****SANDRIK ŠTOS Inc.****FRIN Inc.****Main Activities**

- engineering activities for metallurgy, engineering and civil engineering
- erection of investment units from design to the final delivery
- productive and repair activities
- machinery production

VSŽ INŽINIERING Ltd.

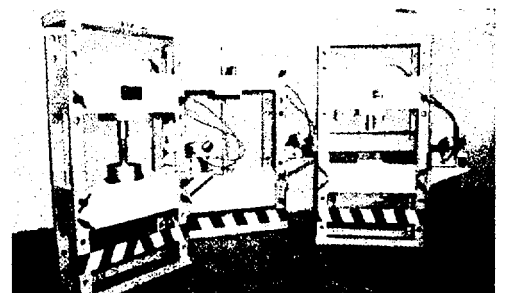
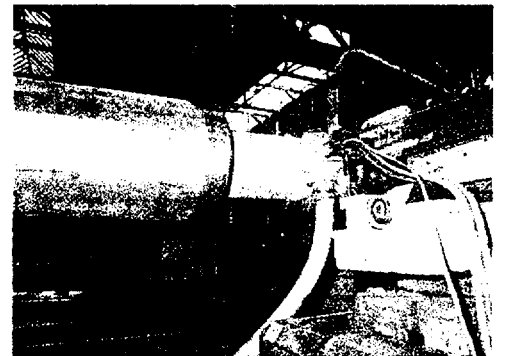
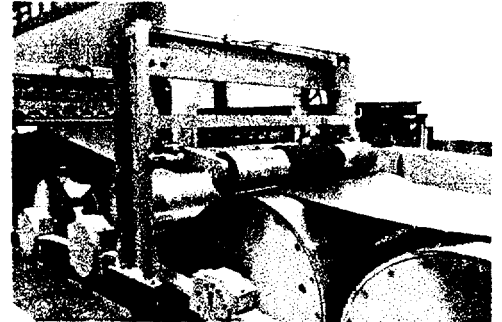
- project and delivery organization with annual turnover approximately USD 100 000 000 (1997)
- leading commercial company in the group of the VSŽ Holding Inc.

Quality of Production:

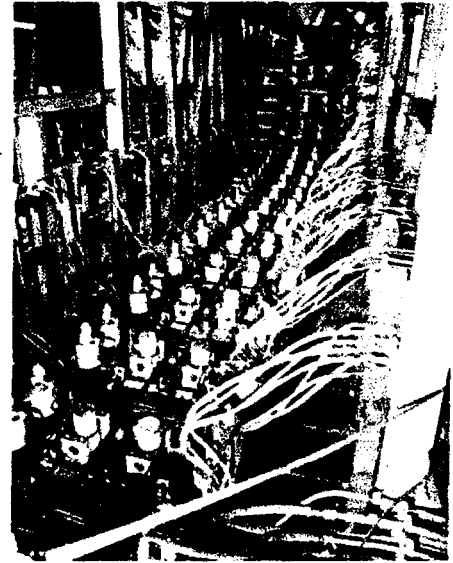
- quality control system certificate in accordance with EN ISO 9002 - SGS YARSLEY since March 3.,1995
- great welding certificate in accordance with the standard 18.800 Teil 7 Abs.6.2-SLV Munich since October 31.1996
 - * method 135, MAG; 141, TIG; 111, E
 - * type of steel: S 235 (st.37); S 355 (st.52)
stainless steel
- quality system certificate SGS in accordance with ISO 9002 for repair of electric engines rotating from power input 25 MW and for repairs of non - rotating engines, since June 12. 1997
- the State Railway Office Authorization for repairs of rotating and non- rotating engines of railway carriages, since Sept.19,1997
- Authorization of the Safety in Work Inspector Office in Košice for following activities: production, assembly, service and maintenance, expert examinations and expert test of electric appliances, May 28, 1997
- Authorization of the State Test Office Lignotesting for products Linea 93
- Authorization of the Quality Institute in Budapest for products Linea93, Linea Soft, P741-2

Main Activities:

- manufacture of machinery and equipment for metallurgy
- spare parts and units production
- presses
- repairs
- electric rotating and non - rotating machines repairs
- manufacture and repairs of fixative load magnets
- without dismantling bearings diagnostic method
- locksmith works
- metal working
- general supplier activities
- elaboration of pre project and project documentation
- delivery, completion and assembly of technologic equipment
- modernization, reconstruction and repairs



- providing of legislative preparation of erection
- construction and technologic preparation, manufacture and repair works
- development of production and service technologies
- general designer and site supervision in capital constructions in progress
- elaboration of workshop documentation
- development of cooperative production



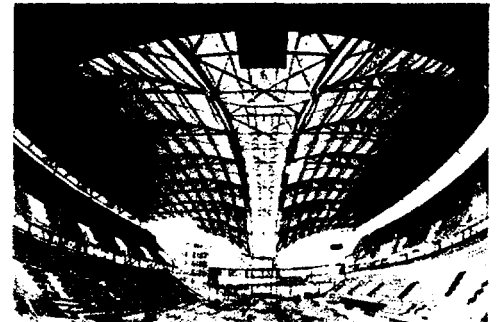
VSŽ MOSTÁREŇ Ltd.

- VSŽ Mostáreň - established in 1960.
- present production capacity of the plant approximately 20 000 t of steel structures per year
- Between 1960 -1997 VSŽ Mostáreň produced over 800 000 tons of steel structures

Quality:

ISO 9001 - 4 (SGS)

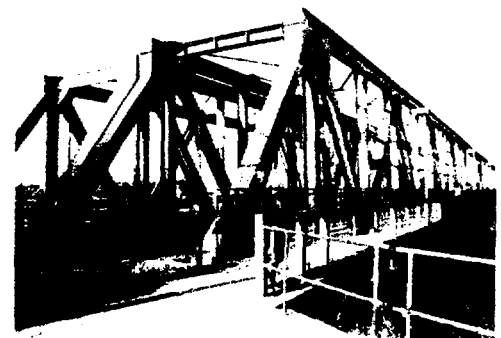
- great welding certificate, Munich SLV
- the State Railway Office Authorization certifying expert abilities for production of welded steel railway bridge constructions



Main Activities:

steel structures:

- steel structures for industrial and civil construction
- supporting steel structure of energetic complexes
- railway, road and pipe bridges
- technologic steel structure
- special steel structure



VSŽ ZLIEVÁRNE Ltd.

- production commencement - 1966
- the most modern and the biggest foundry in Slovakia

Quality:

- SGS Yarsley, Quality control system certificate in accordance with ISO 9001 since July 8, 1993

- TVFA TU, Vienna for special steel castings G-X 22 Cr Ni 17, since February 19, 1992
- Deutsche Bahn-Minden, steel castings for German railways since August 18, 1995

Main Activities:

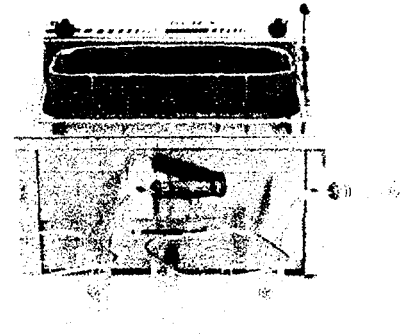
- castings from gray and nodular cast iron with weight up to approximately 12 t
- castings from carbon high and low - alloy steel
- heavy and ultra heavy castings
- centrifugal cast valves and pipes
- casting of non-ferrous metals
- wood models

**LABSTROJ Ltd., Medzilaborce**

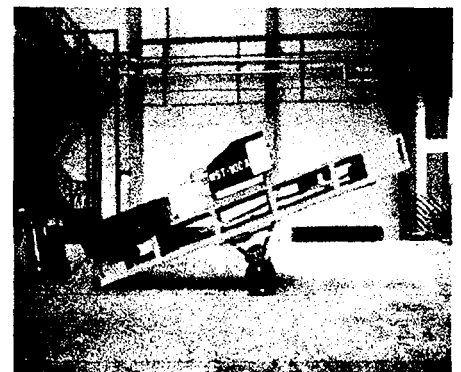
- 40 years of tradition in machinery manufacture

Quality:

- great welding certificate from SLV Munich since 1996
- quality control system certificate SGS Yarsley in accordance with ISO 9001, since 1995
- Technical Testing Office in Piešťany, Slovak Republic for: natural gas boiler
- authorization for pressure container welding since 1996

**Main Activities:**

- transporters
- metal transport means
- central heating gas boilers (to 300 kW) and solid fuel boilers (from 70 to 1100 kW)
- engines and spare parts for agriculture
- facilities for public boarding
- metal packages
- industrial works



VSŽ UNICORN TORNAĽA Ltd.

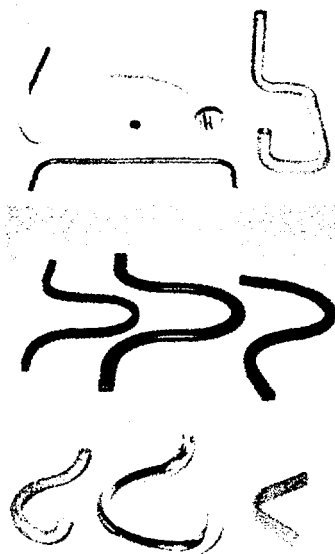
- company established in 1974

Quality:

- Lloyd's Registered Assurance - quality control system in accordance with ISO 9002 since October 28, 1992
- CE, KEMA (Holland) regarding safety in work and hygiene abidance during manufacturing since 1994.

Main Activities:

- forming machines - tube and sheet metal benders, bending rolls, table and orthogonal shears
- spare parts production
- packages



VSŽ KOVOSTROJ Ltd., Dobřiná

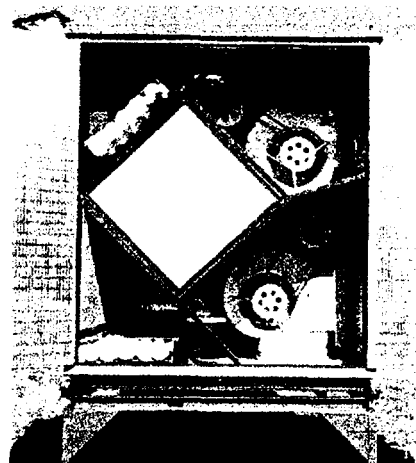
- the company was created from a small plant established in 1962

Quality:

- ISO 9002
- certificates for particular products

Main Activities:

- production of air condition units
- manufacture of bent sections made of galvanized sheets
- production of panel oil-air coolers
- production of insulated sandwich panels



VIHORLAT Inc., Snina

- production established in 1951

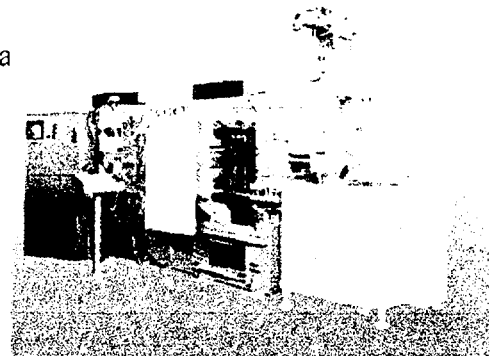
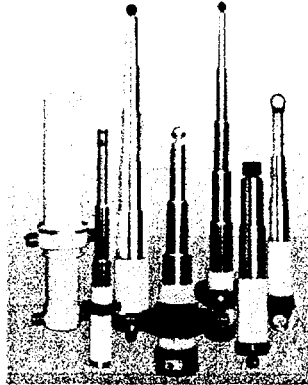
Quality:

- TÜV CERT, Quality control system certificate according to ISO 9001, since October 21, 1997
- SLV Berlin GmbH., Great welding certificate according to DIN 18 800 part 7 and related technical standards, since August 30, 95

- Ability authorization for welding training no. 021, according to EN 287-1 issued by RW TÜV Bureau Prague and VÚZ Bratislava according to STN EN 287 - 1
- RWTÜV, CE, certificate for press CHL 250.01, July 11, 1996

Main Activities:

- boilers
- pressworks and forging
- hydraulics
- special tools
- dies
- steel structures
- cranes
- presses for aluminum die casting
- industrial works

**ZEST Inc., Michalovce**

- established in 1950

Quality:

- SGS Yarsley, quality control system certificate according to ISO 9001 since November 26, 1996
- the State Department of Economy Appraisal for outstanding achievements at quality control realization in 1995
- Technical testing laboratory, certificate for:
 - hydraulic presses for die casting of thermoplastic material type CS, since July 29, 1998
 - saw sharpener with tips made from cemented carbides BSK 100, since July 29, 1998
- State Railway Office, authorization for production of certain technical press equipment, since May 6, 1998
- TÜV Bayer, authorization for welding of railway carriages according to DIN 6700-2, since July 15, 1998

Main Activities:

- machine vices
- clamping devices
- fuel tanks
- production of die casting presses for plastic
- spare parts production, cooperation etc.



SANDRIK ŠTOS Inc.

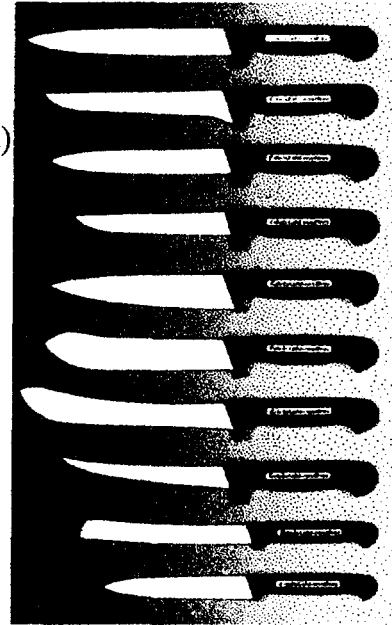
- history of knives production is dated back to 1721.

Quality:

- TÜV for small garage devices (drive on ramp 2 t, rack 2 t, rack 3 t) in Germany, since August 8, 1997
- TÜV SUD WEST - scissors lifting jack, since October 9, 1995
- Slovak Gold for kitchen knife set Diamant and Gastro, No 1495

Main Activities:

- forging and press works
- handicraft tools
- manual tools
- motor vehicle accessories
- knife ware
- metal packages

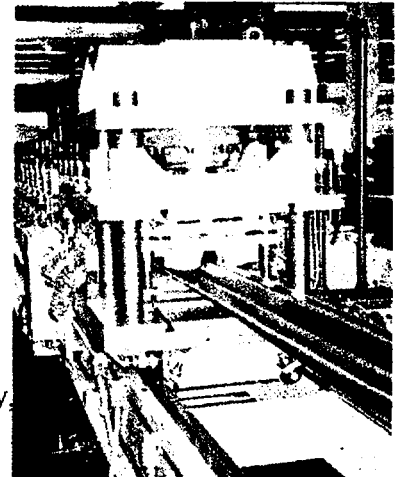


FRIN Inc., Michalovce

- established in 1995 as a joint venture by the VSŽ Holding Inc. and Metalmeccanica Fracasso, Italy

Quality:

- All products made by FRIN Inc., Medzilaborce are certified by the State Testing Office in Bratislava:
 - No. P/00445/105/1/96 - September 9, 1996
 - No. P/00141/105/1/96 - April 3, 1996
 - No. P/00637/105/1/97 - July 4, 1997
- authorization protocol of the State Department of Transportation, Mail and Telecommunication of the Slovak Republic for highway roads and bridge guardrails (type FRIN A, FRIN B, FRIN C, FRACASSO 3N), since August 1, 1997



Main Activities:

- open sections
- manufacture road guardrails and vehicle accessories

CONTACT

Address:

VSŽ INŽINIERING Ltd.

044 54 KOŠICE

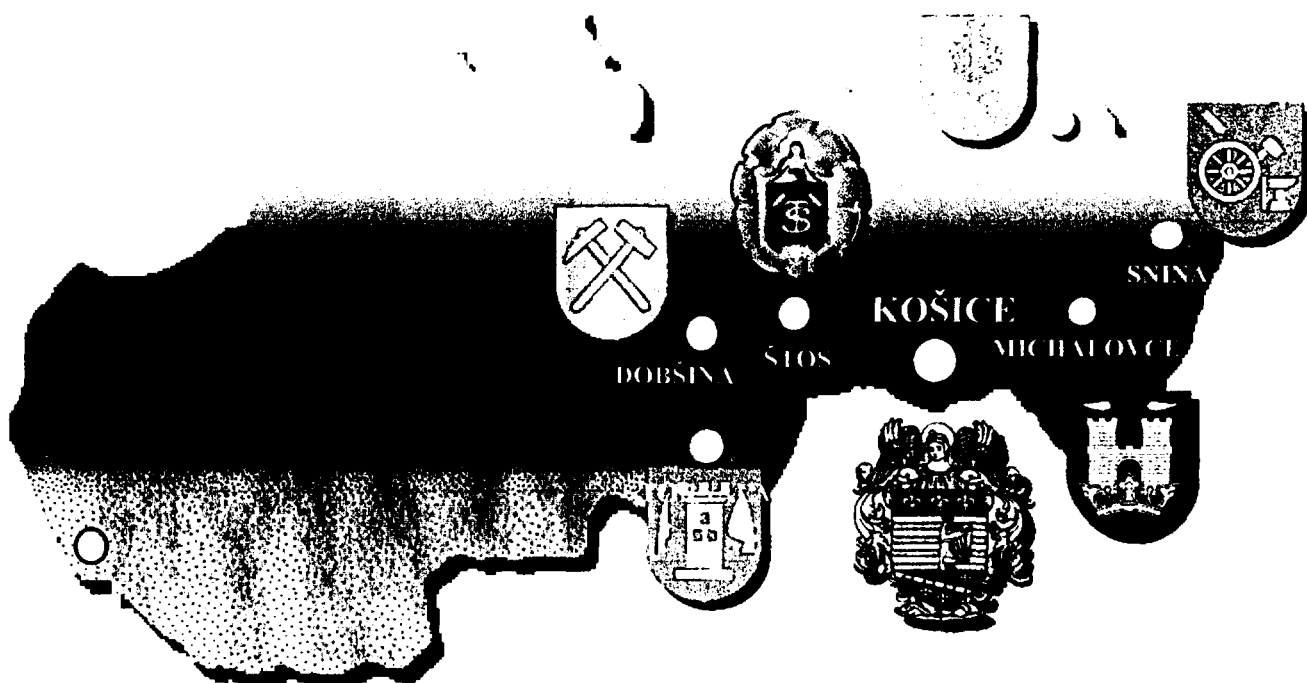
SLOVAK REPUBLIC

Tel.: 00421/95/673 4298,673 4676

Fax: 00421/95/673 0396

E-mail: inz_market@vsz.sk

Designed by: MARKETING DEPT.DGV©



JOINT PROGRAMME UNIDO – SLOVAK REPUBLIC

Network of cooperating Slovak companies and institutions

<i>Sector</i>		<i>Company/Institution</i>	
<u>GEOLOGY and MINES</u>	1	TECHNICKÁ UNIVERZITA, Košice, Fakulta BERG	
	2	INGEO, Žilina	
<u>METALLURGY</u>	3	VSŽ HOLDING, Košice	
	4	VSŽ OCEL, Košice	
	5	VSŽ OCEL – VSÚ, Košice	
	6	OFZ, Istebné	
	7	OFZ, Široká	
	8	SLOVALCO, Žiar nad Hronom	
	9	KOVOHUTY, Krompachy	
	10	METALSINT, Dolný Kubín	
	<u>ENGINEERING</u>	11	VSŽ INŽINIERING, Košice
		12	WUSAM, Zvolen
13		ZŤS TEES MARTINSKÉ STROJÁRNE, Martin	
14		VSS, Košice	
15		PEVIZ, Nové Mesto nad Váhom	
16		IDOS, Slovenská Ľupča	
17		VZT VZDUCHOTECHNIKA, Nové Mesto nad Váhom	
18		SLOVPUMP, Závadka nad Hronom	
<u>REFRACTORY MATERIALS</u>	19	VSŽ KERAMIKA, Košice	
	20	ŽIAROMAT, Kalinovo	
	21	SMZ, Jelšava	
	22	SMZ, Lovinobaňa	
<u>WATER MANAGEMENT</u>	23	VÚVH, Bratislava	
	24	PBaH, Košice	
	25	VVaK, Košice	
	26	VODNÉ DIELO, Žilina	
<u>OTHERS</u>	27	SOPK, Košice	
	28	PROCESNÁ AUTOMATIZÁCIA VSŽ, Košice	
	29	VSŽ KONZULT, Košice	

JOINT PROGRAMME UNIDO – SLOVAK REPUBLIC

Network of cooperating Slovak companies and institutions

Company/Institution	Main products/activities
<u>GEOLOGY and MINES</u>	
1	<p>TECHNICKÁ UNIVERZITA, Fakulta BERG, Košice</p> <p>Faculty of Mining, Ecology, Process Control and Geotechnology, Technical University, Košice. The BERG Faculty of TU Košice - the only Faculty dealing with mining in Slovakia – is a successor of the Mining Academy in Banská Štiavnica founded in 1762. The BERG Faculty was established in Košice in 1952. The educational and research activities include the entire complex of mining sciences starting with geological research and methods of mineral deposits exploration and continuing through mining, associated surveying techniques, mineral processing technologies, as well as ecology, management and economics.</p> <p>Since its beginning 2 744 mining engineers have graduated the BERG Faculty, including students from Afghanistan, Algeria, Columbia, Cuba, Chile, Gabon, Greece, India, Korea, Laos, Madagascar, Mongolia, Nigeria, Syria and Vietnam. Several members of the Faculty also gave lessons at universities of Algeria, Cuba, Chile, Germany, Great Britain, Mexico, Tunis, Spain, Uganda and Zambia. For foreign students the Faculty teaches in English, French or German. The Faculty has 15 full professors, 26 associated professors, 41 senior lecturers and lecturers and 28 scientists and research workers.</p> <p>The BERG Faculty at present provides 7 basic study branches subdivided into 15 specializations:</p> <ul style="list-style-type: none"> - Geoprospecting - Mining, utilization and protection of earth resources - Underground construction engineering and geotechnics - Mining mechanization, transport and deep hole drilling - Ecotechnology and mineralogy - Surveying, geodesy and cartography - Process control of raw material extraction and processing.

2	INGEO, Žilina	<p>INGEO Žilina, founded in 1952, represents today a versatile, professionally and technically well equipped organization with a good reputation in the field of applied geology and construction engineering, namely in hydrogeology, hydrochemistry, engineering geology, geotechnics and environmental protection. Company consists of five divisions with about 350 employees including more than 100 professionals.</p> <p>INGEO Žilina, joint stock company, represents at present time an important assign of geological companies which were established in fifties and were its direct predecessors. The wide range of offered services with rich tradition are the attributes documenting the amount of successfully solved tasks in following fields:</p> <ul style="list-style-type: none"> - hydrogeological exploration, searching for the new sources of groundwater, mineral and thermal waters, protection zones for water sources - engineering geological exploration for construction objects and buildings, roads, railroads, motorway and tunnel constructions, correction of land slide areas - special construction works for maintenance and stabilization of foundations of new buildings as well as historical objects, sealing walls - laboratory tests providing physical and mechanical properties of rocks and soils, grouting mixtures, in situ and ex situ methods of geotechnical tests, laboratory analysis of water and waste water - liquidation of old ecological burden, elimination of dangerous waste, solution waste dump systems. <p>INGEO Žilina chemical, soil and rock mechanics laboratories, divers types of drilling rigs, and other equipment and machinery enable to carry out complete projects of the regional character.</p> <p>INGEO Žilina successfully collaborated on projects with other organizations in many foreign countries and its individual experts worked in more than 20 countries in Africa, Near East, Central and South America as well as in East Asia.</p>
---	---------------	---

METALLURGY

3	VSŽ HOLDING, Košice	<p><u>VSŽ, a. s. Košice</u> (East Slovak Steelworks) was established in November 1990, by transforming the existing state owned enterprise into the first state owned joint stock company in the steel industry in Czechoslovakia. Following the sale of shares, owned by the National Property Fund in 1994-1995 to companies controlled by VSŽ management and employees, VSŽ became an independent public company in which the Slovak State holds no interest.</p> <p>In international terms, VSŽ is a medium-size steel producer with a wide variety of flat hot and cold rolled steel products. A part of VSŽ's production is utilized by those of its subsidiaries engaged in the provision of engineering products: spiral-welded pipes, angled sections, radiators, steel structures, corrugated profiles, foundry products and other. VSŽ products have earned international recognition as evidenced by the international certificates obtained from RV TUV, SGS, API and Lloyd and by the international quality certificates ISO 9000 and ISO 9001, ISO 14001, which were issued in respect of the entire production process.</p> <p>In 1994 the company was granted membership of the International Iron and Steel Institute (IISI). In 1995 VSŽ became the first steel producer from Central and Eastern Europe to be granted affiliate membership of EUROFER. International recognition of VSŽ specialists was evident in VSŽ admittance, the first of all firms from the former Eastern Block, into international association ULSAB (production of ultra-light steel bodies for private cars).</p> <p>By the end of 1997, in response to the rapidly changing demands of the modern business environment, the Executive Board began to draw up plans for change in the organisational and legal structure of the parent company, including a change of name to <u>VSŽ HOLDING</u>. VSŽ HOLDING will act as an investment holding company with shares in 7 operating companies, the activities of which will be determined by industry sector (metallurgy, machinery production, ceramics, energy, trading, services and finance).</p> <p>VSŽ is building a multi-national company. At present it owns rolling mill Finow in Germany and a Steel plant in Diosgyor, Hungary. Joint ventures with US STEEL and Rautaruukki were established in Košice.</p> <p>At present VSŽ consists of 99 companies where in 35 companies VSŽ interest is 100%, in 33 companies more than 50% and in 31 companies more than 20%.</p> <p>Average number of employees is over 25 000.</p>
---	---------------------	---

4	VSŽ OCEL, Košice	<p>VSŽ OCEL (VSŽ Steel) Košice, a fully integrated metallurgical company with a closed production cycle, is the VSŽ main operating subsidiary. VSŽ Ocel' produces coke, pig iron, steel, conticast slabs, hot and cold rolled products, metallurgical by-products and energy, as well as participating in research and development projects. Number of employees is over 10000.</p> <p>In 1997 VSŽ negotiations with Rautaruuki Finland led to the establishing of a joint-venture company, Rannila Košice, which will produce plastic-coated sheets. In early 1998, a joint-venture agreement was concluded with the US Steel Group, leading to the establishing of VSŽ US Steel, which will produce tin plate sheets.</p> <p>VSŽ Ocel' major products:</p> <table border="0"> <tr><td>- wet coke</td><td>1,729.8 kt</td></tr> <tr><td>- pig iron</td><td>3,072.0 kt</td></tr> <tr><td>- converter steel</td><td>3,572.6 kt</td></tr> <tr><td>- conticast slabs</td><td>3,553.4 kt</td></tr> <tr><td>- hot rolled coils, strips and sheets</td><td>1,415.9 kt</td></tr> <tr><td>- cold rolled coils, strips and sheets</td><td>1,180.8 kt</td></tr> <tr><td>- full hard sheets</td><td>70.6 kt</td></tr> <tr><td>- tinsplate sheets</td><td>125.9 kt</td></tr> <tr><td>- hot dip galvanized sheets</td><td>283.4 kt</td></tr> <tr><td>- dynamo sheets</td><td>80.4 kt</td></tr> </table> <p>VSŽ Ocel' obtained the following certificates: EN ISO 9001, ISO 14001, API Spec Q1.</p> <p>Sales of flat rolled products by geographical market:</p> <table border="0"> <tr><td>- EU and EFTA members</td><td>28.8 %</td></tr> <tr><td>- Slovak Republic</td><td>21.2 %</td></tr> <tr><td>- Czech Republic</td><td>15.3 %</td></tr> <tr><td>- Other CEFTA members</td><td>12.2 %</td></tr> <tr><td>- Other East European countries</td><td>8.2 %</td></tr> <tr><td>- USA</td><td>6.2 %</td></tr> <tr><td>- Others</td><td>8.1 %</td></tr> </table>	- wet coke	1,729.8 kt	- pig iron	3,072.0 kt	- converter steel	3,572.6 kt	- conticast slabs	3,553.4 kt	- hot rolled coils, strips and sheets	1,415.9 kt	- cold rolled coils, strips and sheets	1,180.8 kt	- full hard sheets	70.6 kt	- tinsplate sheets	125.9 kt	- hot dip galvanized sheets	283.4 kt	- dynamo sheets	80.4 kt	- EU and EFTA members	28.8 %	- Slovak Republic	21.2 %	- Czech Republic	15.3 %	- Other CEFTA members	12.2 %	- Other East European countries	8.2 %	- USA	6.2 %	- Others	8.1 %
- wet coke	1,729.8 kt																																			
- pig iron	3,072.0 kt																																			
- converter steel	3,572.6 kt																																			
- conticast slabs	3,553.4 kt																																			
- hot rolled coils, strips and sheets	1,415.9 kt																																			
- cold rolled coils, strips and sheets	1,180.8 kt																																			
- full hard sheets	70.6 kt																																			
- tinsplate sheets	125.9 kt																																			
- hot dip galvanized sheets	283.4 kt																																			
- dynamo sheets	80.4 kt																																			
- EU and EFTA members	28.8 %																																			
- Slovak Republic	21.2 %																																			
- Czech Republic	15.3 %																																			
- Other CEFTA members	12.2 %																																			
- Other East European countries	8.2 %																																			
- USA	6.2 %																																			
- Others	8.1 %																																			

5	VSŽ OCEL – VSÚ, Košice	<p>VSÚ – Výskumný a skúšobný ústav (Research and Testing Institute), belonging to VSŽ Ocel' company, is directed to the research and development of new metallurgical products, higher technical parameter grades of steel, manufacturing technologies, development of special instruments and devices, to the improvement of product quality, reduction of energy and material demands of manufacturing, environmental issues, technical advisory services, expertise and prognoses.</p> <p>VSÚ provides laboratory and testing activities in the field of chemistry, mechanical and physical tests of materials, metallographical structure, substructure and chemical microanalyses.</p> <p>VSÚ consists of 4 departments with about 320 employees, of which 116 university graduates and 21 research or academic ranks.</p>
6 7	OFZ Istebné OFZ Široká	<p>OFZ – Oravské Ferozliatinárske Závody, (Orava Ferroalloy Works) is a joint stock company. The OFZ consists of two production plants – Istebné and Široká - both located in north-west part of Slovakia. Total number of employees is over 2000.</p> <p>In <u>Istebné</u> plant the following ferroalloys can be manufactured in 14 electric furnaces with the total transformer capacity of 97 MVA: FeSi, CaSi, SiCr, FeCr, FeW, SiZr and FeTiAlSi.</p> <p>The noble alloys as FeMo, FeTi and FeW can be manufactured by the silicothermic and aluminothermic process in the detached <u>Široká</u> plant. Seven electric and arc furnaces, with the total transformer capacity of 126 MVA produce FeMn, SiMn and FeSi. The total production capacity is close to 200 000 tpy.</p> <p>Foreign market: Austria, Czech Republic, Germany, Great Britain, Italy, Japan, Poland, Slovenia, Sweden, etc.</p>
8	SLOVALCO, Žiar nad Hronom	<p>Slovalco, a. s., Žiar nad Hronom (Alumina Smelter) is a joint stock company located in the Middle Slovakia. Its production is based on a technology of Norway's Hydro Aluminum. Slovalco is a joint-venture of ZSNP Žiar nad Hronom (Slovakia), EBRD (UK) and Hydro Aluminium (Norway). Production capacity of aluminium and carbonaceous materials is 132 000 t/y. Company intends to concentrate its production to premium products consisting mainly of: extrusion billets (100 000 t/y; 3x35 t gas heated holding furnaces; 2x vertical casting machines; 2x In/Line filters; 7x mould tables; 1x homogenising plant.</p> <p>Number of employees is about 600.</p> <p>Foreign market: Austria, France, Germany, Italy, Netherlands, Poland, Yugoslavia.</p>

9	KOVOHUTY, Krompachy	<p>Kovohuty Krompachy, a. s. (Copper smelter) is a joint stock company located in Eastern Slovakia. The ore containing iron and non-ferrous metals has been extracted and processed in the surrounding region for almost 700 years. The copper has been produced since the 2nd half of the 19th century. This production was interrupted during the 2nd World War and renewed again in 1951. Subsequently Kovohuty has become the main regional producer and supplier of high purity copper cathodes. In 1993 it moved to a further development of its production with the purchase of continual casting and rolling line for the production of copper wire, the basic material for cable factories. Number of employees is over 900.</p> <p>The high purity copper is produced in three ways: from copper ore concentrates, refined materials and from scrap. The main final products of the company are as follows:</p> <ul style="list-style-type: none"> - refined and electrolytic copper - copper wires (diameter 8 mm) - copper cathodes - copper powder - granulated brass powder - sulphuric acid and salts and non-ferrous metals. <p>Foreign market: Austria, Czech Republic, France, Germany, Hungary, Italy, Poland, Russia, Spain, Switzerland.</p>
10	METALSINT, Dolný Kubin	<p>Metalsint Dolný Kubin, (Powder Metallurgy Plant) is a joint stock company located in North West part of Slovakia. Its main activity is production and sales of powder products made from ferrous and non-ferrous metals. Number of employees is over 200.</p> <p>Metalsint produces and delivers:</p> <ul style="list-style-type: none"> - iron form compacted parts - bronze bearings and bronze compacted parts - iron bearings - filters. <p>Foreign market: Czech Republic, England, Germany, Netherlands.</p>

ENGINEERING

11	VSŽ INŽINIERING, s r.o., Košice	<p>VSŽ INŽINIERING is a subsidiary of VSŽ HOLDING, controlling those plants involved in technical development of manufacturing technology, modernization and reconstruction of production equipment, capital investment for the metallurgical industry, in repair and maintenance of technical installations and the production of steel-girded structures and foundry castings.</p> <p>Main products/activities:</p> <ul style="list-style-type: none">- engineering activities in capital investment for metallurgy, engineering industry and civil engineering- turn-key investment projects (from feasibility studies to commissioning)- geodetic surveying- supply and warehousing- manufacturing, installation and maintenance of measuring and control instruments- design, manufacturing, installation and maintenance of electrical devices- production of process control equipment- production of low-voltage distributors- electrical mounting, cabling- revision of electric equipment up to 1000V and lightning rods- girder structures- cranes- castings- machining of metals, milling, turning- tools and spare parts- forming machines- repair of machine tools and forming machines- boilers- containers, transport equipment- maintenance and repair of computers and data processing equipment- software services- fine mechanics- etc.
----	---------------------------------	---

12	WUSAM, Zvolen	<p>WUSAM (Research and Development Institute of Machines and Mechanisms), joint stock company located in Zvolen, deals with development, testing and production in engineering industry. Number of employees is about 200.</p> <p>Main activities in the field of research and development:</p> <ul style="list-style-type: none"> - construction, earth moving and road building machines - agricultural machinery - municipal multipurpose vehicles - single purpose machines and mechanisms - nuclear waste handling machines and equipment - axles, gearboxes, converters. <p>Services provided by accredited test laboratories:</p> <ul style="list-style-type: none"> - laboratory of electric measurements - laboratory of reliability tests - laboratory of gear tests - laboratory of mobile working machines tests. <p>Manufacture of:</p> <ul style="list-style-type: none"> - functional models and prototypes - single purpose machines - mechanization devices - made-to-order production (separating, forming, machining, welding, brazing, soldering, assembling, finishing).
13	ZŤS TEES Martinské strojárne, Martin	<p>ZŤS TEES Martinské Strojárne (Engineering Works) is a joint stock company, subsidiary of ZŤS TEES Martin, which was established in 1949. Now it is a part of DMD Holding Trenčín. The present production programme involves the agricultural tractors, bulldozers and diesel engines. With 2300 employees it belongs to the biggest engineering companies in Slovakia.</p> <p>Main products/activities:</p> <ul style="list-style-type: none"> - agricultural tractors and forestry machines of different models and outputs - machines for earthwork (dozers, dumpers, loaders) - diesel engines Lombardini. <p>Foreign market: Belarus, Czech Republic, Poland, Russia, Ukraine.</p>

14	VSS, Košice	<p>VSS Košice (East Slovak Engineering Works) is a company with over 110-years tradition in mechanical engineering production. Number of employees over 900.</p> <p>Main products/activities:</p> <ul style="list-style-type: none"> - tank trucks and suction tank trucks - truck mixers for concrete - recovery vehicles and bridge vehicles - eccentric presses - automatic cutting lines - stationary gear boxes (0.5 – 1600 kW). <p>Quality certification ISO 9001.</p> <p>Foreign export: Austria, Canada, Czech Republic, Denmark, India, Kuwait, Pakistan, United Arab Emirates.</p>
15	PEVIZ, Nové Mesto nad Váhom	<p>PEVIZ is a private engineering company with a long tradition. Number of employees is about 130.</p> <p>Main products:</p> <ul style="list-style-type: none"> - loading/collecting wagons of various capacity for harvesting grass, hay and straw, suitable especially in mountain areas - general-purpose semi-trailers for tractors (one-sided, two-sided and three-sided tippers) - universal dung scatter - vacuum tanks/shipping containers for liquid waste and manure, cesspoolage emptier - belt irrigator. <p>Foreign market: Austria, Germany, Netherlands.</p>
16	IDOS, Slovenská Ľupča	<p>IDOS Slovenská Ľupča is an engineering company located in the Middle Slovakia. Number of employees is about 60.</p> <p>Main products:</p> <ul style="list-style-type: none"> - multipurpose tool carrier (suitable also for hilly areas) - special attachments for tool carrier (rotary scythe, drum scythe, cutter-bar, turning and dozing machine, fork with holder, blade, sharpener, washing equipment, watering equipment, manure spreader) - multipurpose prefabricated and portable units (sanitary rooms, office rooms, habitable rooms) - technological containers.

17	VZT VZDUCHOTECHNIKA, Nové Mesto nad Váhom	<p>VZT Vzduchotechnika is a joint stock company located in Nové Mesto nad Váhom that deals with design, development, manufacturing, installation and maintenance of air conditioning units and drying chambers. Number of employees is about 1200.</p> <p>Main products/activities:</p> <ul style="list-style-type: none"> - drying chambers/stoves for milk, vegetables and fruits - smoking chambers - drying chambers for wood, paper and pulp - air conditioners and fans - advisory, consulting and testing services. <p>Quality control system according to ISO 9001.</p> <p>Main application fields:</p> <ul style="list-style-type: none"> - industrial buildings, laboratories, offices, schools, shops, hospitals, computer centers, etc. - agriculture and food industry - chemical and pharmaceutical industry - wood processing industry. <p>Foreign market: Austria, Belarus, Czech Republic, France, Germany, Hungary, Latvia, Poland, Russia, Ukraine.</p>
18	SLOVPUMP, Závadka nad Hronom	<p>SLOVPUMP Závadka nad Hronom is a joint stock company located in the Middle Slovakia with number of employees over 300.</p> <p>Main products:</p> <ul style="list-style-type: none"> - centrifugal, horizontal and vertical, volute-type pumps - liquid ring vacuum pumps and air compressors. <p>Application fields:</p> <p>water supply, sludge sucking, agriculture, energy production, oils, extracting mining industry, gasses, abrasive materials, chemical industry, petrochemical industry, ship building, civil engineering, fire protection, paper, paste mixtures, food, sugar factory, drinks, dairy, biotechnology, general industry.</p> <p>Foreign market: Angola, Austria, Bulgaria, Czech Republic, Germany, Ecuador, Egypt, Estonia, Guinea, Hungary, Indonesia, Iraq, Italy, Jordan, Kuwait, Latvia, Lithuania, Morocco, Poland, Russia, Saudi Arabia, Sudan, Sweden, Syria, Thailand, Turkey, United Arab Emirates, Yugoslavia, Zimbabwe.</p>

REFRACTORY MATERIALS

19	VSŽ KERAMIKA, Košice	<p>VSŽ KERAMIKA Košice belonging to VSŽ as one of major daughter companies, ranks among leading ceramics and building materials manufacturers within Slovakia. Number of employees is over 800.</p> <p>Company production covers:</p> <ul style="list-style-type: none"> - fire clay bricks - fire resistant concrete - high-alumina building materials containing Al₂O₃ up to 100 % - grainy materials for repairs - ceramic plates for sliding gates - resin-bound, non-burnt building material on magnesite-carbon basis - dolomitic sands - limestone and quicklime - concrete paving blocks. <p>Besides, the company produces construction elements, lime, limestone, concrete pavement, decorative fire-clay and fire-places. VSŽ KERAMIKA is one of the companies in Slovakia to be conferred the quality certificate ISO 9001.</p> <p>Foreign market: Austria, Czech Republic, Finland, Greece, Hungary, Russia, Slovenia, Turkey.</p>
20	ŽIAROMAT, Kalinovo	<p>ŽIAROMAT Kalinovo, joint stock company, is one of traditional manufacturers (factory was founded in 1890) and suppliers of wide assortment of high quality fire resistant products:</p> <ul style="list-style-type: none"> - moulded fireclay building materials - granular materials for fireclay and ganister mortar - mixtures and panels of fire resistant concrete - throwing, ramming and clay materials - fire resistant cements - magnesite licks for animals. <p>Number of employees is about 300.</p> <p>Foreign market: Austria, Czech Republic, Denmark, Hungary, Russia.</p>

21	SMZ, Jelšava	<p>Slovenské Magnezitové Závody (Slovak Magnesite Works) Jelšava is a joint stock company located in south part of Middle Slovakia. The Jelšava region is the crucial magnesite deposit area within Slovakia. The industrial application of the Slovak magnesite dates back to 1886. Company's long-time tradition, orientation to quality and close cooperation with customers make it possible to be present in market in Europe, Asia, Africa and America. Number of employees is about 1500.</p> <p>Applied technology:</p> <ul style="list-style-type: none"> - selective extraction - dressing by heavy liquid suspensions - firing in rotary and shaft kilns - magnetic separation - granulometric dressing. <p>Quality control system in accordance with ISO 9002.</p> <p>Main products/services:</p> <ul style="list-style-type: none"> - brick-making magnesite - steel-making magnesite - products for agriculture - monolithic mass - refractory material - gunning material - sand and raw magnesite. <p>Foreign market: Czech Republic, England, France, Germany, Hungary, India, Poland, Romania, Slovenia, South Africa, Spain, Ukraine, USA, Venezuela.</p>
22	SMZ a.s. Lovinobaňa	<p>Slovenské Magnezitové Závody a.s. Lovinobaňa (Slovak Magnesite Works) ranks second among basic building material manufacturers in Slovakia. With its production of special kinds of magnesite-carbon building materials and masses for repairs it is one of major refractory material manufacturers in Slovakia. The company produces ramming and gun mixes, burnt and chemically-bound magnesite and magnesite-crome building materials.</p> <p>Number of employees is over 300.</p> <p>Foreign market: Belgium, Croatia, France.</p>

WATER MANAGEMENT

23	VÚVH, Bratislava	<p>VÚVH - Výskumný Ústav Vodného Hospodárstva (Water Research Institute) Bratislava is a leading workplace for water management development in Slovak Republic. Number of employees is about 270. Institute consists of:</p> <ul style="list-style-type: none"> - department of hydrology and hydraulics - department of water management development - department of water quality and water treatment technology - department of hydro-analytical laboratories - national reference laboratory for water sector. <p>Main activities of Institute:</p> <ul style="list-style-type: none"> - study of water legislation and the state administration water management practices - analysis of the impact of economic policies and the level of techniques and technology on the optimum utilization and protection of water resources - assessment of water resources - prognosis of water demand and development as well as measures to ensure them - specification of water resource protection and associated legislation - drawing up of water resource development maps - initial loading and continuous updating of databases on water management and associated environmental systems - quantitative and qualitative water management balances of the regions - balance studies of produced waste water volumes with regard to ecology - emergency regulations - determination of minimum balance flow rates - adjustment proposals for run-off conditions and flood control measures - technical-economic estimation of hydropower utilization and waterways development - utilization of geographic information systems with remote data collection. <p>International activities: Argentina, Austria, Brazil, Cambodia, Hungary, Mexico, Netherlands, Pakistan, Romania, South Africa.</p>
----	------------------	--

24	PBaH, Košice	<p>PBaH - Povodie Bodrogu a Hornádu (River Basin Bodrog and Hornád Authority) Košice. Basin authority carry out the following activities:</p> <ul style="list-style-type: none"> - administration, operation and maintenance of watercourses, waterworks and related equipment - development of state assets in their management - supply of surface water to all sectors and sub-sectors, including establishment of new sources - protection against harmful effects of water - monitoring the quality of surface and irrigation water, water protection measures including emergencies caused by quality falling below thresholds - creation of conditions for water transport and for utilization of the hydro power potential - administration, operation, maintenance, repair, reconstruction and modernization of state owned irrigation and drainage systems in their management.
25	VVaK, Košice	<p>VVaK – Východoslovenské Vodárne a Kanalizácie (East Slovak Water Supply and Sewerages) Košice is a state owned enterprise. In the area of Eastern Slovakia it provides:</p> <ul style="list-style-type: none"> - planned overall development of drinking water supply, drainage and sewage water purification - treatment and supply of drinking water for inhabitants, industry and agriculture - drainage system for cities, villages and sewage water purification - new water sources identification - water sources protection - investment activities in water works for medical purposes - water work design - laboratory water tests (chemical, microbiological, biological) - expert and advisory services.
26	VODNÉ DIELO, Žilina	<p>Vodné Dielo (Water Works) Žilina is a joint stock company. Main activities of company:</p> <ul style="list-style-type: none"> - research and development of water works for hydro-power purposes - engineering activities in preparation, realization and operation of water works with regard to their power utilization - advisory and mediating activities in preparation and realization of water works with regard to their power utilization - arrangements of preparatory stage, financing, realization and operation of water works Žilina. <p>Water works Žilina consists of:</p> <ul style="list-style-type: none"> - water reservoir (volume of 17.9 mil. m³) - hydro-power plant (2x Kaplan turbines 31 MW output each, 173 GWh per year).

OTHERS

27	SOPK, Košice	<p>Slovenská Obchodná a Priemyselná Komora (Slovak Chamber of Commerce and Industry) Košice.</p> <p>Activities and services:</p> <ul style="list-style-type: none"> - cooperation with commercial and industrial chambers abroad - consulting on legal, financial and customs issues - customs and certification services - library and information services - educational activities - publication activities - facilitation in property disputes in international trade of domestic subjects at the Court of Arbitration of Slovak Chamber of Commerce and Industry in Bratislava - promotion of members of Slovak Chamber of Commerce and Industry through the network of the International Chamber of Commerce in Paris and other information media in cooperation with chambers of commerce and industry abroad and branch offices of the World Trade Center - mediation and publication on business opportunities, offers and other business information for foreign and domestic companies - presentation and representation of members of Chamber at domestic and foreign exhibitions - cooperation with embassies of the Slovak Republic and their commercial sections.
28	PROCESNÁ AUTOMATIZÁCIA VSŽ, Košice	<p>Procesná Automatizácia VSŽ Košice (Process Automation) belongs to VSŽ group companies. Company was incorporated in 1992 based on former process automation department of VSŽ. The main activities of the company are focused on analysis, design, development and implementation of computerized process control systems especially in metallurgical industry.</p> <p>Main application fields:</p> <ul style="list-style-type: none"> - blast furnaces - converter steel making shops - continuous casting - hot and cold rolling mills. <p>Services are provided including supply of hardware, software and maintenance activities. Implementations abroad: Austria, Belgium, England, Germany, Hungary, Poland.</p>

29	VSŽ KONZULT, Košice	<p>VSŽ KONZULT is a subsidiary of VSŽ Holding with a specific status and mission within the VSŽ group companies. Number of employees about 300.</p> <p>Main activities and services:</p> <ul style="list-style-type: none"> - management consulting services - consulting, advisory and expertise - patent library - management information systems - marketing research - promotion services - publication - estate agency - commercial and service agency - education and training - translation and interpretation. <p>One of the activities realized under VSŽ KONZULT was <u>Joint Programme UNIDO – Slovak Republic</u> based on contract with UNIDO.</p>
----	---------------------	--

JOINT PROGRAMME

UNIDO – SLOVAK REPUBLIC

BRIEF INFORMATION

Košice 1998

Brief information on history of cooperation with UNIDO

The cooperation between UNIDO and Slovak Republic is based on the Memorandum of Understanding, signed on January 20, 1994 and the follow-up decision of the Slovak Government, dated 21 February 1995, regarding the establishment of programme/center for cooperation with UNIDO in metallic and non-metallic industries.

The UNIDO – Slovak Republic Joint Programme is established within the VSŽ Košice (East Slovak Steelworks Group) based on the metallurgical and engineering competence of the Group and the experience in training and technical cooperation with the developing countries of various regions. The main activities of JP-MI are focused on human resource development, technical cooperation, transfer of know-how and technology mainly in metallurgy, engineering, mining and other basic industries in the developing countries.

Companies of VSŽ Košice participated effectively and gained experience in UNDP/UNIDO projects in former Czechoslovakia, e.g.:

- Application of Modern Maintenance System in the Iron and Steel Industry (DP/CZE/77/005)
- Preparatory assistance in Establishing Consultancy and Training Center on Modern Maintenance and Production Control System in Metallurgical Industries (DP/CZE/80/001)
- National Technical Consultancy and Training Center (NTCTC) in Basic Industries (DP/CZE/82/006)
- VSŽ Košice acted as one of the four founding companies contributing to the establishment of NTCTC which was the nucleus for launching of the UNIDO-Czechoslovak Joint Programme for Cooperation in Metallic Industries in ČSFR, in 1987.
- During 1987-1992 the Slovak companies lead by VSŽ Košice actively contributed to the UNIDO-ČSFR JP MI successful operations through fielding, fellowships, workshops, group training programmes, on-the-job training, study tours, etc.
- VSŽ Košice experts provided technical assistance in the project DP/IND/85/002 „Introduction of Computer Managed Maintenance System in Steel Authority of India Ltd.” in 1987-1989, involving over 50 m/m in-field services. More than 60 managers and specialists from India were trained in VSŽ.

VSŽ a. s., Košice, as a host and implementing agency of UNIDO project UC/UT/INT/95/162, realized in 1996 several activities and outputs, e.g.:

- 30 specialists from 11 developing countries were trained in maintenance systems and in management information systems through the organization of 2 workshops:
 - Workshop on Maintenance Systems
 - Workshop on Management Information Systems
- 4 study tours, 1 fellowship and 1 VIP visit to Slovakia:
 - Study tour on Information and Communication Systems
 - Study tour on Refractory Materials
 - Study tour on Restructuring and Privatization of Metallurgical Industry
 - Study tour on Water Management

- Fellowship on Geological Quest in Slovakia
- Visit of Indian Ministry of Steel and Mines and Steel Authority of India Ltd. representatives
- 5 missions to developing countries:
 - mission to Arabic countries (Egypt, Syria, and Saudi Arabia)
 - mission to African Countries (Ivory Coast, Ghana)
 - mission to India
 - mission to China
 - mission to Bulgaria
- The following project proposals were worked out:
 - Preparatory assistance for the introduction of Integrated Management Information System in selected AISU member companies in Egypt and Syria
 - Preparatory assistance for the introduction of Integrated Management Information System in Machine Sazi Arak in Iran
 - Integrated production management and control system for metallurgical industries of MMI, China
 - Preparatory assistance for the introduction of environmental impact assessment, environment monitoring and management plan, with the special regard to arsenic in copper industry in selected Latin America countries
 - Improvement of the pig iron production effectiveness by implementation of blast furnace process control system
 - Application of advanced technology of spare parts and tools reconditioning
 - Support to small and medium scale enterprises in metallurgical, heavy, steel and metal-working industries
- 5 information folders published and distributed to developing countries on:
 - Joint Programme UNIDO – SR
 - Geological quest in Slovakia
 - Refractory materials
 - Metallurgical industry in Slovakia
 - Engineering industry in Slovakia
- From October 1997 VSŽ Konzult s. r. o., Košice, realizes the Project TF/INT/97/001 “UNIDO – Slovak Republic Joint Programme for Cooperation in Metallic Industries” on contract basis. The following activities were realized:
 - Study tour on Refractory Materials
 - Study tour on Metallurgical Industry
 - Study tour on Water Management
 - Mission to Egypt and Mauritania
 - Mission to Chile and Argentina
 - Mission to Kenya and Zimbabwe

List of participants (September 1996 – June 1998)

Algeria	Hassan Larbi	SIDER
	Mohammed Cheriet	SIDER
	Yacine Boussafsaf	SIDER
Bulgaria	Neli Velinova	TECHNOCONTROL
	Teodor Atanassov	TECHNOCONTROL
	Tzvetan Iliev	TECHNOCONTROL
	Raina Vassileva Maltcheva	KREMIKOV TZI
	Irena Koussarova	KREMIKOV TZI
	Nikolai Savov	KREMIKOV TZI
China	Hu Xing	WISCO
Egypt	Einas El Hefnawy	DELTA STEEL
	Gharieb Ahmed Radwan	DELTA STEEL
	Adel A-Azim	EDFO Ferro Alloys Co
	Mohamed Kahla	Egyptian Co. for Refract. Materials
	Khaled Moustafa	Egyptian Copper Works
	Yousry Mohamed El Nashar	EGYPTIAN FERROALLOYS Co.
	Mohamed Shehab	EGYPTIAN FERROALLOYS Co.
	Taher Hamed Moustafa	EISCO
	Houeya El Sabaie	Helvan Iron Foundries
	Abdel Hamid Magdy	Hindal Tebin Co., Helwan
	Hamdi Taha Ibrahim Radvan	Iron and Steel Co.
	Abd El Lattif Soliman	MICOR
	Mohamed El Shawadfy	Sinai Manganese Co.
Onsy Wanis Agayby	Sinai Manganese Co.	
Hungary	Istvan Sofalvi	DUNAFERR
India	S. P. Singh	BIRLA
	Yogendra Tripathi	MINISTRY of Urban Aff. And Employ.
	Sathiamoorthi L. S.	Tamil Nadu Newsprint and Papers
Iran	Alborz Kazemi	KHOUZESTAN STEEL Co.
	Behbahani Alireza	KHOUZESTAN STEEL Co.
	Ebrahim Badafareh	KHOUZESTAN STEEL Co.
	Montasseri Mohammad Djavad	KHOUZESTAN STEEL Co.
	Nosratolahe Khoram Pour	KHOUZESTAN STEEL Co.
	Ramazani Salman	KHOUZESTAN STEEL Co.
	Hooshang Kiany	Tehran Berkeley Engineers
	Massoud Mahmoudi	Tehran Berkeley Engineers
	S. Ali Reza Alavi	Tehran Berkeley Engineers
	Parviz Mehrong	Tehran Berkeley Engineers

Kenya	Abdul-Maghied Abditam Joseph Philip Kimani Sammy Kipkorir Cheluleh Meshack Mokua Saboke Subrata Gupta	EIMCO STEELWORKS Nairobi City Council Nakuru City Council National Water Conservation and Pipeline Steelmakers Ltd.
Syria	Anas Tarah Basnir Brayaz Ghassan Hamaade Hussein Nofal Jumaneh Yousef Mamdouh Abourich	HIAST HIAST GECOSTEEL HIAST GECOSTEEL ADRA CEMENT FACTORY
Zambia	Frank Lloyd Simbeye Evis Masato Siamachoka	RESOURCE TECHNOLOGIES Ltd. Zambezi River Authority
Zimbabwe	Cliford Kanganga Eriphas Elphas Albert Mahachi Newton Mashanyare Dunmore Itas Nhukarume	ZISCO ZISCO ZISCO ZISCO

Countries and companies

Algeria	SIDER
Bulgaria	TECHNOCONTROL KREMIKOV TZI
China	WISCO
Egypt	DELTA STEEL EDFO Ferro Alloys Company Egyptian Corporation for Refractory Materials Egyptian Copper Works Egyptian Ferroalloys Company EISCO Helvan Iron Foundries Hindal Tebin Company Iron and Steel Company MICOR Sinai Manganese Company
Hungary	Dunaferr
India	Birla
Iran	Khuzestan Steel Company Tehran Berkley Engineers

Kenya EIMCO Steelworks
Nairobi City Council
Nakuru City Council
National Water Conservation and Pipeline Corporation
Steelmakers

Syria Adra Cement Factory
GECOSTEEL
HIAST

Zambia Resource Technologies
Zambezi River Authority

Zimbabwe ZISCO

Countries: 11
Companies: 32
Participants: 55

Main forms of cooperation under JP UNIDO - SR

- Research and diagnostic missions of Slovak experts to developing countries
- Elaboration of experts reports, technical and economical analyses and/or projects according to the needs of DC or UNIDO
- Elaboration of Slovak subjects proposals for providing services, supplies of equipment, transfer of know-how, cooperation, etc.
- Group and individual short time study tours of specialists and managers from DC in Slovakia
- Educational and training programmes for groups of specialists from DC in Slovakia and/or directly in DC
- International expert group meetings, seminars and conferences for specialists from DC, CEE countries and developed countries
- Information and promotion services in above mentioned forms of cooperation

Main fields of cooperation under JP UNIDO - SR

- Geological quest
- Mining and treatment of metallic and non-metallic minerals
- Metallurgy of ferrous and non-ferrous metals
- Engineering industry
(mining and power equipment, transport and lifting equipment, building and road machines, machinery and equipment for agriculture and food industry, medical appliances, tooling and forming machines, etc.)
- Production of refractory materials, hydrate and cement
- Glass industry
- Chemical and pharmaceutical industry
- Rubber industry
- Plasters and man-made fibres
- Small and medium-size enterprises
- Water management systems
- Environmental management systems
- Maintenance systems
- Information systems

JOINT PROGRAMME UNIDO – SR
Cooperating companies and institutions in Slovakia

GEOLOGY

- 1 Geoconsult Košice
- 2 Geohyco Košice
- 3 Geologická služba SR Bratislava
- 4 Geologická služba SR Košice
- 5 Geotech Spišská Nová Ves
- 6 IGHP Žilina
- 7 INGEO Žilina

METALLURGY

- 8 Kovohuty Krompachy
- 9 Metalsint Dolný Kubín
- 10 OFZ Istebné
- 11 Procesná Automatizácia VSŽ Košice
- 12 Slovalco Žiar nad Hronom
- 13 Slovenská hutnícka spoločnosť Košice
- 14 VSŽ HOLDING Košice
- 15 VSŽ Export-Import Košice
- 16 VSŽ Informatika Košice
- 17 VSŽ Konzult Košice
- 18 VSŽ Oceľ Košice
- 19 VSŽ Oceľ – VSÚ Košice
- 20 ZSNP Žiar nad Hronom
- 21 Zväz hutníctva, ťažobného priemyslu a geológie SR Bratislava
- 22 Železiarne Podbrezová

ENGINEERING

- 23 B Group Bratislava
- 24 Hriňovské strojárne Hriňová
- 25 Konštrukta Industry Trenčín
- 26 Kovostroj Dobšiná
- 27 Lastroj Medzilaborce
- 28 Podpolianske strojárne Detva
- 29 Pohronské strojárne Hliník nad Hronom
- 30 Považské strojárne Považská Bystrica
- 31 Slovenské Lodenice Komárno
- 32 Slovump Závadka nad Hronom
- 33 Strojsmalt Medzev
- 34 Unicorn Tornaľa
- 35 Vagónka Poprad

- 36 Vihorlat Snina
- 37 VSS Košice
- 38 VSŽ Inžiniering Košice
- 39 VSŽ Mostáreň Košice
- 40 Vzduchotechnika Nové Mesto nad Váhom
- 41 Zemplínske strojárne Michalovce
- 42 ZŤS-TEES Martinské strojárne Martin
- 43 ZŤS-VVÚ Martin
- 44 Zväz strojárskeho priemyslu SR Bratislava
- 45 Zväz zlievární a kováční SR Martin
- 46 ŽELBA Nižná Slaná
- 47 ŽELBA Spišska Nová Ves

REFRACTORY MATERIALS

- 48 Magnezit Hačava
- 49 Slovmag Lubeník
- 50 SMZ Jelšava
- 51 SMZ Lovinobaňa
- 52 VSŽ Keramika Košice
- 53 VÚHK Bratislava
- 54 Žiaromat Kalinovo

ENERGETICS

- 55 SES Tlmače
- 56 VÚEZ Levice

WATER MANAGEMENT

- 57 Ministerstvo Životného Prostredia SR Bratislava
- 58 Ministerstvo Pôdohospodárstva SR Bratislava
- 59 PBaH Košice
- 60 Vodné dielo Žilina
- 61 VÚVH Bratislava
- 62 VV Bratislava
- 63 VVaK Košice

CEMENT, LIME and PLASTERS

- 64 Cementáreň Turňa nad Bodvou
- 65 Kerko Michalovce
- 66 Zeocem Bystré
- 67 Hirocem Bratislava

CHEMICAL INDUSTRY

- 68 Istrochem Bratislava
- 69 Duslo Šaľa

- 70 Chemko Strážske
- 71 VÚCHT Bratislava
- 72 Zväz chemického a farmaceutického priemyslu Bratislava

GLASS INDUSTRY

- 73 Skloobal Nemšová
- 74 Skloplast Trnava
- 75 LR Crystal

OTHERS

- 76 Banské stavby Prievidza
- 77 NEAT Košice
- 78 Novitech Košice
- 79 Novitech Nové Zámky
- 80 Rudný projekt Košice
- 81 SAV Košice
- 82 SLK Informa Komárno
- 83 Slovex Bratislava
- 84 SOPK Košice
- 85 SOPK Trenčín
- 86 ŠŠZÚ Košice

EDUCATION and TRAINING

- 87 Asociácia inštitúcií vzdelávania dospelých Bratislava
- 88 Ratio Educations Žilina
- 89 Technická univerzita Košice, fakulta BERG
- 90 Technická univerzita Košice, HF
- 91 Technická univerzita Košice, Sjf
- 92 Ústav pre ďalšie vzdelávanie ekonómov a manažérov Bratislava
- 93 VSŽ VaPC Košice
- 94 Žilinská Univerzita Žilina