

May 18, 1987

**Herbert Weiz, 'Report about the Working Visit to the
PR China from 10 to 16 May 1987'**

Citation:

"Herbert Weiz, 'Report about the Working Visit to the PR China from 10 to 16 May 1987'", May 18, 1987, Wilson Center Digital Archive, BStU, ZA, HA XVIII, 18262.

Translated by Bernd Schaefer.

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Summary:

Weiz reports on his meetings with Zhao Ziyang, Li Peng, Song Jian, Jiang Zemin, and other Chinese leaders.

Original Language:

German

Contents:

Translation - English

[Ministry for State Security of the GDR]
[Main Department XVIII]

Herbert Weiz^[1]
18 May 1987

Report about the Working Visit to the PR China from 10 to 16 May 1987

The working visit took place based on the directive from the Politburo of the Central Committee of the SED as confirmed by the Council of Ministers. All its covered assignments were fulfilled (Protocol see Appendix 1).

The Acting General Secretary of the CCP and Prime Minister of the State Council of the PR China, Zhao Ziyang^[2], received H. Weiz and other members of the delegation together with the Member of the Politburo of the Central Committee of the SED and Chairman of the Federal Board of the FDGB^[3], Comrade Harry Tisch^[4], for a meeting.

In addition, the delegation was received for an extensive conversation by the Member of the Politburo and the Secretariat of the Central Committee of the CCP, Comrade Li Peng^[5], Deputy of the Prime Minister of the State Council. We forwarded the cordial greetings of the Member of the Politburo of the Central Committee of the SED, Comrade Günter Mittag^[6], which he [Li Peng] returned in the same cordial fashion.

Many consultations were held with the State Commissar and Director of the State Science and Technology Commission, Song Jian^[7]. They focused on the development of scientific-technological cooperation as well as on exchanges about experiences in directing and planning science and technology.

On this subject, following the request of the Chinese comrades, presentations were given by Comrade H. Weiz before about 400 representatives from state organs, the economy, and academia. They were met with lively interest.

Comrade H. Weiz was welcomed in the Space Research Center by Comrade Li Xihe, Minister for the Space Industry in the PR China.

A cordial meeting took place with the Mayor of the City of Shanghai, Jiang Zemin.

As a result of the meetings, the program of concentration in long-term scientific-technological cooperation until 1990 was affirmed by both sides for 33 complexes of subjects in economically important areas. Thus the agreement about the long-term development of economic and scientific-technological cooperation - signed during the official friendship visit of the General Secretary of the Central Committee of the SED, Comrade Erich Honecker, to the PR China in October 1986, by the Member of the Politburo and Secretary of the Central Committee of the SED, Comrade Dr. Günter Mittag, and Comrade Li Peng, Member of the Politburo and the Secretariat of the CCP - is bolstered through concrete tasks.

Furthermore agreed on were the principles for mutual transfer of scientific-technological results on contractual basis for value as well as the General Conditions for the scientific-technological cooperation between both countries.

In order to prepare these documents, the XIV Session of the Permanent Commission for Scientific-technological Cooperation was held in content- and time-wise

coordination with the working visit and the 3rd Conference of the Economic Committee GDR/PR China in Beijing. The guidelines from the directive of 21 April 1987 were complied with.

The delegation chaired by Comrade H. Weiz visited, in order to explore the opportunities for a beneficial cooperation with the PR China, 17 research institutions and companies in Beijing and Shanghai, especially in the areas of key technologies like microelectronics and computer technology, new materials, and laser technology. In addition, during the conference of the Committee for Scientific-Technological Cooperation chaired by Comrade K. Herrmann 8 further research institutions and companies were visited in Shenyang and Tianjin.

An overview of factories and research institutions visited, as well as individual memoranda, are attached in the appendices [\[8\]](#).

In all talks and visits you could sense the sustained impression from the official friendship visit by the General Secretary of the Central Committee of the SED, Comrade Erich Honecker [in October 1986]. Everywhere one could note the sincere efforts to develop on a broad scale the cooperation with the GDR in the interest of economic progress and the solidification of friendly relations and peace.

The delegation was treated with extraordinary attentiveness. All our requests regarding the visits submitted prior to the visit were fulfilled.

The results of this working visit do confirm that there exist good opportunities to further the accelerated development and application of key technologies in the GDR by using the results achieved in the PR China. At the same time it became evident that there exist good preconditions to economically utilize scientific-technological results available in the GDR through export of licenses in combination with equipment deliveries to the PR China.

In more detail, the working visit to the PR China yielded the following results:

1. Talks with Leading Politicians of the PR China

All of the talks with leading politicians of the PR China expressed the high appreciation for the results of the official friendship visit by the General Secretary of the Central Committee of the SED, Comrade Erich Honecker. It was emphasized that this introduced a new stage in the relations between both states and that the traditional friendship between both peoples got strengthened further.

All conversation partners highly appreciated the stable political and economic development in the GDR. They especially emphasized that the results achieved [in the GDR] through the establishment of Combines as the most important units of the economic structure are of great interest to the future economic build-up in the PR China.

They emphasized that the PR China will maintain socialism in its further development, and that it will consequently fight against phenomena of bourgeois liberalism, which had recently appeared in the context of the policy of opening up towards the West.

a) The acting General Secretary of the Central Committee of the CCP, Comrade Zhao Ziyang, highlighted the following in the meeting with Comrades H. Tisch and H. Weiz:

- When developing bilateral relations, it is important to show political respect to each

other and to cooperate in the economic field on the basis of equality for mutual benefit. Here the PR China works from the assumption of our common foundation concerning the build-up of socialism.

- There are two major issues in the PR China: First, the results of the reforms have to prove the superiority of socialism. Second, the education of the youth and the overall political-ideological work has to be substantially increased, qualitatively improved, and implemented with more persuasion.

- In this context, one should highlight to the [Chinese] youth the GDR as an example for the development of socialism.

- We have not forgotten in the PR China how in the years after the liberation [1949] many Chinese specialists were trained in the GDR, and that many GDR specialists helped in the PR China with the build-up of socialism.

- Based on the agreements made at the highest level, the PR China is placing great weight on the further expansion of scientific-technological cooperation. We have to jointly explore how to effectively develop to mutual benefit the cooperation regarding the reconstruction of factories in the PR China and the implementation of the program of developing rural areas of the PR China through the application of science and technology (Plan "Spark").

Comrade Zhao Ziyang emphasized that he is looking forward with great expectations to his upcoming visit^[9] to the GDR and to meeting again with the General Secretary of the Central Committee of the SED, Comrade Erich Honecker.

b) In the meeting with the Member of the Politburo and the Secretariat of the Central Committee of the CCP, Comrade Li Peng, as well as during the consultations with the State Commissar and Director of the State Science and Technology Commission, Comrade Song Jian, we explained from our side the results of the successful implementation of the economic strategy of our Party based on the decisions by the XI SED Party Congress^[10]. Here we placed the main focus on the experiences of central guidance and planning of the economy as well as on the links between science and production, with the Combines acting as the main force to master the scientific-technological revolution. It was emphasized that the guarantee for a dynamic development of achievements in the economy does require great efforts and a targeted and clear leadership by the Party. Recently, it has successfully passed a severe test when mastering the harsh conditions of winter.

c) Comrade Li Peng emphasized in the meeting that the situation in the PR China is stable in both economic and political terms. He praised the visit by the General Secretary of the Central Committee of the SED, Comrade Erich Honecker, as being very successful.

He expressed his satisfaction that, with the program on scientific-technological cooperation agreed as a result of the consultations with Comrade H. Weiz, the agreement on long-term development of economic and scientific-technological relations as agreed during the visit will be consequently implemented.

In China's industry there is a process ongoing to establish so-called "factory groups" where experiences from the work of the Combines in the GDR are applied. This is also to support the link between science and production. Therefore research institutions are getting integrated and contractual relationships between the factories and the scientific institutions are established.

It is the main focus to direct scientific research towards the need of the economy.

Of special importance is the use of scientific-technological results for elevating the level of development in the rural areas. 800 million people are living there, and their living standards have to be raised through an increase in production.

He said he is convinced that the development of scientific-technological cooperation between the two countries can make a substantial contribution in this regard.

d) The State Commissar and Director of the State Science and Technology Commission, Comrade Song Jian, emphasized the following during the meetings:

- Like him, many members of the government of the PR China have already visited the GDR. They have all arrived at the conviction that in the GDR state leadership and the people have been doing good work for many years. It is a special achievement to guarantee security and comfort to the citizens in a complicated foreign trade economic situation.

- All of the visitors are also impressed by the combination of research, production, and turnovers in the Combines. It is worthwhile for the PR China to study the experiences of the GDR.

- A comprehensive use of scientific-technological progress is in the PR China as well the core of the policy to strengthen the economic performance.

They are focussing their work here in the following directions: □□ Modernization of the industry at a high scientific-technological level

- . Development of the rural areas of the PR China through the application of science and technology (Plan "Spark")

- . Support for the poor regions of the PR China

- . Development of high technologies to guarantee a dynamic development beyond the year 2000

□□

A certain extent of basic research is indispensable especially for training a qualified number of cadres. It is currently in the works to prepare the lines for development in this area in such a way that decisions can be made in this regard in 1988.

- In the PR China there exists a consequent orientation towards increasing the cooperation with the socialist countries. Just recently it was recommended in the Central Committee of the CCP not to forget the support from the socialist fraternal countries in the early years and to turn these experiences into a starting point for a fruitful cooperation of mutual benefit. One has convinced itself that a cooperation with the capitalist countries is very difficult and very expensive for the PR China.

- Regarding the future development of cooperation in science and technology, the direct links between factories and institutions of both countries are supposed to be developed according to the program of long-term cooperation and on a contractual basis, according to the agreements reached between the respective ministries in charge. The necessary rank of importance has to be granted to direct relations between the large cities and provinces where most means of production are located.

- It is necessary to find new forms of contractual cooperation for the expansion and implementation of the commercial exchange in science and technology. Here he is thinking about the utilization of scientific-technological results of the GDR for the

performance development of the PR China, all of which is economically advantageous to both sides.

e) The Mayor of Shanghai, Comrade Jiang Zemin, stated in his welcoming address to the delegation headed by Comrade H. Weiz in Shanghai that the visit by the General Secretary of the Central Committee of the SED, Comrade Erich Honecker, has provided new and forceful impulses to the for some years already developing relations in all areas.

The high level of development and the performance capacity of the GDR, as well as the economic and scientific-technological potential of Shanghai, are offering good preconditions for the further expansion of mutually beneficial relations between the GDR and the City of Shanghai.

He referred to the successful visit by the delegation of the Commission for Science and Technology of the City Government to the GDR in April of 1987 and the positive impressions he had gained during his visit to the GDR in 1984 in his then capacity as Minister for Electronics of the PR China.

He expressed the desire to expand the scientific-technological cooperation with concrete projects between factories and institutions of the GDR and his city.

f) The Minister for Space Industry of the PR China, Comrade Li Xihe, expressed during a meeting in the Space Research Center the desire to establish a cooperation with the GDR. Although all material, construction units, and construction parts for the Chinese satellites are coming from Chinese production, there is interest to also use insights from abroad. Since the technological level of the GDR is high, he is believing that certain construction elements and equipment could also be of interest to the space industry of the PR China.

No promises were made from our side in these regards.

The informations about the meetings and conversations with Comrades Li Peng, Song Jian, and Jiang Zemin are attached as Appendix 3.[\[11\]](#)

2. Exchanges about Experiences in Guidance and Planning of Science and Technology

The experiences of the GDR in guidance and planning of science and technology were met with great interest during the consultations with the State Commissar and Director of the State Science and Technology Commission, Comrade Song Jian, and at the presentations before representatives from the state organs and from the economy and academia in Beijing and Shanghai.

The Chinese partners were especially interested in

- the links between science and production in the Combines and the form of contractual relations between the Combines and the research institutes of the Academy of Sciences and the university system;
- the role of the Research Council of the GDR in determining the targets for scientific-technological work and the related implementation of socialist democracy in the area of science and technology;
- the systematic development and application of key technologies with the state targets for science and technology within the framework of central planning;

- involvement of the youth in the task to apply the scientific-technological progress with the youth research collectives of the FDJ.[\[12\]](#)

The Chinese partners assessed that the problems of development in this area in the PR China are requiring in many respects to thoroughly study the methods realized in the GDR.

It was agreed to continue with a deeper exchange of experiences within the framework of direct relations between the Ministry for Science and Technology and the State Commission for Science and Technology of the PR China.

The following is worth to be emphasized from the statements by State Commissar Song Jian regarding the status of implementation of the passed reform for the area of science and technology:

- The efforts towards a stronger link between science and production have yielded first results. Research institutions have moved to a greater extent towards working on scientific-technological tasks regarding economic development on a contractual basis with factories. They have begun to produce themselves tools and equipments for sales.

- However, the integration of research institutions in the factories is still unsatisfactory. With the establishment of so-called factory associations (similar to the Combines in the GDR) one is hoping for progress in this regard.

- Instructions are issued to establish to larger extent factories for the industrial implementation of research and development results. They are supposed to be directed by capable scientists with a pioneer spirit.

In order to guarantee that the PR China will reach the international top level in areas decisive for [economic] progress, and in order to guarantee the conditions for dynamic economic development beyond the year 2000, the Politburo of the Central Committee of the CCP and the Government of the PR China have adopted a Program for the Development of High Technologies for the next 15 years.

It is comprised of 7 main directions while 13 programs are to be realized within their framework. In terms of content, they correspond to major extent to the main directions of scientific-technological work in the GDR:

- Biotechnology (plant and animal breedings, new pharmaceuticals, protein engineering)
- Information technology (intelligent computer systems, optoelectronic elements and systems, information acquisition and processing)
- Automatization technology (computer integrated manufacturing systems, intelligent robots)
- Energy technology (nuclear energy, efficient coal exploitation)
- Laser technology; new materials; space travel technology.

In order to coordinate the work in these areas, expert commissions have been established which are directed by the State Commission for Science and Technology.

As a result of the meetings, it was unanimously agreed that the similarities of objectives for scientific-technological work are offering good conditions for the development of scientific-technological cooperation concerning the accelerated development and utilization of key technologies.

3. Visits in Research Institutes and Factories

The visits in 25 research institutes and factories of the PR China provided comprehensive information about the scientific-technological level of research work and the technological level of production.

The large attention devoted in the PR China to the development of science and technology was on display primarily in the excellent equipment of the visited research institutes with most modern measuring and analytical technology, as well as computer technology from the highly developed capitalist industrial countries.

On this basis, excellent results have been achieved in some areas of key technologies. In part they are surpassing the state of development achieved in the GDR.

a) The scientific-technological level of the research results in the areas of new ceramic materials, laser technology, and opto-electronics, including the here needed materials and supplies, correspond in many cases to the international top level. This is concerning, for instance, the following results:

□□ The production of glass fibers for light guides message transmission in a waveband of 0.85 micrometer is mastered in the production of several factories. The development of mono-mode light guides for transmission in the area of wave lengths between 1.3 and 1.6 micrometer has been finalized in laboratories.

□□

□□ High performance lasers up to 3 kilowatt for machining purposes are in production. For the performance area up to 5 kilowatt the development has been finalized in laboratories.

□□

□□ The cultivation of zinc selenide crystals up to diameters of 75 millimeters as window material for high performance laser gets mastered.

□□

□□ There is a broad range of lasers, as well of optoelectronic and electrooptical components, in production currently, among them helium-neon lasers, argon lasers, metal vapor lasers, white light lasers, carbon dioxide lasers of different performance levels, neodymium lasers, excimer lasers with high impulse energy, semi conductor lasers for communication transfer at 1.3 and 1.6 micrometers, materials for optical components like windows, reflectors, filters, prisms, among them made from infrared transparent glasses and crystals.

□□

□□ Superconductive layers with a transition temperature of 100 degrees Kelvin are produced in laboratories from ceramics.

□□

□□ High performance magnetic materials on a basis of samarium/cobalt and of neodymium/iron/boron, including the technologies to build the magnetic bodies, are getting mastered.

□□

□□ An enamel has been developed for low baking temperatures in single firing in order to save on cobalt respectively nickel as adhesive agents and to lower energy use.

□□

□□ Static hot presses for temperatures up to 2,200 degrees Celsius and pressures up to 200 tons are available from prototype making for the production of building components made from new ceramic materials.

□□

□□ The powders for the production of ceramic construction materials on a basis of silicon nitride and silicon carbide are available from in-house production.

□□

□□ Honeycomb ceramics (diameter 100 millimeters, wall thickness between the pores 0.15 millimeters) for heat exchangers, catalysts, and chemical reactors are produced by an own method.

□□

In the area of scientific apparatus engineering a wide range of needed research technology is produced in the PR China. The level of own developments in the Chinese institutes visited is about 5 years behind the international top level.

The high level and the broad range of high vacuum components, which are available from both industrial manufacturing and institute production, is remarkable (turbo molecular pumps, cryogenic pumps, ionic lattice pumps, flanges, and performances for ultra high vacuum). Those are urgently needed in the GDR.

Of further interest as imports from the PR China are scanning electron microscopes, computer controlled gas and liquid chromatographs, as well as NMR[13] spectrometers. They are manufactured by utilizing Know-How from leading capitalist companies, and probably they can be acquired cheaper from the PR China than from the NSW[14].

Pertaining to microelectronics, we noted in the factories and institutes we visited a deficit vis-a-vis the GDR. Production of circuits lies in the range of structure widths between 5 micrometer and down to 3 micrometer.

It was explained to us that the semiconductor industry is not running at full capacity because of fierce competition with the cheap imports of circuits from Japan and Hong Kong. Since there is no state-directed import policy [in the PR China], the latter can easily be acquired by the [Chinese] electronic equipment industry.

However, this results in extraordinarily short delivery times regarding the procurement of medium and low integrated circuits meeting customer requests. For instance, the Semi-Conductor Factory No. 3 in Beijing is able to deliver circuits already three months after receiving an order based on its own gate array system with up to 1,000 inch gates. The domestic price for numbers of about 5,000 pieces is said to be 20 to 30 Yuan (10 to 15 Valuta Mark) and for about 100,000 units of circuits 5 to 10 Yuan (2.50 to 5 Valuta Mark).

It has to be reviewed whether to use this opportunity to purchase respective circuits to accelerate our own equipment developments.

In the area of computer technology the situation also seems to be impacted by the aspect of competition with imports from the NSW. As the director of the Computer Factory Shanghai explained, the consumers rather prefer the cheap devices from Hong Kong than the personal computers (16 bit, following IBM standards) and computers (32 bit, following VAX standards) produced in his factory through utilizing micro processors from the NSW. He offered to deliver discs (35 inches), which are manufactured in Shanghai under the license of the "3 M" company (USA). The domestic price is 6 to 8 Yuan (3 to 4 Valuta Mark).

In several institutes software is produced for the United States within the framework of "Joint Venture" agreements. All modern languages and operating systems are mastered.

b) The equipment of the visited research institutes with research technology is based on extensive imports of most modern scientific top devices from the highly developed

capitalist countries, in particular measuring and analytical technology. Furthermore, there is equipment available from domestic production (in part based on licenses from the United States, Japan, and the FRG) at a broad range for routine measuring.

In the institutes visited we noted the concentrated use of imported top technology, like electron microscopes up to a resolution of 1.4 aperture (Jeol, Hitachi, Philips), secondary ions mass spectrometers, electron spin resonance spectrometers, nuclear magnetic resonance spectrometers, electron beam micro analyzers, electron beam probes.

With the top measuring technology available, for instance at Fudan University a systematic research of layer structures of micro-electronic components from domestic production as well as from imports is conducted. As a result, information is gathered to increase yield and quality assurance; as well as rejections of not true-to-quality components vis-a-vis foreign suppliers become possible.

During the talks, the Chinese partners emphasized they are only buying the best of research technology so that research can yield to achievements.

In part the imported equipment is supplemented with additional equipment from domestic production and thus the chance of utilization beyond the international available top level gets increased.

The computer technology available in the research institutes is also on international top level. In addition to the most modern mainframe computers from IBM (USA) and Siemens, one could see the latest models of laser printers (Siemens), plotters (Hewlett Packard), and graphics periphery (USA). For the circuit design, they use in the institutes 32-bit computers from Digital Equipment (USA) with most modern periphery and mainframe computer connections. Personal Computer with 16 bit processing widths (mostly from IBM) existed in the institutes in large numbers.

Just the universities we visited in Shanghai (Fudan and Tongji University) with combined 16,000 students had the opportunity in 1986 to purchase research technology from capitalist industrialized countries for 12 million US-Dollar.

The GDR scientists, who were part of the delegation, estimated that the level of equipment in these universities is currently not reached by any university in the GDR. The same situation applies to the institutions of the Academy [of Sciences] and the institutes of the GDR.

In order not to fall behind with the acceleration of scientific-technological progress in the GDR, it appears necessary to spend and target the overall available valuta means in the amount of 12 million Valuta Mark in the areas of the Academy of Sciences of the GDR and in the GDR university system for the acquisition of urgently needed top technology. The valuta have to be increased up to a degree where the necessary measuring and analytical methods in the GDR are mastered at international top level. This also applies to the equipment of the research institutes of the Combines.

c) During the meetings and visits it was noted that the education of cadres in the USSR and the GDR in the 1950s has an extraordinary long-term effect for the attitude of leading officials of the PR China towards socialism and regarding cooperation with the socialist countries.

For instance, State Commissar Song Jian, his Deputy and Chairman of the Chinese side in the Commission for scientific-technological Cooperation with the GDR, Zhou

Lilan, and the Minister for Light Industry, Zeng Xianlin (the former deputy of Song Jian) have graduated from universities in the USSR.

The directors of the Institute for Laser Technology in Shanghai and for Optoelectronics in Beijing have both studied in the GDR.

Many deputy institute directors and department heads of the institutions we visited have received their education in the USSR, respectively the GDR, and have a friendly attitude towards us.

In recent years the focus for the education of Chinese specialist has shifted to capitalist industrialized countries (FRG, USA). As Comrade Song Jian stated, currently 20,000 students and PhD candidates are abroad in capitalist states for their education; this would be generously supported by these countries. The Tongji University in Shanghai, the only university in the PR China where German is taught as first foreign language, enjoys extensive support from FRG institutions. Now there also will be an Institute for GDR Research established, in addition to the Institute for FRG Studies.

It appears necessary to visibly increase the influence of the GDR through focused support of the Institute, targeted deployment of academics and maybe also students and PhD candidates from the GDR.

In order to secured the long-term required influence in cooperation with the PR China as the most populous country on earth with great economic potential, it appears necessary to reassess the concept for the education of students from the PR China in the GDR and of GDR students in the PR China.

The individual reports about the research institutes and factories visited are in Appendix 4.[\[15\]](#)

4. On the Development of Scientific-Technological Cooperation with the PR China

During the working visit, the main components of long-term scientific-technological cooperation until 1990 were agreed concerning 33 subject complexes in the areas of geology, coal mining and processing, chemical industry, metallurgy, electronic engineering, mechanical engineering, light industry, building trade, as wells as agriculture, forestry, and food industry. These components are to be considered an important step for the implementation of the 15-year agreement on the long-term development of economic and scientific-technological cooperation with the PR China.

It is necessary to consequently fulfill these tasks guided by the [GDR] ministers in charge. Its implementation is to be controlled strictly by the Ministry for Science and Technology in coordination with the work of the Economic Committee GDR/PR China.

The results of the study delegations deliberately sent to the PR China in late 1986 and early 1987 in the areas of computer technology, microelectronics, biotechnology, and metallurgical materials - as well as the results of our working visit - make it necessary to complement and expand the long-term program of scientific-technological cooperation, in order to utilize the opportunities existing in the PR China regarding the accelerated development of key technologies in the GDR.

We achieved agreement with the Chinese side on this and agreed to draft respective proposals by the end of 1987.

Given the current status of insights and agreements, this can be based on the tasks outlined in Appendix #2 [\[16\]](#) of this report.

In order to prepare accordingly the contractual agreements for direct relations of the Combines, the Academy of Sciences, as well as the universities and colleges, with factories and research institutes of the PRC, it is necessary to send in the short run thoroughly prepared study delegations to the PR China for the following areas:

- Laser technology and optoelectronics
- Scientific apparatus engineering and high vacuum technology
- New ceramic construction materials
- Polymeric fibers and technical applications

The willingness of the Chinese side to receive these delegations was accomplished with this working visit to the PR China.

When determining new areas for cooperation, the advice by Comrade State Commissar Song Jian must be heeded to consider the larger cities, like e.g. Beijing, Shanghai, Shenyang, and Tianjin.

The City Governments of these cities command extensive scientific-technological potential. Directed by organs of the City Governments, the so-called "City Commissions for Science and Technology" are cooperating closely with the industry and have in part substantial productions capacities of their own.

Regarding the participation of the GDR in implementing the program of the PR China to develop the rural areas (Plan "Spark") through the sale of licenses and equipment, the consultations achieved that the proposals already submitted by the GDR in October 1986 will be answered in short term and the negotiation partners on the Chinese side will be named. They apologized for the occurred delay, which they explained with problems in the PR China regarding organization and funds.

Another result of the consultations and visits in factories and institutes is that license activities vis-a-vis the PR China have to improve in quality. In order to yield economic results for the GDR, the licenses offered must be aimed at productive solutions that are feasible in short term. In any case, they must contain concrete offers for the deliveries of equipment respectively construction components or building documentation for in-house manufacturing in the PR China, as well as offers for services to transfer the solutions to production (supervision assembly, training).

A good example in this regard is the contract signed about the construction of the Compressing Gas Plant in Harbin.

In those cases where the gathering of insights from the PR China is in the interest of the GDR, the equivalent exchange of licenses and Know How on a contractual basis would make sense. This pattern was especially emphasized by Comrade State Commissar Song Jian during the consultations in order to accelerate mutually beneficial cooperation.

In this context we also have to evaluate the proposal by Comrade Song Jian to find new methods of contractually based cooperation directed towards the utilization of scientific-technological results of the GDR in the PR China on a mutually beneficial economic basis.

He expressed that the methods of capitalist "joint ventures" are currently subject to legislation influenced by the Ministry of Foreign Trade of the PR China and targeted

towards production of goods for export to the capitalist countries. This method needs to be complemented by a model adequate for socialist cooperation. New ideas are required here which he will further within the government of the PR China.

In order to expand the mutual exchange of results and experiences, in his opinion also the valuta-free exchange of scientists needs to be expanded within the framework of contractual cooperation concerning the long-term subjects. This should apply not just to cooperation between the Academy and the universities, but also between the Combines and factories of both countries.

5. Conclusions

1. The agreed subjects and foci for the long-term scientific-technological cooperation until 1990 are to be implemented consequently under the responsibility of the Ministers in charge, respectively the President of the Academy of Sciences of the GDR in coordination with the work of the Economic Committee GDR/PR China.

In charge: □

Minister for Science and Technology

Chairman of the Economic Committee GDR/PR China, Dr. Wyschofsky^[17]

Respective Ministers

President of the Academy of Sciences of the GDR

2. In order to utilize the opportunities emerging from the cooperation with the PR China for the accelerated development and application of key technologies in the GDR, proposals for cooperation in the areas listed below are to be drafted. Study delegation need to be sent to the PR China to prepare according agreements. The scientists who were part of our delegation to the PR China, as well as leading representatives from the respective Combines and scientific institutions, are to be included in the preparation of these proposals.

- New Ceramic Materials (Professor L. Michalowski)

Participation:

Minister for Higher and Vocational Education

Minister for Glass and Ceramics Industry

- Development and Application of Laser Technology and Optoelectronics□□□□□(Professor B. Wilhelmi)

Participation:

Minister for Higher and Vocational Education

Minister for Electrical and Electronic Engineering

Minister for District-Directed Industry and Food Industry

- Scientific Equipment Building and Vacuum Technology, including Exchange of Equipment and Acquisition of Parts and Components

□□(Professor N. Langhoff)

Participation: President of the Academy of Sciences of the GDR

Minister for Electrical and Electronic Engineering

The overall coordination by the Minister for Science and Technology is to be guaranteed.

Dates:

Proposals for Cooperation and Directives for the Study Delegations: June 1987

Agreements with the Chinese Side by the Study Delegations: October 1987

3. Based on the agreements signed with the partners of the PR China as a result of the study delegations, the subjects for long-term scientific-technological cooperation between the GDR and the PR China until 1990 are to be complemented. The respective proposals to be forwarded to the Chinese side need to be submitted.□

In charge: □

Minister for Science and Technology

Respective Ministers

President of the Academy of Sciences of the GDR

Date:

November 1987

4. In the framework of the annual trade agreements between the GDR and the PR China from 1988 onwards, required funds need to be provided for the acquisition of equipment, construction components and parts, as well as materials for the acceleration of research projects regarding the development and utilization of key technologies in the GDR. The amount is to be coordinated between the Minister for Science and Technology and the Minister for Foreign Trade.

In charge: □

Minister for Science and Technology

Minister for Foreign Trade

Date:□□

October 1987

5. For the determined utilization of scientific-technological results of the GDR, in combination with the exports of equipment, construction components, and services, concrete license offers are to be drafted within the framework of the work of the Economic Committee and to be presented in a targeted fashion to suitable partners in the PR China.

In charge: □

Respective Ministers

Minister for Science and Technology

Chairman of the Economic Committee GDR/PR China, Dr. Wyschofsky

Chairman of the State Planning Commission

Minister for Science and Technology

Date:

immediately

6. The concept for the education of students and PhD candidates of the PR China in the GDR, as well as of GDR students respectively PhD candidates in the PR China, is to be assessed with the objective to create the required conditions for [qualified] cadres for the long-term development of economic and scientific-technological

relations with the PR China.

In charge:□

Minister for Higher and Vocational Education

Chairman of the State Planning Commission

Date:

October 1987

[1] Born 1924.

[2] 1919-2005. Premier of the PRC 1980-1987, General Secretary of the CCP 1987-1989. Lost power in June 1989 and spent the rest of his life under house arrest.

[3] "Freier Deutscher Gewerkschaftsbund" = "Free German Trade Association", the GDR state mass organization for workers.

[4] 1927-1995.

[5] 1928-2019. Vice Premier of the PRC 1983-1987, Prime Minister 1988-1998/

[6] 1926-1994. Member of the SED Politburo and Secretary for Economy in the SED Central Committee.

[7] Born 1931. Director of the PRC State Science and Technology Commission 1985-1998.

[8] Not part of this document.

[9] 8 to 12 June 1987.

[10] Held in Berlin from 17 to 21 April 1986.

[11] Not part of the document.

[12] "Freie Deutsche Jugend": Free German Youth, the youth mass organization of then GDR.

[13] Nuclear Magnetic Resonance.

[14] "Nicht-sozialistisches Wirtschaftsgebiet" = "non-socialist economic area", i.e. capitalist Western countries.

[15] Not part of this document.

[16] Not part of this document.

[17] Günther Wyschofsky, born 1929. Minister for Chemical Industry in the GDR between 1966 and 1989.