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**UNIDO - CZECH REPUBLIC JOINT PROGRAMME FOR CO-OPERATION
METALLIC INDUSTRIES**



A N N U A L R E P O R T

1993

UC/UT/INT/92/020

Prepared by
the UNIDO - Czech Republic Joint Programme
for Co-operation, Metallic Industries

Prague, January 1994

**UNIDO - Czech Republic Joint Programme
for Co-operation in Metallic Industries**

ANNUAL REPORT 1993

UC/UT/INT/92/020

Part A.

1. Introduction

The UNIDO-Czechoslovakia Joint Programme for Co-operation, Metallic Industries (JP/MI) has been established on 1st March 1988 based on the Memorandum of Understanding between the Government of the Czechoslovak Republic and the United Nations Industrial Development Organization (UNIDO), signed in April 1987. The operation of the JP/MI was evaluated on the sessions of the Joint UNIDO-Czechoslovakia Committee for Co-operation. The 5th session of the Joint Committee held in Vienna during February 4-6, 1992 approved the Work Programme for 1992-1993. The detailed Work Programme for 1993 was approved by IO/MET in December 1992. In compliance with agreements between the Czech and the Slovak Republic in view of splitting Czechoslovakia into two independent states as of 1 January 1993, it was decided in December 1992 that ongoing UNIDO-Czechoslovakia Joint Programme will continue as UNIDO-Czech Republic Joint Programme and also that an agreement about the establishment of a new UNIDO-Slovak Republic Joint Programme will be prepared. The 6th session of the UNIDO-Czech Republic Joint Committee held in Pilsen during October 11-12, 1993 reviewed the JP/MI Annual report for the year 1992 and Interim report for 1993. Draft version of the JP/MI Work Programme for 1994-1995 was approved.

This report summarizes the activities during the period from January till December 1993.

2. Narrative Part

The JP/MI has continued in its operation in 1993 as UNIDO-Czech Republic Joint Programme. Its host institution up to October 31, 1993 - National Technical Consultancy and Training Centre (NTCTC), state-owned enterprise - was privatized. Private company TECON Ltd. was established from the NTCTC and since November 1993 has been the host organization of the JP/MI.

The JP/MI co-operates in its operation with the Ministry of Foreign Affairs of the Czech Republic, the Czech Ministry of Industry and Trade, the Czech Ministry of the Environment, the Confederation of Industry of the Czech Republic, etc.

Changes in economic system and transition to market economy (restructuring, privatization, establishment of small- and medium-scale enterprises etc.) have influenced the work of the Joint Programme itself as well as its surroundings, it means the network of cooperating organizations creating necessary background for the Joint Programme operation. In the course of 2 years a new network of cooperating organizations has been created consisting both of large enterprises and of small- and medium-scale enterprises. Besides the JP/MI also cooperates with the Prague Technical University, Prague School of Economics, Technical University of Liberec, University of Mining and Metallurgy Ostrava and with various associations.

The aim of JP/MI is not only implementation of series of workshops and courses, but also tangible outputs for the needs of developing countries and UNIDO itself.

Part B. Objectives and Outputs Envisaged at the Project Document

The following objectives and outputs were stated in the approved Project Document UC/UT/INT/92/020:

a) Project Objectives

1. To provide a framework to the transfer of CSFR know-how in the metallic industries to the concerned developing countries.
2. To support UNIDO activities in providing technical assistance to developing countries in metallic industries field.
3. To provide management information, computing and data bank to support the production and maintenance in metallic and other related industries.

b) Project Outputs

Outputs related to Objective 1

- 1.1 The UNIDO/CSFR Joint Programme, Metallic Industries Operation.
- 1.2 Training programmes/workshops to be executed in several branches of metallic industries covering inter alia such topics as industrial maintenance, flexible production systems, high quality steel production, industry application software for production management, mineral beneficiation, machinery for tropical and subtropical agriculture. Environmental management, low-waste and non-waste technologies, process control and Computer Aided Design and Computer Aided Manufacturing are also envisaged, subject to the availability of funds.

- 1.3 Study tours/fellowships of specialists from developing countries in CSFR.
- 1.4 Preparation of manuals, training aids (i.e. slides, transparencies, videofilms, computer programmes, etc.) for training events.

Outputs related to Objective 2

- 2.1 Mapping surveys of various industrial enterprises and institutions in African, Arabic and European regions in the field of metallurgy, engineering and electronics organized on UNIDO and/or developing countries Governments requests.
- 2.2 Advisory and project formulation missions in the field of basic industry into developing countries of African, Arab, Asian and Latin American regions organized in co-operation with UNIDO.
- 2.3 Preparation of experts, services and activities offered by Czech and Slovak metallurgical, engineering and electronic industries for assistance and consultancy support with the aim to meet specific requirements of UNIDO and developing countries in the above areas.
- 2.4 Publications and technical reports related to the missions as stated in item 2.2 above and to R and D results achieved in JP/MI partner organizations prepared and distributed in interested developing countries.

Outputs related to Objective 3

- 3.1 Data bank directory of co-operating organizations to support the Joint Programme, Metallic Industries activities.
- 3.2 Data bank of available industrial technologies and projects with links to UNIDO data banks and information services to support the Joint Programme, Metallic Industries activities.
- 3.3 Support to the introduction of UNIDO IO/T computerized project monitoring and management system.
- 3.4 Preparation of a study for the recommendation of new procedures and improvement of existing services of INTIB databank.
- 3.5 Publishing and distribution of the Joint Programme Newsletter (quarterly) and information leaflets.

4. Other Related Activities

C. Outputs Produced during 1993

Outputs related to Objective 1

1.1 The UNIDO/CSFR Joint Programme, Metallic Industries Operation.

The JP/MI activities in 1993 were executed in accordance with the Project Document for 1992-1993 approved at the 5th session of the Joint UNIDO-Czechoslovakia Committee for Co-operation in Vienna in February 1992 and in accordance with the detailed Work Programme for 1993 and also according to the requests of UNIDO and/or developing countries.

The outputs achieved in 1993 are described in the following part of the Report.

- 1.2 Training programmes/workshops to be executed in several branches of metallic industries covering inter alia such topics as industrial maintenance, flexible production systems, high quality steel production, industry application software for production management, mineral beneficiation, machinery for tropical and subtropical agriculture. Environmental management, low-waste and non-waste technologies, process control and Computer Aided Design and Computer Aided Manufacturing are also envisaged, subject to the availability of funds.

The following workshops/seminars were organized by JP/MI in 1993:

A:

- 1.2.1 **Workshop on Beneficiation in Metallurgy**
(Prague and Liberec; financed by JP/MI, organized in co-operation with GEOINDUSTRIA Prague; 2 weeks, 21 June - 2 July 1993; 13 participants of 6 countries: Egypt (1), India (1), Iran (6), Nigeria (3), Sri Lanka (1), Ukraine (1))
- 1.2.2 **Workshop on High Quality Steel Production**
(Ostrava; financed by JP/MI, organized by JP/MI jointly with University of Mining and Metallurgy Ostrava, Iron and Steel Research Institute (VUHZ) Dobra, ZDAS Engineering Works and Foundries Zdar n/S, Nova Hut Ostrava, Vitkovice, Trinecke zelezarny Trinec, TATRA Koprivnice; 2 weeks, 22 November - 3 December 1993; 15 participants of 8 countries: Algeria (2), Colombia (1), India (1), Iran (5), Mexico (1), Nigeria (2), Peru (1), Ukraine (2)).

- 1.2.3 Participation in the "Technical Workshop on Energy Management and Environment" organized by the Non-metallic Branch of the Joint Programme, Pilsen, with a lecture of Mr. P. Nemeskal "Impacts of Structural Changes in Czech and Slovak Iron and Steel Industries into Reduction of Energy Consumption and Improvement of Environment"

The total number of participants of the above-mentioned workshops (items 1.2.1, 1.2.2) was 28.

B: Workshops/seminars partially financed by JP/MI:

- 1.2.4 **Workshop for specialists of Byelorussian enterprise ATLANT, Minsk in the Field of Market Economy - transition to the market economy, principles of restructuring, privatization, project design, analysis and evaluation, experience of Czech producers of consumer goods**
(Prague, 18 - 30 April 1993, 20 participants)
- 1.2.5 **Workshop on COMFAR for the specialists from Byelorussian savings-bank**
(Prague, 29 August - 10 September 1993, 20 participants)
- 1.2.6. **2 Seminars on technical aspects of power supply development in the Czech Republic for Russian specialists from power engineering industry**
- according to the Contract between ASEN Moscow and JP/MI (in co-operation with UNIDO Vienna)
(Prague; 43 participants; 11 - 22 October; 6 - 17 December 1993)
- 1.2.7. **Seminar on present problems of quality control of chemical products for specialists from Russian chemical plants**
(in co-operation with the International Academy of Entrepreneurship, Moscow)
(Prague; 14 participants; 8 - 19 November 1993)
- 1.2.8. **Seminar on marketing and sales for Byelorussian specialists**
(in co-operation with Belfortex Minsk)
(Prague; 15 participants; 22 November - 3 December 1993)

1.3 Study tours/fellowships of specialists from developing countries in CSFR.

During 1993 the following study tours/fellowships of participants from developing countries were implemented in the Czech Republic:

- 1.3.1 **Study tour of the Iranian Specialists delegated by the Ministry of Mines and Metals**
(Prague, Ostrava and Pilsen; 11 - 22 January 1993; organized by JP/MI; 5 participants: Mr. S. Farokhzad,

Iranian R&D Center for Iron & Steel; Mr. J. Kasiani-Avval, Ministry of Mines and Metals; Mr. Mohammad Hassan Taghizadeh, Esfahan Steel Company; Mr. J. Izadi-Laibidi, Mobarakeh Steel Complex; Mr. N. Madini, Ahvaz Steel Company)

- 1.3.2 **Study Tour of Indian Experts in the Field of Metallurgy**
(Prague and Ostrava; 7 - 12 February 1993; organized by JP/MI; 4 participants: Mr. B.R. Nijhawan, Senior UNIDO Consultant; Mr. P.N. Dastur, Dastur Engineering International; Mr. M.R. Pattanayak, M and M Associates Ltd.; Mr. A. K. Kapoor, Dastur Engineering International)
- 1.3.3 **Study Tour in the Field of Management, Power Engineering Maintenance and Social Services**
(Prague; 4 - 7 May 1993; 2 participants of Belfortex Minsk, Republic of Belarus: Mr. U.M. Bouloitchik, Mr. L.A. Souboch)
- 1.3.4 **Study Tour in the Field of Computer Applications to Agricultural Machinery**
(Prague and Brno; 10 - 21 May 1993; organized by JP/MI; 12 participants from 8 countries: Albania (1), Macedonia (2), Nigeria (1), Poland (2), Republic of Belarus (3), Romania (1), Russia (1), Tanzania (1))
- 1.3.5 **Study Tour in the Field of Equipment for Small Printing Offices (Small Scale Industry)**
(Brno and Prague; 31 May - 9 June 1993; organized by JP/MI in co-operation with ADAST Adamov; 8 participants from Jordan: Mr. A. K. Hasim Mousa, Mr. J. Zaidan, Mr. Hussein T. Barjis Al Adwan, Mr. Salman M.S. Rawashdeh, Mr. Hussein N. M. Awaisheh, Mr. Atef Hamed H. Albadaineh, Mr. Walid F.F. Bani Ahmad, Mr. Adel H. Azab)
- 1.3.6 **Study Tour of the representative of Raw Materials Research and Development Council (RMRDC), Lagos, Nigeria - follow-up of the Workshop on Beneficiation in Metallurgy**
(Prague and Pribram; 3 - 9 July 1993, Dr. Paul O. Ogazi)
- 1.3.7 **Study Tour in the Field of Enterprise Analysis and Project Preparation, Feasibility Studies**
(Prague, 11 - 23 July 1993, 2 participants of Semiplan Minsk, Republic of Belarus (Ms. L.V. Hilko, Mr. M.A. Makovets)).
- 1.3.8 **Study Tour on Waste Treatment**
(Prague; 29 August - 10 September 1993; 6 participants from 2 countries: Algeria (Mr. A. Bousdira), Zimbabwe (Mr. B. Marufu, Mr. J. Mavhiya, Mr. L. Sola, Mr. V. Sithole, Mr. G. Mkudu)
In the framework of co-operation with the Institute of Chemical Process Fundamentals (Academy of Science) in the field of wastes liquidation and environmental protection

a study tour in the above-mentioned field was realized, the participation in the International Conference CHISA'93 was a part of this study tour.

- 1.3.9 **Study Tour in the Field of Engineering, Automation and Maintenance in Manufacturing Industry**
(Prague and Brno, 11 - 26 September 1993, 12 participants of 7 countries: Albania (2), Algeria (1), Brazil (2), Bulgaria (3), India (1), Iran (2), Mexico (1)).
- 1.3.10 **Study Tour in the Field of Equipment for Small Printing Offices (Small Scale Industry)**
(Brno, 29 November - 9 December 1992, 11 participants from 5 countries: Algeria (1), France (1), Iran (5), Singapore (2), Syria (2)).

In 1993 ten study tours (items 1.3.1 - 1.3.10) for 63 participants from 19 countries were organized in the Czech Republic, representing 740 m/days.

- 1.4 **Preparation of manuals, training aids (i.e. slides, transparencies, videofilms, computer programmes, etc.) for training events.**

The manuals and other training aids for the training events envisaged by the Work Programme for 1993 were prepared.

The course manuals and lectures were published for the Workshop on Beneficiation in Metallurgy, Workshop on High Grade Steel Production, Workshops/seminars for participants from Byelorussian/Russian enterprises/banks/companies as well as for study tours in the field of computer applications to agricultural machinery, in the field of engineering, automation and maintenance in manufacturing industry and for study tour in the field of equipment for small printing offices.

Computer demonstration programmes (for example in the field of analysis of management system, feasibility studies, certification and auditing) for training activities according to the approved Work Programme for 1993 have been developed and their demo versions are included in workshops/seminars/study tours materials.

For the purpose of JP/MI activities a videofilm presenting technology profiles and production of cooperating organizations is under preparation.

2. Outputs related to Objective 2

2.1 Mapping surveys of various industrial enterprises and institutions in African, Arabic and European regions in the field of metallurgy, engineering and electronics organized on UNIDO and/or developing countries Governments requests.

Experts of the Joint Programme, Metallic Industries are ready to undertake missions to developing countries according to UNIDO and/or developing countries Governments requests, e.g. a mapping mission to Mexico in the field of industrial wastes and environmental pollution with the aim to formulate respective projects.

2.2 Advisory and project formulation missions in the field of basic industry into developing countries of African, Arab, Asian and Latin American regions organized in co-operation with UNIDO.

The following missions of JP/MI experts and experts of cooperating organization were implemented in 1993:

2.2.1 Diagnostic Mission to Nigeria

Mr. J. Benda (JP/MI), Mr. J. Kucera and Mr. K. Ivanyi (Rudne doly Pribram); 16 March - 6 April 1993

Mission was realized on the base of signed Letter of Intent with the representative RMRDC Lagos for the preparation of the project for Lead-Zinc ore processing plant in Enugu State and smelter Lead-Zinc concentrates in Abia State. The sources of Lead-Zinc ore were seen in Enugu State directly in the four country sites and eventually place for smelter was shown in Abia State. As a result of this mission three Project Documents were prepared (see item 2.4).

2.2.2 Feasibility Study Mission to India in the field of financial analysis

Mr. J. Herman; 30 July - 7 August 1993

The aim of the project DP/IND/91/093 is to prepare a feasibility study for establishment of an experimental demonstration unit for manufacturing super-pure aluminium and condensor foils from it in Bharat Aluminium Company Ltd. (BALCO). Presentation of the Draft Final Report.

2.2.3 Mission to the Republic of Belarus, Minsk

Ms. D. Trkalova; 3 - 5 March 1993

The aim of this mission was to consider the needs of Byelorussian enterprises and banks in the field of training activities in view of market economy, privatization, restructuring, project preparation, feasibility studies, etc.

As a result of this mission three seminars for Byelorussian specialists were implemented in 1993 and a draft programme of training activities for 1994-1995 was prepared.

Missions of JP/MI experts and experts of cooperating organization represented 2.6 m/month in 1993.

- 2.3 Preparation of experts, services and activities offered by Czech and Slovak metallurgical, engineering and electronic industries for assistance and consultancy support with the aim to meet specific requirements of UNIDO and developing countries in the above areas.

The Joint Programme, Metallic Industries provided services and support to Czech experts prepared for technical assistance to developing countries.

In co-operation with Czech experts and representatives of Czech firms/organizations JP/MI prepared documents for UNIDO roster of experts, UNIDO vendors roster and UNIDO roster of consulting firms/organizations.

On these occasions the representatives of Czech firms and/or experts are provided with the information on UNDP/UNIDO technical assistance and on possibilities of their participation in UNIDO projects.

- 2.4 Publications and technical reports related to the missions as stated in item 2.2 above and to R and D results achieved in JP/MI partner organizations prepared and distributed in interested developing countries.

A number of reports were prepared by JP/MI experts for UNIDO, i.e.:

- Annual Report of the JP/MI activities in 1992
- Mission Report - UNIDO JP/MI Mission to Nigeria; Benda, J.
- Summary Evaluation Report of the UNIDO-CR Workshop on Beneficiation in Metallurgy (Benda, J.)
- Evaluation of study tour in the field of management, power engineering maintenance and social services
- Summary Evaluation Report of the UNIDO-CR Study Tour in the Field of Computer Application to Agricultural Machinery (Urbanova, J.)
- Summary Evaluation Report of the Study Tour in the Field of Equipment for Small Printing Office for Small Scale Industry (Benda, J.)
- Evaluation Report - Study Tour on Waste Treatment (Fiala, M.)
- Summary Evaluation Report of the Study Tour in the Field of Engineering, Automation and Maintenance in Manufacturing Industry (Havlik, J.)
- Evaluation Report of Study Tour/Workshop on High Quality Steel Production (Fiala, M.)
- Summary Evaluation Report of the Study Tour in the Field of Equipment for Small Printing Office for Small Scale Industry (Benda, J.)

- Final report - Project No. DP/IND/91/093, Establishment of an experimental demonstration unit for manufacturing super-pure aluminium condenser foils from it (METALCONSULT Ltd. Prague, POLYTECHNA Prague, JP/MI)

The following projects documents, projects proposals and project formulation frameworks were worked out by JP/MI experts, experts from cooperating organizations and UNIDO staff members or are under preparation:

- Project Formulation Framework for Mexico "Comprehensive Information System (Computerized Databank) for Industrial Wastes Recycling"
- Assistance in the Field of Apparel Computer Aided Design and Production. (Pilot project in the Technical University in Liberec.)
- Establishing of Retraining Center for Ostrava-Karvina Region
- The Reclamation of the Landscape in the Ostrava-Karvina Area Blighted by a Mining Activity and Industrial Production
- Development of Technical/Technological Consultancy and Environmental Auditing Capabilities of National Technical Consultancy and Training Centre (NTCTC) and a network of cooperating organization in the area of Environment Protection and Energy Conservation with Special Focus on Small and Medium Enterprises (SME)
- Protection of Ecologically Important Areas with Drinking Water Sources in Ostrava-Karvina Region
- Technical Assistance for the Coking Plants in the Czech Republic
- Design and Equipment of Environmental Center
- Introduction of Thin Slab Casting at Nova Hut Steel Plant, Ostrava
- On the base of diagnostic mission, signed Letter of Intent and discussion with the representatives of Raw Material Research and Developing Council, Lagos, Nigeria and in connection with their visit to UNIDO Vienna and to the Permanent Mission of Nigeria in Vienna, the drafts of projects were started. Later, on the base of preliminary Government request drafts of the following Project Documents were prepared:
 - * Pilot Plant for Lead-Zinc Ore Processing
 - * Preparation of Techno-economic Prefeasibility Study for Smelting of Lead-Zinc Concentrates
 - * Pilot Plant for Salt Production from Brine

- On the base of evaluation of workshop "Beneficiation in Metallurgy" are still under preparation the Project Documents for Iranian partners according to their wish. There are the following topics:
 - * Establishing of Research and Development Center for Steelmaking Industry in Iran
 - * Quality Increasing in Steel Production Industry
 - * Increasing of Production in Metallurgical Industry
- Ecological and Economical Possibilities of Electric Arc Furnace Processing in Vitkovice
- Processing of oily mill scales with Nova Hut and AUSTROPLAN Austria
- Preparation of a Project Document of Establishing of Retraining Center for North Bohemia Region has been started.

3. Outputs related to Objective 3

- 3.1 Data bank directory of co-operating organizations to support the Joint Programme, Metallic Industries activities.
- 3.2 Data bank of available industrial technologies and projects with links to UNIDO data banks and information services to support the Joint Programme, Metallic Industries activities.
- 3.3 Support to the introduction of UNIDO IO/T computerized project monitoring and management system.
- 3.4 Preparation of a study for the recommendation of new procedures and improvement of existing services of INTIB databank.

Data bank directory of co-operating firms/organizations to support the Joint Programme, Metallic Industries activities was created and it is continuously supplied with new information.

With respect to the changing situation in the organizations and enterprises structure (establishment of new small- and medium-scale enterprises) and to the possibilities of collecting information about them, it was agreed that the authorization for such a collecting would have the National Information Center (NIC) in Prague and the JP/MI will co-operate with NIC in this area.

Support and services in the field of computerized project monitoring and management system and services of INTIB databank are provided on the request of UNIDO and/or Czech cooperating organizations.

In the field of financial analysis of investment projects based on the UNIDO methodology and COMFAR software the following activities took place in the time period reported:

- The COMFAR system has been utilized for consulting various investment projects in 17 companies throughout the Czech Republic.
- As a result of the consulting and the authorized promoting activity, 9 potential buyers of the COMFAR package have been contacted with UNIDO, Feasibility Studies Branch.
- The education and training activity in the field of financial analysis methodology and COMFAR system utilization was continuing during the period. TECON organized in co-operation with JP/MI seminars and workshops covering the topics according to the requirements of companies, including case studies. All together 247 participants were presented of 16 seminars.
- Mr. J. Herman participated in the feasibility study mission to India in July/August 1993 in the framework of the project DP/IND/91/093.
- UNIDO mission (project No. XP/BYE/93) of Mr. J. Herman to Minsk, Republic of Belarus, 25 October - 12 November 1993 as one of the lecturers in the Workshop on Industrial Investment Project Appraisal and the Application of the COMFAR software.
- External lecturing activity in seminars organized by the Czech Association of Investment Facilities, Mr. Herman UNIDO methodology of investment project appraisal and using COMFAR system for financial analysis
5 one-day lectures so far

3.5 Publishing and distribution of the Joint Programme Newsletter (quarterly) and information leaflets.

3.5.1 The following Newsletters were issued and distributed to interested developing countries in 1993:

- No. 13/92 - Joint Programme/Metallic Industries (JP/MI), Activities in 1993
- No. 14/92 - ZPS Zlin Company, Ltd. - Producer of Modern Machine Tools
- No. 15/93 - VUHZ a.s., Dobra - R&D, Manufacturing, Services, Sales
PILANA TOOLS Ltd., Hulín - Short information about PILANA TOOLS company

3.5.2 With the aim to introduce the JP/MI and TECON on the occasions of exhibitions/fairs/press conferences, an informative leaflet was prepared and printed.

Brief informative booklets about the Joint Programme, Metallic Industries and TECON (in English, Russian and Czech versions) were prepared for publication.

4. Other Related Activities.

JP/MI participated in preparation and implementation of the following projects/events:

- JP/MI representative took part in preparation of Conference of Pollution Control and Abatement Enterprises, 15-17 March 1993, Budapest, Hungary. 10 projects documents were prepared and submitted to the conference committee. 15 participants from the Czech Republic took active part in the Conference.
- Co-operation between JP/MI, Pramet Sumperk and Sepahan Sanatyar Engineering & Services Co. Isfahan, Iran for the establishing of factory for production of hard and soft ferrites. Interest of Iranian counterpart is as follows:
 1. know-how
 2. technical cooperation
 3. Joint Venture.
- Draft for co-operation between Walter Industry (production of stationery electric sets) and Nigeria, Enugu State. The main aim:
 1. stage - selling of sets
 2. stage - assembling of sets in Enugu
 3. stage - production of simple parts in Enugu.
- Co-operation between the JP/MI, SKODAEXPORT Prague and INDUSTRYSKODA Lagos was established for a realization of the following project: Pilot Plant for Lead-Zinc Ore Processing and Pilot Plant for Salt Production from Brine.
- JP/MI has started the co-operation with the FAHAD company, Engineering & Trade Consultations (Dr. Sulaiman Fahad), Prague with the aim to direct attention to MAGREB countries.

The experts of the Joint Programme, Metallic Industries promoted UNIDO and JP/MI tasks and activities in a lot of occasions and they participated in several international conferences, exhibitions and other events, namely:

- Participation in the Seminar on Metallurgy and Ecology; Nancy, France; 10 - 14 May 1993; Ms. D. Trkalova
- Participation in the International Contracting and Sales Exhibitions; Brno; 20 - 26 May 1993; Ms. D. Trkalova
- Participation in international exhibition AUTOTEC '93; Brno; 4 - 10 June 1993; Mr. J. Benda

- Participation in the high tech exhibition INTEC Prague '93; 1 - 3 September 1993; Mr. J. Benda
- Participation in the International Engineering Fair in Brno with the aim to establish contacts with partners for workshops and seminars; 16 - 23 September 1993; Ms. D. Trkalova, Mr. J. Benda, Mr. J. Havlik
- Participation in the international conference "Metallurgy East-West '93"; High Tatras - Stara Lesna, Slovakia; 11 - 14 October 1993; Mr. M. Fiala with reading of Mr. Krouzek's lecture: "UNIDO Activities in Restructuring of Metallurgical Industries in Central and Eastern Europe and CIS"
- Participation in IFPI'93 - International Forum on Privatization and Investment in Central and Eastern European Countries; Prague; 12 - 14 October 1993; Mr. J. Benda
- Participation in the international INVEX-Computer, Software and Hardware Exhibition; Brno; 19 - 22 October 1993

LIST OF ANNEXES**Annex 1:**

Important negotiations related to the activities of the JP/MI in 1993

Annex 2:

The list of study tours participants in 1993

Annex 3:

The financial statement of non-convertible costs in 1993

Annex 4:

The list of countries participating in workshops, seminars and other training events

Annex 5:

List of organizations to which JP/MI provided COMFAR consultations

Annex 6:

Selected list of papers/lectures presented by the JP/MI experts and experts from co-operating organizations at international workshops/conferences/meetings

Important negotiations related to JP/MI activities in 1993

1. Mr. T. Grof; UNIDO Vienna; January 1993
2. Mr. A.I. Kovalev; EMC, Moscow, Russia; January 1993
3. Mr. A. Makovets; SEMIPLAN Minsk; Republic of Belarus; February 1993
4. Mr. Hall; DELCAM, UK; February 1993
5. Mr. J.V. Krouzek; UNIDO Vienna; February 1993
6. Mr. C. Davies; International Economic + Energy Consultants, UK; March 1993
7. Mr. Stuart Heaman-Dunn; UNIDO Vienna; March 1993
8. Mr. V.S. Grinev; International Academy of Entrepreneurship, Moscow, Russia; April 1993
9. Dr. Francesca Giannotti, UNIDO Vienna, May 1993
10. Mr. V. Shatravko, UNIDO Vienna, May 1993
11. Ms. F. Kirschmayer; VAIS Linz, Austria; June 1993
12. Mr. C. Beinhoff, UNIDO Vienna, June 1993
13. Mr. L. J. Ukegbu; Enugu, Nigeria; June 1993
14. Mr. J. Holakovsky and Mr. P. Miler; INDUSTRYSKODA Lagos, Nigeria; July 1993
15. Mr. P.D. Hindmarcn; P and RH Consultancy Ltd., London, UK; August 1993
16. Mr. R. Vujacic, UNIDO Vienna, September 1993
17. Mr. P. Fanta and W. W. Meierhofer; ESCHER WYSS Zurich, Switzerland; September 1993
18. Mr. J.V. Krouzek, UNIDO Vienna, September 1993
19. Ms. A. Tcheknavorian-Asenbauer, Ms. G. Roces, Mr. R. Vujacic, Mr. J.V. Krouzek; UNIDO Vienna; October 1993
20. Mr. A. Wootton; QUALTER HALL, Barnsley, UK; November 1993
21. Mr. M. Sato, UNIDO Vienna, December 1993
22. Mr. I. Lengah Izram; Lamindo Sakti Trading Company, Jakarta, Indonesia; December 1993
23. Mr. Y.D. Bala; Embassy of Nigeria, Prague; December 1993
24. Mr. E.W. Waltl and Mr. M. Richter; VAIS Linz and Prague; December 1993

The list of study tour participants in 1993

- 1.3.1 Study tour of the Iranian Specialists delegated by the Ministry of Mines and Metals
Prague, Ostrava and Pilsen; 11 - 22 January 1993
5 participants: Mr. S. Farokhzad, Iranian R&D Center for Iron & Steel; Mr. J. Kasiani-Avval, Ministry of Mines and Metals; Mr. Mohammad Hassan Taghizadeh, Esfahan Steel Company; Mr. J. Izadi-Laibidi, Mobarakeh Steel Complex; Mr. N. Madini, Ahvaz Steel Company
- 1.3.2 Study Tour of Indian Experts in the Field of Metallurgy
Prague and Ostrava, 7 - 12 February 1993
4 participants: Mr. B.R. Nijhawan, Senior UNIDO Consultant; Mr. P.N. Dastur, Dastur Engineering International; Mr. M.R. Pattanayak, M and M Associates Ltd.; Mr. A. K. Kapoor, Dastur Engineering International
- 1.3.3 Study Tour in the Field of Management, Power Engineering Maintenance and Social Services
Prague, 4 - 7 May 1993
2 specialists of Belfortex Minsk, Republic of Belarus (Mr. U.M. Bouloitchik, Mr. L.A. Souboch)
- 1.3.4 Study Tour in the Field of Computer Application to Agricultural Machinery
Prague and Brno, 10 - 21 May 1993
12 participants of: Albania (Mr. K. Bode), Macedonia (Ms. S. Nakovska, Mr. C. Dimitrievski), Nigeria (Mr. Samuel C.O. Onyekwelu), Poland (Ms. H. Korolewska-Mroz, Mr. J. Szcapaniak), Republic of Belarus (Mr. V. A. Drozd, Mr. S. D. Maslov, Mr. K. Logovski), Romania (Mr. H. Beghes), Russia (Mr. N. V. Mungalov), Tanzania (Mr. Ramesh N. Patel)
- 1.3.5 Study Tour in the Field of Equipment for Small Printing Offices (Small Scale Industry)
Brno, Adamov and Prague, 31 May - 9 June 1993
8 participants from Jordan (Mr. A. K. Hasim Mousa, Mr. J. Zaidan, Mr. Hussein T. Barjis Al Adwan, Mr. Salman M.S. Rawashdeh, Mr. Hussein N. M. Awaisheh, Mr. Atef Hamed H. Albadaineh, Mr. Walid F.F. Bani Ahmad, Mr. Adel H. Azab)
- 1.3.6 Study Tour of the representative of Raw Materials Research and Development Council (RMRDC), Lagos, Nigeria
Prague and Pribram, 3 - 9 July 1993
Dr. Paul O. Ogazi

- 1.3.7 Study Tour in the Field of Enterprise Analysis and Project Preparation, Feasibility Studies
Prague, 11 - 23 July 1993
2 participants of Semiplan Minsk, Republic of Belarus
(Ms. L.V. Hilko, Mr. M.A. Makovets)
- 1.3.8 Study Tour on Waste Treatment
Prague, 29 August - 10 September 1993
6 participants of: Algeria (Mr. A. Bousdira) and Zimbabwe
(Mr. B. Marufu, Mr. J. Mavhiya, Mr. L. Sola, Mr. V. Sithole, Mr. G. Mkudu)
- 1.3.9 Study Tour on Engineering, Automation and Maintenance in Manufacturing Industry
Prague and Brno, 11 - 26 September 1993
12 participants of India (Mr. S.P. Singh), Albania (Mr. M. Saraci, Mr. M. Q. Nuri), Iran (Mr. M. Bozorgi, Mr. A. Hedayat), Brazil (Ms. Rosana B. B. Haddad, Ms. Thais H. de Lima Nunes), Bulgaria (Mr. K. V. Mateeva, Mr. D. T. Dimitrov, Mr. L.G. Radev), Mexico (Mr. A. Esparza Ramirez), Algeria (Mr. Djamel Zennini)
- 1.3.10 Study Tour in the Field of Equipment for Small Printing Offices (Small Scale Industry)
Brno, 29 November - 9 December 1993
11 participants of: Algeria (Mr. Y. Mohli), France (Mr. L. Quenette), Iran (Mr. M. Teymouri, Mr. A. Salimi, Mr. M. Kiamarsi, Mr. H. Jamalizadeh, Mr. E. Rasekhi), Singapore (Mr. L.S. Yeow, Mr. S.S. Kuang), Syria (Mr. R. Zelhof, Mr. E. Meshaka)

The financial statement of the non-convertible costs in 1993

Item	Original Budget	Revised Budget	Expenditures
1. Workshops in Czech Rep.	1,100,000	1,500,000	938,978.11
2. Study Tours/Fellowships of Participants from Dev. Countries to Czech Rep.	362,500	662,500	1,372,722.51
3. Programming, Computer Services	100,000	100,000	205,394.00
4. Other Purchased Services	150,000	200,000	255,745.00
5. Data Bank Services	50,000	50,000	---
6. Publication Services	50,000	50,000	21,000.00
7. Travel Expenses	250,000	250,000	145,194.35
8. Personal Costs	800,000	950,000	926,491.00
9. Administrative Running Costs	400,000	400,000	343,136.06
10. Operational Costs	200,000	200,000	134,525.00
11. Equipment	250,000	350,000	630,962.59
12. Miscellaneous	100,000	100,000	261,621.07
T O T A L :	3,812,500	4,812,000	5,235,769.69

Notes:

- 1/ The amount of 3,812,500 Cz.Cr. represents the original budget according to Project Document for 1992-1993.
- 2/ It has been decided at the meeting with IO/T/MET in December 1993 that a part of working capital reserve for 1993 at the amount of 1,000,000 Cz.Cr. would be utilized for items no. 1, 2, 4, 8 and 11.
- 3/ Additional payment of 1,095,000 Cz. Cr. for implementation of study tours experts from developing countries (item no. 2) was available from July 1993.

Commentary:**1. Workshops in the Czech Republic**

These expenditures include costs of the Workshop on Beneficiation in Metallurgy at the amount of Czech Crowns 333,656.85 and of the Workshop on High Grade Steel Production at the amount of Czech Crowns 371,621.26; and also JP/MI contribution to 2 seminars in the field of power engineering based on the Contract concluded between UNIDO, JP/MI and ASEN Moscow at the amounts of Czech Crowns 114,000.00 and 119,700.00. The actual expenses are lower than originally planned as the Technical Workshop on CAD/CAM Application of Personal Computers in Basic Engineering Industries was scheduled to be held according to the Work Programme but in view of structural changes in Czech enterprises/organizations initiated by privatization and restructuring (changes in production, changing situation at design departments, utilization of know-how from abroad) it was not possible to organize this workshop.

2. Study Tours/Fellowships of Participants from Developing Countries to the Czech Republic

These expenditures include costs of the Study Tour of the Iranian specialists at the amount of Czech Crowns 129,189.65, the Study Tour of Indian Experts in the Field of Metallurgy at the amount of Czech Crowns 37,090.23; the Study Tour in the Field of Management, Power Engineering Maintenance and Social Services at the amount of 10,658.82; the Study Tour in the Field of Computer Applications to Agricultural Machinery at the amount of Czech Crowns 304,356.81; the Study Tour in the Field of Equipment for Small Printing Offices at the amount of Czech Crowns 168,187.28; the Study Tour of Nigerian specialist at the amount of Czech Crowns 8,084.00; the Study tour in the Field of Enterprise Analysis and Project Preparation, Feasibility Studies at the amount of Czech Crowns 17,556.00; the Study Tour in the Field on Waste Treatment at the amount of Czech Crowns 163,314.95; the Study Tour in the Field of Engineering, Automation and Maintenance in Manufacturing Industry at the amount of Czech Crowns 319,037.37; the Study Tour in the Field of Equipment for Small Printing Offices at the amount of Czech Crowns 187,907.40.

3. Programming, Computer Services

Expenditures connected to creation of computer network, programming and computer services and organizational support of NTCTC/TECON staff members during study tours and workshops realization. In the course of 1993 the JP/MI staff was reduced by 1 employee and the NTCTC/TECON support was, therefore, necessary.

4. Other Purchased Services

Expenditures connected to the leasing of computers and expenditures to support JP/MI consultancy and training activities.

5. Data Bank Services

Databank services were provided as a Czech in-kind contribution in 1994.

6. Publication Services

Expenditures connected to the JP/MI publication activities, i.e. printing and publishing of JP/MI Newsletters. The actual expenses are lower than originally planned as the printing of JP/MI and TECON brochure was postponed till 1994.

7. Travel Expenses of JP/MI

International travel of experts and staff of JP/MI connected with missions to developing countries, conferences, UNIDO Vienna, etc.

8. Personal Costs

The personal costs are in conformity with the present regulations in the Czech Republic.

9. Administrative Running Costs

These include expenses for office material, travel of JP/MI staff within the country, costs of petrol, repairs of JP/MI vehicle and spare parts, costs of mail and telecommunication, documentation, repairs of equipments, etc.

10. Operational Costs

Expenditures connected with the operation of JP/MI premises.

11. Equipment

Purchase of a SKODA car FORMAN 135LX at the amount of Czech Crowns 188,954.07; TI-MICROLASER Plus printer at the amount of Czech Crowns 29,900; MINOLTA fax at the amount of Czech Crowns 76,546; computer accessories at the amount of Czech Crowns 2,571.48; fax modems at the amount of Czech Crowns 44,020; EUROTEL (mobile telephone set) at the amount of Czech Crowns 75,400; software (QUATRO, MEAP, etc.) at the amount of Czech Crowns 7,782; office equipment at the amount of Czech Crowns 12,239.04 and also 2 IBM computers at the amount of Czech Crowns 193,550 - it was a local purchase in the framework of convertible part of JP/MI budget and in December 1993 UNIDO was requested to transfer this amount to our account to Prague.

12. Miscellaneous

Expenditures connected to refreshments of JP/MI guests, internal training fees, publicity of JP/MI activities, books, insurance, etc.
The total amount is considerably higher due to the fact that the value-added tax was introduced in the Czech Republic in 1993. It represents 151,927.76 Czech Crowns and this amount was not included to the originally budget.

Working Capital Reserve
i.e. savings of JP/MI
budgets

Czech Crowns

1,326,995.41

List of countries participating in workshops, seminars and other training events

- 1.2.1 Workshop on Beneficiation in Metallurgy
Egypt India Iran Nigeria Sri Lanka
Ukraine
- 1.2.2 Workshop on High Grade Steel Production
Algeria Colombia India Iran Mexico
Nigeria Peru
- 1.2.4 Workshop for specialists of Byelorussian enterprise
ATLANT, Minsk in the Field of Market Economy
Republic of Belarus
- 1.2.5 Workshop on COMFAR for the specialists from Byelorussian
savings-bank
Republic of Belarus
- 1.2.6. Seminars on technical aspects of power engineering
development in the Czech Republic
Russia
- 1.2.7. Seminar on present problems of quality control of
chemical products
Russia
- 1.2.8. Seminar on marketing and sales
Russia

**List of organizations to which JP/MI provided COMFAR
consultations**

CABLE Plus, Ostrava
DEJDAROVA, Prague
HUBEL Servis, Brno
MARRIOT Projekt, Liberec
Metalconsult - hutni projekt, Praha
Pivovar Sluknov
P-Servis, Louny
ROMO, Fulnek
SAGITTA, Praha
SAMEA, Praha
Sdruzeni dodavatelů investicnich celku, Praha
Sklarna Emilie, Novy Bor
SPOLANA, Neratovice
TECHO, Praha
TRANSCONSULT, Hradec Kralove
WENERGO, Lipova Lazne
Zapadoslovenske energeticke zavody, Bratislava

Selected list of papers/lectures presented by the JP/MI experts and experts from co-operating organizations at international workshops/conferences/meetings

Workshop on Beneficiation in Metallurgy

Dolezil, M.:	Comminution and Sizing
Spacek, V.:	Treatment of Gold Bearing Ores and Solution of Environmental Problems connected with this Treatment
Duda, J.:	Heavy Mineral Prospecting Methodology
Zurek, F.:	Magnetic Separation
Rashman, R.:	Flotation, Gravity Separation and Preliminary Dressing of Ores - the Recent Trends
Janatka, J.:	Follow-up Program of Gold Exploration: Case History of Mokrsko West Deposit Geochemical Prospecting for Gold in Bohemian Massif
Kalousek, J.:	Development of Steel Production in next Future
Karnik, T.:	Production of Aluminium and its Alloys
Pedlik, M.:	Principles of Nonferrous Metallurgy Production of Metals and Alloys for Special Technical Purposes
Buzek, Z.:	Continuous Casting of Steel
Exner, J.:	Production of Cast Iron, Steel and Aluminium Castings
Roubicek, V.:	Environmental Problems in Metallurgy

Workshop on High Grade Steel Production

Motloch, Z.:	The Czech iron and steel industry
Kalousek, J.:	The development of steel production in next future
Roubicek, V.:	Environmental problems in metallurgy
Micek, P.:	Oil pipe quality assurance from design up to installation
Wozniak, J.:	Physical and metallurgical aspects of the quality control and the design of steels for deep drawing and cold forming
Pastrnak, Z.:	Influence of trace elements on the quality of continuously cast and rolled products in the New Metallurgical Works Inc., Ostrava
Styblo, K.:	Determination of chemical composition in process control
Kosnovsky, Z.:	The past and present of the Vitkovice Corporation
Idzikovsky, B.:	The Vitkovice Company's publicity oriented information systems
Raska, P.:	Present state and development of oxygen steelmaking

- Raska, P.: OXYVIT combined blown steelmaking converter at Vitkovice
- Turek, J.: Quality of steel made in a bottom-blown oxygen vessel
- Motloch, Z.: Secondary metallurgy now an integral part of steelmaking
- Krayzel, M.: Metallurgical effects of ladle treatments
- Grobar, V.: Equipment for the vacuum treatment of steel
- Terlecky, J.: Equipment for ladle refining steel at atmospheric pressure
- Gavlik, M.: Improving the quality of steel by electromagnetic stirring
- Jilek, L.: Developments in the production of forging and special ingots
- Jaksh, P.: Manufacturing and installation of metallurgical equipment
- Dofek, F.: Key machines in rolling Mills
- Vavrecka, J.: Design and construction of plate and hot strip rolling mills
- Liska, M.: Production of high quality steel plants
- Husek, J.: Trends of forming machines development
- Landsman, F.: Machines for volume forming
- Vesely, O.: Equipment for the scrap treatment
- Suchy, K.: Free forging presses
- Jilek, L.: Manufacture of large forging for exacting applications
- Purmensky, J.: New materials for power plants and chemical engineering
- Tvrdy, M.: Materials for nuclear power plants with water cooled reactors
- Matocha, K.: New methods of mechanical properties evaluation of steels and alloys
- Volny, O.: Wire and core wire injection at steelmaking - one of the methods for increasing a quality of steel
- Jansky, M.: Secondary metallurgy technological processes for steel treatment with utilization of cored wire injection
- Volny, O.: Equipment for the technology of wire and cored wire injection into liquid steel
- Rohac, J.: Electromagnetic mould level measurements - principles and designs
- Cech, V.: Electromagnetic system VUHZ for continuous casting mould level measurement
- Cech, V.: Operational experience with electromagnetic mould level measurement
- Cech, V.: Roll force and torque measurements in rolling mills
- Mrovec, J.: Steel production quality assurance system
- Cieslar, O.: Continuous casting in Trinec iron and steel works

Workshops for managers and selected specialists from Byelorussian enterprises/companies in the field of market economy, COMFAR and marketing and sales

Kovar, F.:	Transformation process in market economy
Duchecek, F.:	Financial management of enterprise
Pipek, J.:	International commerce
	Analysis of economy strategy for new industrialised Asian countries and Japan, the most successful countries in international commerce in last thirty years
Bedrnova, E.:	Personal management in market economy
Svoboda, S.:	Accountancy of enterprises in new conditions
Vodacek, L.:	Today management of privatized Czech organizations
Adamec, S.:	Information system and its marketing orientation
Herman, J.:	Financial analysis of investment project with the use of system COMFAR
Sedlacek, J.:	Analysis of international business possibilities and their description
	Analysis of competition, development of demand, market selection
Jindra, J.:	Development of integrated commerce in Europe
	Enterprise strategy in market economy
Svarc, Z.:	Commerce rights, commerce systems in the world
	Domestic and international sources and their common connections in market economy
Machkova, H.:	International commerce operations
	Suppose enter of the firm to the international market
Plchova, B.:	Economical transformation and its influence to international and domestic commerce
Mala, V.:	Tourism as a source of development for world economy
	Tourism as a business activity in market economy

Workshops for managers and selected specialists from Russian enterprises/companies in the field of technical aspects of power engineering development in the Czech Republic and present problems of quality control for chemical products

Brychta, P.:	Economy in power supply in the Czech Republic
Brix, B.:	Desulphurisation program during production of power supply
Hasalik, J.:	Quality control theory
	Quality insurance in power supply
Svoboda, S.:	Accountancy of enterprises in new conditions
Urban, M.:	Quality system audit
Palecek, M.:	Prevention system of serious accidents and breakdowns in the Czech Republic

- Chalupa, B.: Common conditions, methods and forms of transformation economic process in the Czech Republic
- Machkova, H.: International commerce operations
Entry preconditions of the firm to the international market
- Sedlacek, J.: Analysis of international business possibilities and their description
Analysis of competition, development of demand, market selection
- Svarc, Z.: Commerce rights, commerce systems in the world
Domestic and international sources and their common connections in market economy
- Duchecek, F.: Financial management of enterprise

List of Other Publications/Papers/Lectures

- Trkalova, D.: JP/MI and its activities (introduction to JP/MI workshops/seminars)
- Trkalova, D.: UNDP/UNIDO projects and activities of JP/MI, Press conference, Confederation of Industry of the Czech Republic and PROFIT, Prague
- Herman, J.: Financial Analysis of Investment Projects and UNIDO Methodology COMFAR, CMC Celakovice, February 1993
- Benda, J.: JP/MI activities in connection with foreign trade, Meeting with SKODAEXPORT representatives, Prague, February 1993
- Benda, J.: JP/MI activities especially in the field of project formulation
RMRDC Lagos, March 1993
- Benda, J.: UNIDO - Czech Republic Joint Programme, Metallic Industries and its activities - co-operation between Czech enterprises and foreign companies
Meeting with STROJIMPORT representatives, Prague and Brno, September 1993
- Benda, J.: Bilateral co-operation in technical and commercial field between Byelorussian representatives and Czech partners
Meeting in KOVO Prague, November 1993
- Fiala, M.: Presentation of UNIDO - Czech Republic Joint Programme, Metallic Industries and its activities; International conference "Metallurgy East-West '93", High Tatras-Stara Lesna, Slovak Republic; October 1993