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# ***JPRS Report***

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## **Soviet Union**

### ***Economic Affairs***

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# Soviet Union

## Economic Affairs

JPRS-UEA-91-030

### CONTENTS

10 JULY 1991

## NATIONAL ECONOMY

### ECONOMIC POLICY, ORGANIZATION, MANAGEMENT

Strategic Reserves Used To Help Industry [V. Ladygin; SOVETSKAYA LATVIYA, 29 May 91] ...	1
New Regulations on Currency Explained [A. Voytenkov; DELOVOY MIR, 18 Jun 91] .....	2
USSR Law on Inventions Published [IZVESTIYA, 15 Jun 91] .....	4
Decree Enacting Inventions Law [IZVESTIYA, 15 Jun 91] .....	15
Economist's Methodology, Results Criticized [T. Kozlov; EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO) No 2, 1991] .....	16
Economist Defends Own Results [G. Khanin; EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO) No 2, 1991] .....	20
Exchange Conference Focuses on Needed Legislation, Operations [O. Prokofyev; EKONOMIKA I ZHIZN No 15, Apr 91] .....	23
Problems of Conversion Examined [V. Tkachuk; FINANSY SSR No 1, 1991] .....	26
Defense Industry Minister Belousov on Conversion [V. Badov; RABOCHAYA TRIBUNA, 7 Jun 91] .....	31
Higher Customs Rates for Foreign Goods Explained [N. Kozlova; RABOCHAYA TRIBUNA, 22 Jun 91] .....	34
New Customs Tariffs May Hurt Consumers [A. Protsenko; IZVESTIYA, 20 Jun 91] .....	35
USSR Arbitration Court Structure, Functions Explained [V. Yakovlev; IZVESTIYA, 21 Jun 91] ..	37

### INVESTMENT, PRICES, BUDGET, FINANCE

USSR Law on Amendments to Income Tax Law [IZVESTIYA, 24 Jun 91] .....	39
Law on Amendments to Repeal of Tax Law [IZVESTIYA, 24 Jun 91] .....	43
Decree on Enacting Amendment Laws [IZVESTIYA, 24 Jun 91] .....	44

### INDUSTRIAL DEVELOPMENT, PERFORMANCE

Atomnash Diversifies to Consumer Goods Production [G. Belotserkovskiy; RABOCHAYA TRIBUNA, 15 Jun 91] .....	45
Krasnoyarsk-26 Faces Conversion Problems [V. Khrebtov; EKONOMIKA I ZHIZN No 14, Apr 91] .....	46
Ministry Becomes Joint-Stock Association [N. Panichev; IZVESTIYA, 2 Jul 91] .....	47

## AGRICULTURE

### AGRO-ECONOMICS, POLICY, ORGANIZATION

Land Ownership Questions Explored .....	50
Discussion by Gosplan Worker [V. Petrenko; SELSKAYA ZHIZN, 1 Feb 91] .....	50
Follow-Up: Peasants Not Heard [I. Chizhikov; SELSKAYA ZHIZN, 15 June 91] .....	51
Supreme Soviet Looks at Obstacles [SELSKAYA ZHIZN; 28 May 91] .....	52
Progress on Land Reforms Discussed [A. Yemelyanov; KHOZYAIN No 8, May 91] .....	52
Starodubtsev Discusses Peasants' Concerns .....	56
Interview on Peasant Wants, Union Role [V. Starodubtsev; SELSKAYA ZHIZN, 14 Jun 91] .....	56
Chairman's Report to Peasant Congress [SELSKAYA ZHIZN, 18 Jun 91] .....	57

## REGIONAL DEVELOPMENT

RSFSR Agrarian Leaders Discuss Peasants' Interests .....	63
Bashmachnikov on AKKOR Role [V. Bashmachnikov; SELSKAYA ZHIZN, 12 Jun 91] .....	63
Mikhaylov Interviewed on Agrarian Union [A. Mikhaylov; ZEMLYA I LYUDI No 25, 21 Jun 91] .....	64
Nikonov Attends Saratov Agrarian Congress [Ye. Tokareva, et al.; ROSSIYSKAYA GAZETA, 26 Jun 91] .....	67

## CONSUMER GOODS, DOMESTIC TRADE

### POLICY, ORGANIZATION

Goskomsen Chief Answers Consumers' Price Questions [V. Senchagov; EKONOMIKA I ZHIZN No 16, Apr 91] .....	68
Prices in Military Cafeterias Protected [N. Sadovnikov; KRASNAYA ZVEZDA, 6 Jun 91] .....	70

### GOODS PRODUCTION, DISTRIBUTION

Statistics on Light Industry Goods Supplied [A. Bokov; EKONOMIKA I ZHIZN No 17, Apr 91] ..	71
--	----

### HOUSING, PERSONAL SERVICES

Housing Availability in Dushanbe, Vilnius, Yerevan [V. Ashurov, G. Konchyus; TRUD, 15 Jun 91] .....	75
--	----

## ENERGY

### FUELS

Oil, Gas Construction Ministry Change to Market Economy Examined [V. Chirskov; STROITELSTVO TRUBOPROVODOV No 1, Jan 91] .....	78
Oil, Gas Construction Production Processes Automation Noted [D. Muzhev; STROITELSTVO TRUBOPROVODOV No 1, Jan 91] .....	86

### ELECTRIC POWER GENERATION

Nuclear Power Station Training Exercises Highlighted [A. Biryukov, et al.; ELEKTRICHESKIYE STANTSII No 2, Feb 91] .....	87
Minister on Electric Power Industry Problems [Yu. Semenov; ENERGETIK No 3, Mar 91] .....	93

## LABOR

Draft USSR Law on Labor Safety [RABOCHAYA TRIBUNA, 18 Jun 91] .....	103
Pension Fund Board Chairman Gives Positive Outlook [O. Tarasov; IZVESTIYA, 19 Jun 91] .....	107
Report on Progress of Ministry-Trade Unions Labor Accord [TRUD, 18 Jun 91] .....	109
Unemployment Impact of Impending Market Conditions Discussed [V. Kovalenko; ROSSIYSKAYA GAZETA 19 Jun 91] .....	109
Director of Public Fund For Unemployment Protection Interviewed [A. Kapustin; RABOCHAYA TRIBUNA, 26 Jun 91] .....	112
Republic Receptiveness to Miners' Cares Probed [M. Loginov; LITERATURNAYA GAZETA No 24, 19 Jun 91] .....	113
Miners Oppose 'Social Partnership' Concept [TRUD, 28 Jun 91] .....	116
Strike Developments at Tsentrlnaya Mine [A. Golyaev; TRUD, 28 Jun 91] .....	117
Economist Examines United Workers' Front [Yu. Shushkevich; ROSSIYSKAYA GAZETA, 20 Jun 91] .....	117

## TRANSPORTATION

### CIVIL AVIATION

Antonov Design Bureau Work Reviewed [P. Balabuyev; <i>RABOCHAYA GAZETA</i> , 31 May 91] .....	119
New Aviation Concern Highlighted [V. Pinayev; <i>VOZDUSHNYY TRANSPORT</i> No 26, Jun 91] ..	120
Aviation's Agricultural Work Noted [A. Nikitin, et al.; <i>VOZDUSHNYY TRANSPORT</i> No 26, Jun 91] .....	121
Spare Parts, Fuel Shortages Plague Aeroflot [M. Buzhkevich; <i>PRAVDA</i> , 14 Jun 91] .....	123
Taganrog's 'Albatros' Aircraft to Paris Air Show [G. Panatov; <i>RABOCHAYA TRIBUNA</i> , 5 Jun 91] .....	125

### RAIL SYSTEMS

Container Transport Improvements Viewed [M. Basyrov, G. Pisarevskiy; <i>ZHELEZNODOROZHNYI TRANSPORT</i> No 2, Feb 91] .....	126
Program for Increasing Train Speeds Reviewed S. Shkapich, G. Akhramenko; <i>ZHELEZNODOROZHNYI TRANSPORT</i> No 2, Feb 91] .....	130
High-Speed Rail Project Addressed [B. Zimting; <i>ELEKTRICHESKAYA I TEPLOVOZNAYA TYAGA</i> No 2, Feb 91] .....	132
Railroad Chief on Local Consequences of Chernobyl Incident [M. Grabskiy; <i>GUDOK</i> , 6 Jun 91] .....	137
Ufa Railroad Tragedy Investigation Concluded [Ye. Nichkova, G. Agisheva; <i>KOMSOMOLSKAYA PRAVDA</i> , 31 May 91] .....	138
Railway Passenger Service Changes, Pricing Policy Examined [V. Shatayev; <i>IZVESTIYA</i> , 11 Jun 91] .....	139
Railroad Freight Traffic With China to Resume [A. Golubchenko; <i>RABOCHAYA TRIBUNA</i> , 8 Jun 91] .....	140
Railway Medical Service Highlighted [V. Sibilev; <i>GUDOK</i> , 14 Jun 91] .....	141

### MARITIME AND RIVER FLEETS

Shipyards Activity Reported [A. Khaustov; <i>SUDOSTROYENIYE</i> No 1, Jan 91] .....	143
Maritime Fleet Composition Detailed [SUDOSTROYENIYE No 1, Jan 91] .....	146



## ECONOMIC POLICY, ORGANIZATION, MANAGEMENT

### Strategic Reserves Used To Help Industry

914A0893A Riga SOVETSKAYA LATVIYA in Russian  
29 May 91 p 4

[Interview with V. Ladygin, chairman of the Committee for Government Material Reserves under the USSR Cabinet of Ministers, by G. Bilyalitdinova: "Strategic Reserves: Myths and Reality"]

[Text] Moscow—Now that the economic links among enterprises and republics have been disrupted, and many food items and essential goods are not available, many readers may be asking the following question: Does the government have any strategic reserves?

It is true that the time is now right to scrape clean the country's barns and bins. Is the situation the same where it concerns strategic reserves? I directed our readers' questions to V. Ladygin, chairman of the Committee for Government Material Reserves under the USSR Cabinet of Ministers.

[Ladygin] This concern on the part of our people is not groundless. I will be honest with you: If it were not for our government reserves which, by the way, also include strategic reserves, many of our plants and factories would have stopped long time ago. We give away so much today, which we never did before. We are most distressed about the fact that of late we have been taking considerably more than we are putting back. This results in a drastic reduction of our reserves. For instance, our industry does not produce sufficient amounts of ferrous metals and we issue such metals to the corresponding plants to help them stay afloat, without stopping production. Or take aluminum. We do not produce sufficient quantities of it now either. We have to honor the request of the Ministry of Automotive and Agricultural Machine Building and issue large amounts of it so that car production can go on. A similar situation also exists in many other industries.

[Bilyalitdinova] At what level is the decision made on issuing materials from government reserves?

[Ladygin] Mostly this is done at the government level. Sometimes it is done through recommendations from our technology experts when the goods storage time is close to expiring and they have to be "refreshed." The part of our reserves that needs to be replaced by new goods can be handed over to the people's economy. Lately, however, our resources have been "flowing away" too often before their storage time expires.

[Bilyalitdinova] Who does the "begging"—republics, or managers of ministries and industry branches?

[Ladygin] It depends on what they want to get. Ministries, agencies, concerns, and associations ask for industrial and raw materials. Oblispolkoms [oblast soviet

executive committees], krayispolkoms [kray soviet executive committees], and Union republics mostly want food items.

[Bilyalitdinova] Who should replace the resources, the party that takes them?

[Ladygin] Yes, whoever that is—a ministry or a region. Besides, they should do it out of their own funds, strictly within the agreed time limits. Unfortunately, this condition very often remains unobserved. Due to the sovereign and independent status of certain regions, some cities, rayons, oblasts, krays, and republics find it possible not to honor the agreement. There are many such examples. Last year we had basically no sugar, unless we count a small amount, which was a strategic reserve, by the way, that we managed to get in the Ukraine and the Russian Federation. But most of their sugar they kept for themselves. For that reason it is very hard for us now to honor those requests that are extended to us by some oblasts and krays, including Khabarovsk, Krasnoyarsk, Tyumen, and Perm. Previously, we used to store up to three million tons of it and distributed it in spring, as they say, when people need vitamins, and in summer, when people make preserves, until the sugar beet harvest came in and new sugar was produced.

[Bilyalitdinova] Vladimir Nikolayevich, what is the practice in other countries with respect to their strategic reserves? What could we learn from them?

[Ladygin] Most of our contacts concerning work with government reserves were with the countries of Eastern Europe, Cuba, Vietnam, and Mongolia. They learned from us and we learned from them. As for the capitalist countries, they are similar to us in structure. Apart from food items, we have almost identical lists of materials, raw materials, and foodstuffs except, maybe, crude oil, which they also include in government reserves. They also have frequent problems—the war in Vietnam, the Persian crisis... According to our data even under Reagan the level of strategic reserves in the United States dropped some five times. Later they were replenished and then they diminished again. In other words, they must sense situation changes somewhat better than we do. Incidentally, our service has been keeping records since 1931 and the American service has been doing so since 1937.

[Bilyalitdinova] At present, some Union republics are trying to become independent, and I am sure that they would like to have comparable strategic reserves of their own, so that they do not have to rely on the center. Is this problem being discussed?

[Ladygin] Yes, this issue is being considered. We have some concrete proposals from the Ukrainian Council of Ministers and the government of Belorussia. We think, nevertheless, that government reserves should be the prerogative of the center and Union republics must have their definite shares in the reserves. Why do we adhere to such a point of view? Because only the Union and the center can afford to set up such volumes of government

reserves, including strategic. No one republic, not even Russia, can carry such a burden. Take the Ukraine, for instance. A lot of items are not produced there, the Ukraine can contribute only 30 items to government reserves, and it would receive 70 from outside. If you look at the Central Asian republics, they can contribute only five items, and 95 will remain under the minus sign. Belorussia has 10 items, and does not have 90. I do not even mention other republics, such as the Baltics, Kyrgyzstan, Tajikistan, Armenia, Georgia. That is why the strength of the Union government reserves is in their concentration!

[Bilyalitinova] Is it expensive to maintain the strategic reserves storage facilities?

[Ladygin] In our opinion, ours is a very practical structure. It has three links in it. The center has a small staff of about 200 people. Territorial administrations have limited numbers of personnel—from 40 to 90 or 100 people. Finally, the storage facilities themselves have from 80 to 180 people each. Unfortunately, neither newspapers nor television provide any information on them. But there are many talented engineers, technologists, and scientists working there.

Our system is very well disciplined and it is viable. We have our own access roads, power plants, heat-producing plants, etc., even our own kindergartens. We enjoy a great degree of independence. We have our advantages; the railroad is trying to provide us with the speediest transportation, and give us regular and flat cars as soon as possible.

We have the right to impose fines for insufficient or bad-quality deliveries. Our main strength lies in the speed of our operations. Whatever happened, the earthquake in Armenia, mud slides in Central Asia, flooding in the Far East, or Chernobyl, we sent relief supplies the same day.

### **New Regulations on Currency Explained**

91A0894A Moscow DELOVOY MIR in Russian  
18 Jun 91 p 5

[Interview with Aleksandr Voytenkov, deputy chief of the USSR State Bank Administration of Foreign Exchange and Economics, by DELOVOY MIR correspondent Aleksandr Tutushkin: "The Ruble Phenomenon?"]

[Text] On 25 May Basic Provisions on the Regulation of Foreign Exchange Operations in the Territory of the USSR took effect. This document was developed by the USSR Gosbank [State Bank] in execution of the USSR Law on Foreign-Exchange Regulations which has been in effect since 1 April of this year. The Basic Provisions set forth specific arrangements for compliance with the fundamental requirements of the law. Aleksandr Voytenkov, deputy chief of the USSR Gosbank Administration

of Foreign Exchange and Economics, commented on the new normative act in a conversation with our correspondent.

[Tutushkin] Aleksandr Yevgenyevich, foreign-exchange operations in our country have always been regulated one way or another. However, now that we have begun moving toward an open economy and have already covered a certain segment of this path, it has become necessary to regulate things which previously simply did not exist in what was customarily called our "national economy," and also in life as such. From this point of view, what is new about the Basic Provisions?

[Voytenkov] Procedures have been determined for the opening of ruble accounts in the USSR by foreign legal entities. Cases in which Soviet enterprises may settle accounts among themselves in foreign exchange, as well as have foreign-exchange accounts abroad, have been strictly regulated. The first section of the Basic Provisions indicates that residents may engage in foreign-exchange operations only with funds which are of "legal origin," and their sources are also clearly outlined there.

[Tutushkin] Perhaps it will be logical for us to concentrate mainly on new provisions in our discussion. The documents include the demand that enterprises which have accounts at foreign banks without appropriate authorizations close these accounts and transfer foreign exchange funds to the USSR within one month of the enactment of the Basic Provisions. Can compliance with this demand be monitored realistically? After all, as a rule, foreign banks do not provide information on their depositors.

[Voytenkov] First of all, I would like to note that this demand is typical in world practice. The so-called "rule of repatriating foreign-exchange profits" is in effect in more than 100 countries. I believe it is realistic to monitor this. At present a system of customs and bank control is being created. Declarers will have to provide information in customs documents, on the basis of which the banks will be able to monitor the transfers of foreign-exchange profits to the USSR. If such profits are not transferred on time, the banks will approach foreign companies, the tax inspectorate, and other interested organizations.

[Tutushkin] At the same time the principle of residents opening and maintaining foreign-exchange accounts at foreign banks with permission has remained in the Basic Provisions, the only difference being that licensing will now be done by the USSR Gosbank or the central banks of the republics rather than the Bank for Foreign Economic Relations. What will they be guided by in the process?

[Voytenkov] This has to do with cases when, in keeping with the terms of specific transactions, it is impossible to maintain accounts in the USSR. We have already issued several such permits, for example, to organizations which do construction work abroad. They need to have

foreign-exchange accounts abroad to pay for local outlays. Such accounts are also necessary for organizations which receive credit from foreign partners. They spend the credit abroad and pay through this account with their own proceeds (in many cases, foreign banks simply do not give loans on other terms). On the other hand, for example, we do not consider a claim that the Bank for Foreign Economic Relations takes an unacceptably long time to effect settlements to be sufficient grounds for opening one's own account at a foreign bank. In these cases, we recommend that enterprises approach other banks which have general licenses and correspondent accounts abroad, and which may effect necessary settlements swiftly and skillfully.

[Tutushkin] Recently mutual settlements between Soviet enterprises in hard currency have been more and more commonly practiced. As far as I understand it, the general policy of Gosbank is to reduce such settlements to a minimum because it is impossible to give them up entirely. This policy is in line with both our legislation and foreign experience. This is why the Basic Provisions include a ban on foreign-exchange operations between resident legal entities in the territory of the USSR.

[Voytenkov] I would disagree with the word "ban." This has to do with putting settlements in order. After all, the document clearly specifies exceptions when such settlements are permissible. They are associated mainly with foreign trade and credit operations. In the territory of the USSR, the ruble should be the main means of payment.

[Tutushkin] However, there are about 10 such exceptions, and some of them are quite fuzzy. For example, the provision on the possibility of settlements of account between suppliers and indirect suppliers of export products with foreign-exchange proceeds may be interpreted quite broadly. Will this not bring about the inferiority of the ruble on the internal market?

[Voytenkov] To my mind, all exceptions have been thoroughly thought through and substantiated. They pertain to cases in which, as of now, it is absolutely impossible to give up settlements of account in freely convertible currencies. As far as mutual relations between suppliers and indirect suppliers are concerned, there are questions indeed in the matter. At present, the USSR Ministry of Foreign Economic Relations is developing more specific proposals. Evaluating properly the input of both the exporter (final producer) and the supplier of materials and subcontracted parts for a product into the manufacturing of this product is the problem in this instance. The role of the final manufacturer should not be overestimated. On occasion, it is much more modest than that of a subcontractor. However, we cannot infinitely splinter foreign-exchange proceeds by allocating a portion to everyone, conventionally speaking, on down to iron ore producers. In this case, everybody will get practically nothing.

[Tutushkin] The Basic Provisions finally regulate the opening of ruble accounts by foreign companies, something that foreign entrepreneurs doing business in the USSR have long talked about. Three types of such accounts are envisaged. Funds generated by the sale of foreign exchange to the USSR Gosbank or authorized banks at the commercial rate (approximately 1.8 rubles [R] per U.S. \$1) may be deposited in "S" accounts. Is this not a pie in the sky? Will they be willing to open such accounts now that a legal market rate of freely convertible currencies is already in existence in the country?

[Voytenkov] Indeed, at this point we are not exactly "in danger" of being swamped with foreign exchange. However, we need to look to the future. When realistic opportunities appear to purchase shares and some property in the USSR, we will very thoroughly ensure that the owners of "S" accounts are in a privileged position. We will not allow ruble proceeds generated through the sale of goods at market prices to be spent for this purpose. That is to say, the "S" accounts should become the sole source for foreign capital investments in the territory of our country. I believe that such terms will be sufficiently attractive for foreign companies. We should be mindful of the fact that the market rate of currency exchange which is emerging at present is absolutely unrealistic with regard to investment in fixed production assets. After all, labor is considerably cheaper in the USSR, and equipment has always been appraised at the official rate. Therefore, the ruble is not at all an incorporeal ghost, as it may seem at first glance.

[Tutushkin] Are there restrictions on the size of ruble accounts and the conversion of funds in them into freely convertible currency?

[Voytenkov] It would be illogical to limit the size of these accounts. After all, the larger the "S" accounts are, the more currency the country will get. The higher the "L" accounts are, into which the ruble profits are deposited, the higher the revenue of the budget will be in the form of taxes. We are telling the businessmen: "Work and make money!" The balances of ruble funds in the "S" accounts may be freely converted into freely convertible currency at the same commercial rate. The "L" accounts are converted at the market rate; this is why the interaction of supply and demand in the currency exchange is the only and quite natural restriction on this.

[Tutushkin] Many objections against retail trade for freely convertible currency were voiced in the course of discussing the Law on Foreign Exchange Regulation in the union parliament. However, such trade was not banned, and the USSR Gosbank was asked to regulate it. What is the position of the bank in this regard, and how was it reflected in the Basic Provisions?

[Voytenkov] We believe that, in principle, retail trade for foreign exchange should not exist in the country. However, this is not to say that it should be eliminated by means of some one-time resolute act, similar to the recent closure of the Beriozka shops. This is why we

introduced procedures for such trade by permit. Permits will be issued by the USSR Gosbank and the central banks of the republics on the basis of appropriate documents. I believe that the prospects in this matter are as follows: First of all, we need to study this market, see how many shops sell for foreign exchange, what they sell, and so on. Some of them will have to be closed because even now it is clear that many of them trade in violation of the legislation in effect.

[Tutushkin] For example?

[Voytenkov] Here we go. Resolution No. 712 of the USSR Council of Ministers, which authorized such trade, said that joint enterprises may sell for foreign currency only products that they themselves manufacture. What do the Moscow shops "Super Rifle," "Montana," and many others sell? Not their own products at all. It would be interesting to see their permits. As far as I know, the USSR Ministry of Foreign Economic Relations has not issued such permits to anyone.

[Tutushkin] The final section of the document is devoted to foreign exchange operations by resident citizens and nonresidents. Undoubtedly the opportunity for Soviet citizens to take foreign exchange to authorized banks in order to deposit it into accounts and sell the foreign exchange to the banks without producing any documents explaining its origin is the focal point. Meanwhile the infamous Article 88 on violating the rules of foreign exchange operations still exists in the Criminal Code of the RSFSR [Russian Soviet Federated Socialist Republic].

[Voytenkov] I think its repeal is long overdue. It has never been in line with legal norms accepted in the civilized world. At present, it also runs counter to the realities of our economy. However, it is not up to the Gosbank to revise the Criminal Code. It was only within our powers to ignore this article in our normative document. This was done within the framework of the USSR Law on Foreign-Exchange Regulation.

[Tutushkin] My final question. The Basic Provisions allow Soviet citizens to open foreign-exchange accounts abroad for the duration of their residence there, and in other cases, through the procedures established by the USSR Gosbank. What is meant by "other cases" and what will the procedure be?

[Voytenkov] It is hard to give a specific answer. So far, we have received no petitions concerning this. I think this may have to do with people who stay abroad periodically and for long periods of time; for example, actors working on contracts. Apparently the issue is going to be resolved on a case-by-case basis.

## USSR Law on Inventions Published

914A0868A Moscow IZVESTIYA in Russian 15 Jun 91  
Union Edition pp 4-5

[Law signed by USSR President M. Gorbachev on 31 May 1991: "Union of Soviet Socialist Republics Law 'On Inventions in the USSR'"]

[Text]

### I. The Invention and Its Legal Protection

#### Article 1. Conditions of invention patentability

1. An invention is provided legal protection if it is new, if it has an inventive level, and if it has industrial application.

An invention is new if it is not previously known from the existing level of technology.

An invention has an inventive level if it does not obviously follow from a specialist's level of technology.

The level of technology is determined according to all types of information generally accessible in the USSR or foreign countries prior to the invention's date of priority.

An invention has industrial application if it may be used in industry, agriculture, public health and other sectors of the country's national economy.

2. The object of an invention may be a device, method, substance, strain of microorganism, plant or animal cell culture, as well as the application of a previously known device, method, substance or strain for a new purpose.

3. The following are not acknowledged to be inventions:

- scientific theories;
- methods of economic organization and management;
- conditional designations, schedules, or regulations;
- methods of performing mental operations;
- algorithms and computer programs;
- projects and diagrams for planning structures, buildings and territories;
- proposals concerning only the external appearance of products directed at the satisfaction of aesthetic requirements.

4. Inventions containing information whose announcement may be detrimental to USSR security must be made confidential in the order established by the USSR Cabinet of Ministers.

#### Article 2. Authorship of inventions

1. The author of an invention is considered to be the citizen by whose creative labor the invention was developed.

If an invention is developed by the joint creative labor of several citizens, all of them are considered to be co-authors of the invention. The order of exercising rights to an invention developed by joint authorship is determined by agreement between the co-authors.

2. Citizens who have not made a personal creative contribution to the development of the invention, and who have given the author only technical, organizational or material assistance or facilitated the formulation of rights to the invention and application of the invention are not considered to be its co-authors.

3. The author of an invention has the right of authorship, which is an inalienable individual right. Authorship to an invention is protected without a time limit.

### **Article 3. Legal protection of an invention**

1. The right to an invention is protected by the state and is certified by a patent.

2. A patent on an invention certifies: The authorship of the invention, the priority of the invention and exclusive right of application of the invention.

3. The patent on an invention is effective for 20 years from the date of filing the application with the USSR State Patent Department (USSR Gospatent).

4. The scope of legal protection provided by the patent is determined by the formula for the invention. The description and blueprints serve only for interpreting the formula for the invention.

5. The effectiveness of the patent issued for a method of obtaining a product is extended also to the product directly obtained by this method.

In this case, the new product is considered to be obtained by the patented method if there is no proof to the contrary.

6. Legal protection on inventions is not granted to decisions which contradict public interests, humanitarian principles or morals.

### **Article 4. The patent holder (patentee)**

1. The patent on an invention is issued:

—to the author of the invention;

—to a citizen or legal person (in the presence of an agreement) who has been designated by the invention's author in the patent application, or in the application submitted to the USSR Gospatent prior to listing of the invention in the USSR State Register of Inventions;

—to the heir of the invention's author;

—to the USSR State Inventions Fund, if the author transfers exclusive rights for application of the invention to the state.

2. A patent on an invention developed by a worker is issued to his employer, provided the appropriate agreement has been concluded between them. This agreement, along with the concession of the right to obtain a patent, determines the employer's responsibilities for ensuring conditions of a material, production, and social character (including pension and housing provisions) necessary for the effective creative activity of the worker, as well as the payment of a premium to him in case of development of the invention, as specified by the present Law. The agreement is concluded in regard to inventions developed as a result of solving specific problems in accordance with the tasks assigned to the worker. The author of such an invention has the right to a non-remunerative, non-exclusive license.

If the indicated agreement has not been concluded between the worker and the employer, the patent is issued to the author of the invention. The employer has the right to use this invention on the conditions specified in the licensing agreement.

### **Article 5. Exclusive right to application of the invention**

1. The exclusive right to the application of the invention belongs to the patent holder.

2. The exclusive right to the application of the invention allows the patent holder to use the invention at his discretion, provided this does not violate the rights of other patent holders, as well as to prohibit the use of the invention in cases which contradict the present Law.

No one may use an invention on which a patent has been issued without the permission of the patent holder.

The patent holder must exercise the rights granted by the patent without detriment to the interests of the state and society.

3. The unsanctioned manufacture, application, import, offer for sale, sale, or other introduction into economic turnover of the product containing the patented invention, as well as the application of the method protected by patent, are viewed as a violation of the patent holder's rights.

### **Article 6. Actions which are not deemed a violation of the exclusive right of application of the invention**

The following are not deemed to be a violation of the exclusive right to application of the invention:

—the application of vehicles containing the invention protected by patents on board seagoing or river vessels of other countries, within the body of the vessel, in the machinery, rigging, mechanisms and other equipment when these vessels are temporarily or accidentally found in USSR waters, under the condition that the indicated means are used exclusively for the needs of the vessel;

—application of vehicles containing inventions protected by patents in the design or operation of aerial,

space or ground means of transport belonging to other countries, or auxiliary equipment for these means, when the indicated means of transport are temporarily or accidentally located on USSR territory.

The indicated actions are not considered a violation of the exclusive right to application of the invention if the seagoing or river vessels, aerial, space, or ground means of transport belong to citizens or legal persons of countries which grant the same rights to citizens and legal persons of the USSR:

- conducting scientific research or experiments on vehicles containing an invention protected by patent;
- one-time preparation of medicines in pharmacies by doctor's prescription;
- application of vehicles containing inventions protected by patent during natural disasters, catastrophes, epidemics and other extraordinary circumstances;
- application of vehicles containing inventions protected by patents for private use without commercial purposes;
- application of vehicles containing inventions protected by patents if these vehicles have been introduced into economic use by legal means.

#### Article 7. Right of prior use

Any citizen or legal person who, prior to the priority date of the invention protected by patent and independently of its author, has developed and used a principle similar to the invention on USSR territory or made the necessary preparations for its application, retains the right to continued uncompensated application without expansion of its scope.

The right of prior use may be transferred to a citizen or legal person only in conjunction with the production at which the application occurred or where the necessary preparations for it were made.

#### Article 8. Application for issuance of patent for invention

1. The application for issuance of a patent on an invention (henceforth - application for invention) is submitted to the USSR Gospatent:

- by the author of the invention, including also in the case of requesting the patent in the name of the USSR State Invention Fund;
- by the developer under conditions specified by Paragraph 1, Section 2, Article 4 of the present Law;
- by a citizen or legal person to whom the author or developer has transferred on a contractual basis his right to submit the application, or to whom this right has passed in accordance with the inheritance legislation.

The application for invention may be submitted through the patent attorney registered with the USSR Gospatent.

2. If under the conditions specified in Paragraph 1, Section 2, Article 4 of the present Law the employer does not file an application for invention within three months from the date of notification by the author of the invention's development, the author has the right to file the application and obtain the patent in his own name. The application of the invention by the employer in this case is implemented in the order specified in Paragraph 2, Section 2, Article 4 of the present Law.

3. Citizens or persons without citizenship living beyond the boundaries of the USSR, or foreign legal persons having permanent residence in foreign countries, or their patent attorneys, must conduct affairs on obtaining patents on inventions in the USSR and maintaining them in force through Soviet patent attorneys registered with the USSR Gospatent.

4. The application for invention must relate to one invention or a group of inventions associated with each other to such a degree that they form a single inventor's idea (requirement of unity of the invention).

5. The application for invention must contain:

- the statement of patent issuance with indication of the author (co- authors) of the invention and the applicant, as well as their place of residence and whereabouts;
- a description of the invention, describing it with completeness sufficient for implementation;
- a formula for the invention which expresses its essence and which is fully based on the description;
- blueprints and other materials, if they are necessary for understanding the essence of the invention;
- a synopsis.

The application for invention (if the author is not seeking the patent in the name of the USSR State Invention Fund) must contain a document confirming the payment of duty in the established amount or proof of exemption from duty payment, or the grounds for reducing the amount of the duty payment.

The application for issuance of a patent must be submitted in Russian. Other documents of the application may be submitted in Russian or some other language. If the application documents are submitted in another language, a Russian translation must accompany the application. The Russian translation may be submitted by the applicant within 2 months after submission of the application containing the documents in another language to the USSR Gospatent.

The requirements for the documents accompanying the application for invention are set by the USSR Gospatent.

**Article 9. Transfer of patent right and right to invention application**

The right to a patent and the right to use an invention stemming from the patent may by agreement be transferred to a citizen or legal person. The agreement is registered with the USSR Gospatent. An unregistered agreement is considered invalid.

**Article 10. Priority of invention**

1. The priority of invention is established according to the date of submission to the USSR Gospatent of the application containing the statement of patent issuance, the description and formula of the invention, the blueprints and other materials, if they are necessary for understanding the essence of the invention and if the description of the invention makes reference to them.

2. The priority of the invention may be determined by the date of submission of the first application for invention in a foreign country which is a participant in the Paris Convention on Protection of Industrial Ownership (conventional priority), if the application for invention is received by the USSR Gospatent within 12 months from the indicated date.

If by circumstances beyond the applicant's control the application with request of conventional priority could not be submitted within the indicated time, an extension may be granted, but no longer than two months.

An applicant who wishes to exercise the right of conventional priority must indicate this at the time of submission of the application for invention, or within two months from the receipt of the application by the USSR Gospatent, with enclosure of the necessary documents confirming the regularity of such a demand, or must present these documents no later than three months from the date of receipt of the application by the USSR Gospatent.

3. The priority of the invention may be established according to the date of submission of the earliest application to the USSR Gospatent by the same applicant describing this invention, provided the application through which such priority is requested is received no later than 12 months from the date of filing of the earlier application. In this case, the earlier application is considered rescinded.

The priority of invention may be established on the basis of several previously submitted applications with adherence to the indicated conditions for all of them.

The priority of invention cannot be established by the date of filing of an application in which an earlier priority has already been requested.

**Article 11. Publication of the application for invention**

1. The publication of information on the application for invention accepted for review, including the formula for

the invention, is performed in the USSR Gospatent official bulletin after 18 months have elapsed from the date of priority.

At the request of the applicant, the publication of information on the application may be performed prior to this time.

The application information is not publicized if the decision to issue the patent is made prior to the publication, if the application is withdrawn, or if the patent application has been denied and the appeals possibilities have been exhausted. Publication of information on applications for invention and on granted patents is not performed in cases when such publication may be detrimental to state interests.

Any person has the right to acquaint himself with the materials of the application after information on it or on the patent has been published.

2. The author of the invention has the right to refuse being mentioned as such in the published application information.

3. An invention for which an application has been filed, from the date of publication of the application to the date of registration of the invention in the USSR State Register of Inventions, is granted temporary legal protection within the scope of the published formula. The temporary legal protection is considered invalid if the patent request is denied.

**Article 12. Expert examination of the application for invention**

1. The expert examination of the application for invention is performed by the USSR Gospatent and includes a preliminary and a patent expert evaluation conducted in accordance with the present Law and with the regulations established by the USSR Gospatent on the basis of this law.

The applicant has the right, at his own initiative or at the invitation of the state patent expert, to participate personally or through his representative in the examination of questions arising in the course of the preliminary and patent expert investigations.

2. During the expert examination of the application for invention, the applicant has the right, at his own initiative or upon request, to supplement, clarify, or correct the materials of the application without changing the essence of the invention.

Additional materials alter the essence of the announced invention if they contain indicators subject to inclusion in the formula of the invention which were absent in the initial materials of the application. Supplemental materials, in the portion by which they alter the essence of the declared invention, are not taken into consideration in review of the application and may be formulated by the applicant as a separate application.

If this application is filed within a three month period from the date the applicant receives notification that the supplemental materials cannot be considered, the priority of the invention is established according to the date of filing of the supplemental materials.

At the request of the expert committee, the supplemental materials must be presented within a two-month time from the date this request is received. The deadline for submission of response to the request may be extended upon petition of the applicant, which must be submitted prior to expiration of this time. The time of performing the expert examination in the indicated cases is also extended accordingly.

If the applicant has violated the indicated deadline or left the request of the expert committee unanswered, the application for invention is considered withdrawn.

3. Upon violation of the requirements of Section 4, Article 8 of the present Law, or if other inventions are included in the initial materials, the applicant has the right to file a separate application (applications).

An application separated out at the initiative of the applicant must be submitted prior to issuance of the patent on the initial application.

If a separate application (applications) is filed within the established times and does not change the essence of the declared invention as compared with the content of the initial application, then the priority of the initial application is established for the separate application.

If the indicated conditions for the separate application are not fulfilled, the priority is established based on the date of its filing.

4. The application may be withdrawn by the applicant at his request, which must be received by USSR Gospatent prior to expiration of the term of publication of information on the application as specified in Article 11 of the present Law. If the decision to issue a patent is made prior to expiration of the indicated term, this request must be received prior to entry of the invention into the USSR State Register of Inventions.

5. Applications received by USSR Gospatent for review are not returned to the applicant.

#### **Article 13. Preliminary expert examination of the application for invention**

1. The preliminary expert examination of the application for invention is performed within a month's time from the date of its receipt by USSR Gospatent.

2. In the course of conducting the expert examination, the presence of all documents contained in the application for invention is verified and the question of whether the declared invention relates to objects protected by the present Law is resolved.

If necessary, the applicant may be asked to clarify the application within a period of two months from his receipt of such request. In this case, the time for conducting the expert examination is extended accordingly. If it is found that the declared invention does not relate to objects protected by the present Law, or if the necessary clarifications have not been introduced within the established time period, or if necessary documents missing on the date of filing the application for invention are not supplied, then the application is not accepted for review, and the applicant is informed of this fact.

3. If the application for invention is accepted for review, the applicant is informed of the established priority of the invention, if he is not seeking conventional priority or priority by date of filing an earlier application or supplemental materials to it with the USSR Gospatent.

4. If he disagrees with the decision of the preliminary expert commission, the applicant has the right to file an appeal with the USSR Gospatent within a period of two months from receipt of such a decision. The decision on the appeal is made within a month from the day of its receipt.

#### **Article 14. Patent expert examination of the application for invention**

1. The patent expert examination of the application for invention is conducted upon conclusion of the preliminary expert examination.

In the course of the patent expert examination, the priority of the invention is established, if it has not already been established in the course of the preliminary expert examination, and the patentability of the invention is verified.

It is not considered a circumstance influencing the patentability of the invention if the disclosure of information relating to the invention by the applicant (author) or by any person who has directly or indirectly received this information from him, in which the essence of the invention has become generally accessible in the USSR or abroad, occurs no more than 12 months prior to the date of filing the application with the USSR Gospatent. In this case, the burden of proof of this circumstance lies with the applicant.

In establishing the innovative quality of the declared invention, all previously filed unrejected applications, except for the applications by the same authors, and all inventions which are acknowledged as being patentable in the USSR are taken into consideration from the date of priority, regardless of the date of publication of information about them.

2. If the applicant does not fulfill the requirement of unity of the invention (Section 4, Article 8 of the present Law), the patent expert examination is conducted only in regard to the principle which is indicated as the first in the invention formula, if the applicant does not respond to the expert commission's notification of violation of



this requirement by filing a separate application (applications), or does not request a limited review of only one of the inventions or group of inventions contained in the application, corresponding to the requirement of unity.

3. The patent expert examination must be performed within 12 months from the date the applicant is notified that his application has been accepted for review. The time of conducting the expert examination is extended in cases provided by Section 2, Article 12 of the present Law.

4. Changes in the invention formula are permitted at the initiative of the applicant, without expansion of the scope of legal protection and within the limits of invention's description in the initial application materials. Such changes may be introduced prior to the applicant's receipt of the patent expert commission's first request or its final decision, if such request is not sent. In this case, the time of performing the patent expert examination is extended accordingly.

5. Based on the results of the patent expert examination, the decision to grant or refuse the issuance of a patent is made.

The invention's applicant has the right to acquaint himself with the materials used in conducting the expert examination.

Copies of materials opposing the patent may be requested for two months following the date of decision on the patent.

6. If the applicant disagrees with the decision of the patent expert commission, he has the right to petition the USSR Gospatent to conduct a repeat expert examination within a three-month time from the day of receipt of the decision or the copies of materials contradicting the application which he has requested.

No duty is collected for filing a petition to conduct a repeat (second) expert examination.

The repeat expert examination is performed within two-months from the day the applicant's petition is filed.

7. If in the course of the expert examination it is determined that similar inventions have the same priority date, then with the agreement of the applicants they are issued one patent.

If agreement cannot be reached, the patent on the invention is not issued until the question is resolved by the USSR Patent Court.

#### **Article 15. Appealing the decision on the application for invention and restoring expired terms**

1. In case of disagreement with the decision of the patent expert commission, within a three-month period from the day of receipt of the decision or the copies of materials contradicting the application which he has

requested, the applicant has the right to file a substantiated complaint with the USSR Gospatent Patent Expert Commission Appeals Council (henceforth referred to as the Appeals Council). The complaint must be reviewed within 4 months from the day of its receipt. For complex applications the indicated time may be extended upon agreement with the applicant. The applicant has the right to participate, personally or through his representative, in the review of his complaint.

2. The decision of the Appeals Council may be appealed by the applicant to the USSR Patent Court within 1 year from the day of its adoption.

3. Deadlines specified by Section 2, Article 12; Sections 2 and 4, Article 13; Section 5, Article 14 and Section 1, Article 15 of the present Law, which have been missed by the applicant may be restored by the USSR Gospatent if (the applicant) can substantiate valid reasons and pay the duty.

The petition for restoration of deadlines may be filed by the applicant no later than 12 months after the day of expiration of the missed deadline.

#### **Article 16. Publication of patent information**

The USSR Gospatent publishes patent information within six months from the date of the invention's registration in the USSR State Register of Inventions. The published patent information indicates the author of the invention (provided he does not decline to be named as such), the patent holder, the name and formula of the invention, and other necessary information determined by the USSR Gospatent.

The patent holder has the right to petition the USSR Gospatent to correct accidental errors in the patent, provided this does not lead to expanded scope of its legal protection.

#### **Article 17. Issuing the patent**

The patent is issued by the USSR Gospatent after the invention is entered in the USSR State Register of Inventions.

The USSR Gospatent issues a certificate confirming authorship to the author of an invention who is not the patent holder.

#### **Article 18. Voiding a patent**

1. A patent on an invention may be fully or partially voided (considered invalid) during the entire term of its effectiveness in the following cases:

—improper issuance of the patent as a result of violation of the requirements of patentability or presence of indicators in the invention formula which were absent in the initial application materials;

—incorrect indication of author (co-authors) of the invention or patent holder on the patent.

2. Within six months from the date of publication of patent information, any citizen or legal person may file an objection against issuance of the patent to the Appeals Council on the grounds of violation of the requirements of patentability or presence in the invention formula of indicators which were absent in the initial application materials.

The objection to patent issuance must be reviewed within six months from the date of its receipt. The person filing the objection, as well as the patent holder, may participate in its review.

3. After six months have elapsed from the date of publication of the patent information, or in case of disagreement with the decision of the Appeals Council, challenges to an issued patent or decision on its annulment are directed to the USSR Patent Court.

#### Article 19. Duties

1. Duties are paid for filing an application for invention, performing the expert examination, issuing the patent, maintaining it in force, as well as for performance of other legally significant actions associated with the patent. The list of actions for which duties are imposed, the amounts and terms of duty payment, as well as the grounds for exemption from duty payment, reduction of duty payment amounts, or refund of duty payments are determined by the USSR Cabinet of Ministers.

2. Duties are paid by the applicant, by the patent holder, as well as by other interested citizens or legal persons.

3. Duties are not charged for filing an application and conducting its expert examination when the author files an application containing a request for issuance of patent to the USSR State Inventions Fund.

If a patent belonging to an author is transferred to the USSR State Inventions Fund, the expenditures borne by the author in connection with duty payments for performing legally significant actions prior to issuance of the patent are refunded to him by the USSR State Inventions Fund from state budget funds.

In the case of issuance of a patent to the USSR State Inventions Fund, no duties are collected for its issuance and for maintaining it in force, as well as for performance of other legally significant actions in the future.

#### Article 20. Early termination of patent

A patent is terminated prior to expiration of its term:

- by request of the patent holder filed with the USSR Gospatent;
- for nonpayment of the annual duty for maintaining the patent in force within the established time;
- if the patent is deemed invalid.

#### Article 21. Patenting an invention in foreign countries

1. USSR Citizens and legal persons have the right to patent their inventions in foreign countries.

2. Prior to submitting the application for invention to foreign countries, the applicant must file an application for this invention in the USSR and inform the USSR Gospatent of his intentions to patent the invention in foreign countries. If no prohibition is issued within a three-month period from the date of filing the indicated announcement, the application for invention may be filed in foreign countries.

The USSR Gospatent may in necessary cases allow the patenting of inventions in foreign countries prior to filing application for them in the USSR.

3. Expenditures associated with patenting an invention in foreign countries are borne by the applicant, or by agreement with him, some other citizen or legal person.

### II. Utilization of Inventions

#### Article 22. Utilization of the invention

1. Utilization of an invention is considered to be the introduction into economic turnover of a product manufactured through the application of the patented invention, as well as through the application of a method protected by patent.

A product is considered to be manufactured with the utilization of a patented invention, and a method protected by patent is considered to be applied if it utilizes each indicator of the invention included in an independent point of the formula, or an indicator equivalent to it.

2. Relations on the utilization of an invention whose patent is held by several persons are determined by agreement between them. In the absence of an agreement, each of them has the right to use the invention at his discretion, except for granting a license or giving up the patent.

3. Any citizen or legal person wishing to use the invention must conclude a license agreement with the patent holder.

#### Article 23. License agreement

1. By a license agreement, the patent holder (licensor) transfers the right for use of the invention to another person (licensee), and the latter assumes the responsibility of making payments to the licensor as specified in the agreement and performing other actions specified in the agreement on exclusive or nonexclusive license.

In the case of exclusive license, the licensee is granted the exclusive right for use of the invention within the limits stipulated by the agreement, with the licensor retaining the right to use the invention in the portion not transferred to the licensee. In the case of a nonexclusive license, the licensor, while granting the licensee the right

to use the invention, retains all rights to the invention which stem from the patent, including the right to grant licenses to third parties.

2. If the patent holder cannot use the invention due to the fact that it utilizes another invention patented by another citizen or legal person, he has the right to demand permission from the latter for use of this invention under the conditions specified in the agreement.

#### **Article 24. Open license**

A patent holder may apply to the USSR Gospatent for official publication of an announcement granting any person the right to use the invention (open license). In this case, the duty for maintaining the patent in force is reduced by 50 percent, beginning with the year following the year of publication of such an announcement.

A person who wishes to use the indicated invention must conclude an agreement on payments with the patent holder.

#### **Article 25. Utilization of an invention in the interests of the state and compulsory license**

1. In the interests of USSR defense and public order, the USSR Cabinet of Ministers has the right to allow the use of an invention without consent of the patent holder, with payment of monetary compensation to him which is comparable to the market price of the license.

Disputes regarding the amount of compensation are resolved by the USSR Patent Court.

2. In case of disuse or insufficient application of the invention on USSR territory within a period of 5 years from the date of entry of the invention into the USSR State Register of Inventions, after such time has elapsed, a person who is ready and willing to use the invention but who cannot conclude a license agreement with the patent holder may petition the USSR Patent Court to grant him a compulsory nonexclusive license with indication of the limits of use of the invention, the amount, term, and order of payments.

The indicated license is granted if the patent holder cannot prove that the disuse or insufficient application of the invention were conditioned by valid reasons.

#### **Article 26. Property responsibility for patent violation**

1. Any citizen or legal person who uses a patented invention in contradiction of the present Law is considered a patent violator.

2. At the demand of the patent holder, the patent violation must cease and losses which he has incurred as a result of illegal use of the invention must be repaid to him.

Claims against the patent violator may be filed also by the holder of an exclusive license, if the patent holder has

not taken appropriate measures against the violator within a two month period from the day the patent violation was discovered.

#### **Article 27. Utilization of declared invention during the period of its temporary legal protection**

1. During the period for which the temporary legal protection remains in force, the applicant has the right to use the declared invention, provided such use does not violate the rights stemming from existing patents.

2. A citizen or legal person using a declared invention during the effective period of its temporary legal protection pays the patent holder a monetary compensation after he has received the patent on the invention. The amount of compensation is determined by agreement of the parties.

#### **Article 28. State incentives for use of the invention**

1. The profit (income) and currency receipts received by a patentholding enterprise from the use of the invention in its own production, as well as from the sale of licenses on it, is not taxable for a period of five years from the date the invention was first used or the license sold, within the limits of patent's term.

2. The profit (income) and currency receipts received by an enterprise from the use of the invention as a result of the purchase of a license is not taxable for a period of five years the time the invention was first used.

3. At the decision of the USSR Cabinet of Ministers and the republic governments, the terms indicated in sections 1 and 2 of the present article may be extended in regard to inventions having important national economic significance and requiring a longer time for their assimilation in production, and primarily those relating to the sphere of ecology and medicine.

4. The profit (income) and currency receipts received by an enterprise or new production line created especially for the manufacture of new technology using the patented invention are not taxable for five years from the date of operational introduction of the enterprise or the new production line.

5. The savings on estimated allocations obtained by a state budget organization from the utilization of inventions, as well as the income from license agreements, remain entirely at the disposal of the state budget organization for five years from the date the invention is first used or the license sold.

#### **Article 29. State order for development and delivery of new technology containing the invention**

When an enterprise is given a state order for the manufacture of products utilizing inventions whose patents belong to other enterprises or citizens, as well as to foreign patent holders, the agency issuing the state order makes provision for obtaining the licenses, allocating the necessary financial means for this purpose.

**Article 30. Financing invention activity at enterprises and state budget organizations**

1. Invention activity at enterprises is financed at the expense of (the enterprise's) own funds.

If the indicated funds are insufficient, bank credits or monies from innovation funds may be used, and if necessary—budget allocations.

The state budget organization finances inventive activity at the expense of monies allocated for the maintenance of this organization, savings (income) from the use of the inventions which remain at its disposal in accordance with Section 5, Article 28 of the present Law, as well as bank credits and monies from centralized funds, and if necessary—from additional budget allocations.

2. Enterprises may create an incentive fund for inventive activity, whose monies are not included in the sum of funds directed for consumption and subject to taxation.

**Article 31. USSR State Inventions Fund**

The USSR State Inventions Fund exercises the rights and responsibilities of the patent holder in regard to inventions on which exclusive rights of use have been transferred to the state, and takes measures to ensure their widespread application.

The USSR State Inventions Fund finances its activities through income from the sale of licenses on inventions whose patents are held by the USSR State Inventions Fund, through state budget funds, as well as through voluntary contributions from enterprises and citizens.

The USSR State Inventions Fund does not have the right to grant the patents belonging to it to third parties without the consent of the inventions' authors.

The USSR State Inventions Fund performs its activity on the basis of the Charter ratified by the USSR Cabinet of Ministers.

**Article 32. Compensation to the author of an invention who is not the patent holder**

1. Compensation for the use of an invention during the effective term of its patent is paid to the author on the basis of an agreement with the employer who obtained the patent in accordance with Section 2, Article 4 of the present Law, or by his legal successor, in the amount of no less than 15 percent of the (profits) (appropriate portion of the income) received annually by the patent holder from the invention's application, and no less than 20 percent of the income from the sale of licenses, without limitation of the maximal amount of compensation.

Compensation for the use of an invention whose useful effect is not expressed in profit or income is paid to the

author in an amount of no less than two percent of the share of production cost of the product (work and services) accounted for by the given invention.

The percentage amount is determined by the enterprise upon agreement with the author.

2. Compensation to the author of an invention whose patent has been issued to the USSR State Inventions Fund is paid by the USSR States Inventions Fund in an amount determined by agreement with the author, but no less than 20 percent of the income from the sale of the license on the given invention.

3. Compensation is paid to the author no later than three months after completion of each year in which the invention was used, and no later than three months after receipt of income from the sale of the license.

4. If an invention whose patent is issued to a Soviet enterprise or to the USSR State Inventions Fund is sold abroad, including the sale of licenses and supply of the product for export, the author's compensation may, upon his request, be paid in foreign currency.

5. If the patent on an invention has been issued to an enterprise, the patent-holder enterprise must pay an incentive bonus to the invention's author within a month's time from the date of patent issue. This bonus is not taken into consideration in subsequent payments. The amount of the incentive bonus on the invention (regardless of the number of co-authors) must be no less than the average monthly wage of a worker at the given enterprise.

6. Information on the use of the invention and compensation paid is entered by the patent holder into the invention's authorship certificate.

**Article 33. Responsibility for overdue payment of compensation**

The patentholder who is guilty of overdue compensation must pay the author a fine in the amount of 0.04 percent of the amount due every day the payment is overdue.

**Article 34. Compensation to persons aiding in the development and utilization of the invention**

1. Enterprise patentholders and enterprise-licensees pay a compensation to persons (including those who do not work at the given enterprise) who aided in the development and application of the invention, regardless of other forms of payment.

2. The sum of the compensation paid for joint participation in the development and application of an invention by all persons is set in the amount of no less than 30 percent of the profit (appropriate portion of the income) received by the enterprise from the use of the invention. For an invention whose useful effect is not expressed in profit or income, [compensation is paid] in the amount of no less than four percent of the portion of production cost of the product (work, services) obtained as a result of the given invention, and paid out within a period of three years from the date the invention is first used.

### III. Labor and Other Rights and Privileges of Inventors

#### Article 35. Labor rights and privileges

1. The author has the right to participate on a contractual basis in work on preparing the invention for application (in the development of technical documentation, manufacture and testing of the product prototype, organization of production).

2. In order to participate in preparing the invention for application, the author may for a time be fully or partially excused from performing his primary work duties, and paid no less than the average wage he received. If this work is performed outside the area of his permanent employment, a labor contract is concluded with the author, with wage payment depending on the complexity of the job performed.

3. The amount of compensation for additional expenses incurred by the invention's author and associated with his participation in work on the preparation of the invention for application away from his permanent place of resident is established by agreement with the interested enterprise.

4. The author of an invention who has been temporarily excused from his primary work duties retains his position, work seniority, seniority in his specialty, vacation rights, and other rights and privileges established at his place of permanent employment.

5. In case of cut-backs in the number of enterprise personnel, inventors have a priority right to retain their jobs.

6. If lower valuations are introduced at the enterprise as a result of the invention's application, the labor wage of the author, as well as the labor wages of workers participating in the preparations for application of this invention, are paid at the former rates for a period of six months from the day the invention is first introduced.

#### Article 36. Housing privileges

The authors of inventions which are utilized have the right to additional living space in the amounts established by effective legislation.

#### Article 37. Other rights and privileges of inventors

1. The author of an invention, upon request at any stage of review of the application for invention, has the right to have the invention named after him or to give it a special name.

2. Republic legislation may establish additional rights and privileges of inventors.

#### Article 38. Transfer of invention author's (patent holder's) rights by inheritance

The right to file an application and the patent on the invention, the exclusive right to use the invention, as well as the right to compensation and income from the utilization of the invention are transferred by inheritance.

### IV. Organizational Principles of Legal Protection of Inventions and Defense of the Rights of Inventors and Patent Holders

#### Article 39. USSR State Patent Department

The USSR Gospatent provides for the functioning and management of a unified patent system throughout the country.

The USSR Gospatent accepts applications for inventions for review, conducts expert examinations on them, issues patents which are effective throughout the entire USSR territory, within the limits of its competency implements control over adherence to legislation in the sphere of inventions, generalizes practical experience in its application, interprets the statutes of the present Law, provides methodological aid and services on the indicated questions to interested enterprises, citizens, as well as public organizations of inventors, implements training of cadres of patent specialists, performs patent information work, and performs state certification and registration of patent attorneys.

#### Article 40. Enterprises, organizations, institutions

Enterprises, organizations, and institutions, regardless of their form of ownership of means of production and other property, create the necessary conditions for the development of inventive creativity and for the utilization of inventions, organize their own patent services if necessary, and provide comprehensive aid for the activity of public inventors' organizations.

#### Article 41. Public organizations

The All-Union Society of Inventors and Innovators, engineering and scientific-technical societies and other public organizations provide inventors with organizational, material, technical and other support, and also help inventors in the defense of their rights and legal interests.

#### **Article 42. Agencies reviewing disputes associated with invention activity**

Disputes associated with invention activity are reviewed by rayon (city) people's courts, courts of autonomous okrugs, courts of autonomous oblasts, city, oblast, and kray courts, republic Supreme Courts, the USSR Supreme Court, the USSR Patent Court, and organs of the state board of arbitration.

Disputes arising in connection with the realization of labor rights of authors of inventions are reviewed in accordance with the legislation on the order of reviewing labor disputes.

#### **Article 43. Organization and competency of courts reviewing disputes associated with invention activity**

1. Rayon (city) people's courts, courts of autonomous okrugs, courts of autonomous oblasts, city, oblast, and kray courts, republic Supreme Courts, and the USSR Supreme Court review disputes associated with invention activity, with the exception of disputes related to the competence of the USSR Patent Court, and in the order established by civil-judicial legislation.

The following disputes are specifically related to the competency of the indicated courts:

- disputes over authorship (co-authorship) of an invention;
- disputes in determining the patent holder;
- disputes over violation of the exclusive right to use invention and other property rights of the patent holder stemming from the patent on the invention;
- disputes regarding the conclusion and fulfillment of an agreement on use of the invention, including on the application of the invention by an enterprise when the patent holder is an employee of the enterprise;
- disputes over monetary compensation for the use of the invention during the period of its temporary protection, and the amounts of this compensation;
- disputes over seeking compensation for the use of an invention;
- disputes over distribution of compensation for the use of the invention between co-authors;
- disputes over the right of prior use.

2. The types of disputes reviewed by the USSR Patent Court, as well as the organization and order of its activity, are determined by the USSR Law: "On the USSR Patent Court".

#### **Article 44. Responsibility for violating rights of authors of inventions**

Assuming authorship, forced co-authorship, publication of the essence of the proposed invention prior to filing of

the application for invention without the author's consent are all subject to criminal responsibility in accordance with the effective legislation.

#### **Article 45. Responsibility for violating legislation in the field of invention**

1. Responsible parties bear criminal, disciplinary or material responsibility in accordance with the effective legislation if they are guilty of a careless or unconscientious attitude toward their responsibilities in formulating the application for invention, as well as in utilizing the invention and paying out compensation to the authors of the invention.

2. A state patent expert bears disciplinary responsibility for publicizing the essence of an application prior to its publication (except for the case provided by Paragraph 4, Section 1, Article 14 of the present Law), if by its character this action does not entail criminal responsibility in accordance with effective legislation.

3. Officials and employees of the USSR Gospatent, during their period of service and for a year after its termination, do not have the right to file applications for invention, assume the right of patent directly or indirectly, or formulate applications for invention for someone else.

#### **Article 46. Public control over adherence to legislation in the field of inventions**

The All-Union Society of Inventors and Innovators implements public control over adherence to legislation in the field of inventions.

### **V. Concluding Principles**

#### **Article 47. USSR and republic legislation on inventions**

Legislation on inventions consists of the present Law, other USSR legislative statutes, and the legislation of republics on questions relating to their administration.

#### **Article 48. Rights of foreign citizens, persons without citizenship and foreign legal persons**

Foreign citizens, persons without citizenship and foreign legal persons exercise the rights provided by the present Law and other USSR and republic legislative statutes dealing with inventions on par with USSR citizens and legal persons, if not otherwise specified by the present Law and other statutes of effective legislation.

#### **Article 49. Rights of enterprises, organizations and associations with foreign investments created in the USSR**

1. The statutes of the present Law are applicable in regard to the enterprises, organizations and associations with foreign investments created in the USSR.

2. The principles provided by Section 2, Article 4 and Section 2, Article 8 of the present Law are applicable in regard to enterprises, organizations and associations indicated in Section 1 of the present article, if not otherwise specified in their charter documents.

3. Enterprises, organizations and associations indicated in Section 1 of the present article make independent

decisions on foreign patenting of inventions developed in the USSR by their workers, under the condition that patent applications for these inventions be filed in the USSR prior to filing in the foreign country.

#### Article 50. International agreements

If USSR international agreements have established different regulations than those contained in the present Law, the regulations of the international agreement are applied.

[signed] *USSR President M. Gorbachev, Moscow, Kremlin, 31 May 1991*

#### Decree Enacting Inventions Law

914A0868B Moscow IZVESTIYA in Russian 15 Jun 91  
Union Edition p 5

[Decree signed by USSR Supreme Soviet Chairman A. Lukyanov on 31 May, 1991: "USSR Supreme Soviet Resolution on Enactment of the USSR Law: 'On Inventions in the USSR'"]

[Text] The USSR Supreme Soviet hereby resolves:

1. To enact the USSR Law: "On Inventions in the USSR," effective 1 July 1991.

Henceforth, until USSR and republic legislation is brought into line with the USSR Law: "On Inventions in the USSR," the effective statutes of USSR and republic legislation are applicable in so far as they do not contradict this Law.

2. The USSR Law: "On Inventions in the USSR" is applicable to legal relations arising after enactment of the Law.

Applications for invention, as well as objections, complaints and protects whose cases have not been concluded prior to 1 July 1991 will be reviewed in the order established by the Law, with the application of criteria of protectability of the invention provided by previously effective legislation.

3. For applications for issuance of copyright on an invention which are currently under review or which at the moment of enactment of the Law have been granted the decision to issue copyright certification, as well as for copyrights on inventions for which the 20-year term from the date of application has not elapsed by 1 July 1991, the USSR State Patent Department (USSR Gospatent) will issue a patent at the request of the author (authors) in conjunction with the applicant (will exchange the copyright certificate for a patent for the remaining period). [This patent will be issued] in the name of the author or some other citizen or legal person (under condition of their consent) who will be specified in the petition, with payment of the appropriate duties, or in the name of the USSR State Inventions Fund.

If agreement cannot be reached between the authors or between the author (authors) of the invention and the applicant, the dispute will be reviewed in a judicial order.

In the absence of such a petition prior to 1 July 1991, previously issued copyright certificates remain in effect, and applications for which copyright certificates were not issued by the date of enactment of the present Law will be issued patents in the name of the USSR State Inventions Fund.

4. Enterprises, organizations and institutions which prior to 1 July 1991 introduced the use of inventions for which copyright certificates had been issued or for which applications for issuance of copyright certificates were filed, retain the right of continued use of these inventions without having to conclude license agreements. The payment of compensation to the authors by these enterprises, organizations, and institutions is performed in accordance with the previously effective legislation.

The same order of payment of compensation extends also to the authors of inventions protected by copyrights and used after 1 July 1991, for which petitions to exchange the copyrights for patents were not received prior to 1 July 1992.

5. Patents for inventions issued prior to 1 July 1991 whose terms have not expired are equated by legal status to the patent issued on the basis of the USSR Law: "On Inventions in the USSR."

6. It is recommended that the republic Supreme Soviets bring the republic legislation into line with the USSR Law: "On Inventions in the USSR."

7. The USSR Cabinet of Ministers must:

—submit proposals to the USSR Supreme Soviet on bringing USSR legislative statutes into line with the USSR Law: "On Inventions in the USSR";

—ensure the adoption of normative statutes provided by the USSR Law: "On Inventions in the USSR," simultaneously with the enactment of the Law;

—bring the resolutions of the USSR Government into line with the USSR Law: "On Inventions in the USSR" and provide for the review and repeal by USSR ministries, state committees and departments of their normative statutes which contradict the indicated Law.

8. The USSR Supreme Soviet Committee on Science and Technology, the USSR Supreme Soviet Committee on Legislation and Law and Order, the USSR Supreme Soviet Committee on Industry and Energetics, and the USSR Supreme Soviet Committee on Transport, Communications and Informatics must be assigned the following tasks:

In conjunction with the USSR Cabinet of Ministers, developing the question of establishing the optimal

amounts of duties, preferential payments, and possibilities of granting extensions until the receipt of income from the use of the inventions;

In conjunction with the USSR Gospatent, generalizing practical experience in application of the present Law and informing the USSR Supreme Soviet of the results by 1 August 1992.

[signed] *USSR Supreme Soviet Chairman A. Lukyanov, Moscow, Kremlin, 31 May 1991*

### Economist's Methodology, Results Criticized

914A0866A Novosibirsk *EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO)* in Russian No 2, 1991 pp 4-13

[Article by Doctor of Economic Sciences T. I. Kozlov, Moscow: "Details of Calculation and Reliability of Data"]

[Text] Various evaluations of the rates of our economic development have appeared in journals and newspapers in the last few years. The following publications by V. Selyunin and G. Khanin are significant: "The Sly Figure" (NOVYY MIR, February 1987), "Economic Growth: Alternative Evaluation" (KOMMUNIST, January 1988), "Why Did the New Economic Policy Die and When?" (EKO, October 1989), and "Black Holes of the Economy" (NOVYY MIR, October 1989). In them the rates of growth of macroeconomic indicators differ from official ones dozens of times. Which figures reflect the real picture and which are the fruit of their authors' imagination, or the results of erroneous methods of calculation?

Unfortunately, a description of methods confirming the reliability of the presented data is absent from these works. Not burdening themselves with such computations, V. Selyunin and G. Khanin find justification in the fact that "the reading public is more interested in the reliable figure itself, not in the details of calculation." Meanwhile, the figures lose conclusiveness and cannot serve as the basis for valid conclusions. However, the

authors assert that these rates of economic development are reliable, because they are obtained on the basis of a scientific method, which G. Khanin set forth in the articles: "Alternative Evaluations of the Results of Economic Activity of Industrial Production Units" and "Ways of Improving Information Support for Consolidated Planned National Economic Calculations" in the journal *IZVESTIYA AN SSSR. SERIYA EKONOMICHESKAYA*, June 1981 and March 1984.

In accordance with this procedure several alternative evaluations of the rates of growth of a specific indicator are calculated by various methods. Each has shortcomings and can contain errors. Therefore, it is necessary to determine the simple (unweighted) arithmetic mean and to take it as the real rate of growth of a given indicator. Since value magnitudes introduce the biggest distortion, alternative evaluations are constructed mainly on the basis of physical and material indicators, or value magnitudes minimally subject to the effect of shifts in prices.

The first evaluation: the index of the volume of output according to the normative labor intensiveness of the current period on the basis of the part of the products list, on which there is information in the Gosplan and in ministries. This index can be calculated for individual years if current normative labor intensiveness is available. In fact, however, such information is not available for the entire products list. Moreover, base indices characterizing the dynamics of a specific indicator for several years cannot be obtained on the basis of chain indices with current weights. In order to calculate base indices, it is necessary to calculate chain indices according to comparable normative labor intensiveness, which is also absent from our statistics.

G. Khanin believes that, when indices are calculated, it is necessary to ensure approximately the same specific weight of output included in the index during the base year and the year under review. In principle, this indication is incorrect, because the magnitude of the index depends not only on the growth of production of individual types of products, but also on the change in their specific weights. This is evident from calculations performed on the basis of the data presented in Table 1.

Table 1

Type of product	Produced during the period		Normative labor intensiveness during the current period, man-days	Expenditures during the period, man-days		Specific weight of expenditures during the period, percent	
	base	current		base	current	base	current
A, units	20	20	50	1000	1000	50	40
B, tons	50	75	20	1000	1500	50	60

The index of the volume of output is equal to 1.25 (2500:2000). Since Khanin does not specify the structure of which period should be considered invariable, for further calculations we will use base values of the specific

weight of expenditures (50 and 50). In order that expenditures on the production of articles A and B during the current period be in the proportion of 1:1, it is necessary to replace actual data on their amount (20 and 75) with



conditional ones; for example, to take 10 and 25 or 40 and 100. However, then the index of the volume of output will be equal to 0.5 and 2.0 respectively, not to 1.25.

The example shows that the observance of the requirement for an invariability of the structure cannot lead to correct results. Such a conclusion is also correct when, at the same time, current and base normative labor intensiveness is used as weights of the index of the volume of output. This index will characterize not only a change in the quantity of output, but also in normative labor intensiveness.

The second evaluation: the index of the volume of output equal to the product of two indices—the number of workers and labor productivity. For the determination of the latter G. Khanin proposed a formula, where the rate of growth of labor productivity is equal to the rates of growth of average wages multiplied by the share of wages and deductions for social insurance in production costs and divided by the rate of growth of production costs of comparable commodity output.

This formula gives unexpected results. Let us assume that the rate of growth of wages comprised four percent, the share of wages and deductions for social insurance in production costs of commodity output, 50 percent, and the rate of growth of production costs, minus two percent. Substituting these data in the proposed formula  $[4 \times 50 : (-2)]$ , we will obtain a rate of growth of labor productivity equal to minus 100 percent. Consequently, the index of labor productivity will be equal to zero  $(-100 + 100)$ . Accordingly, the index of the volume of output is also equal to zero. That is, during the examined period output was not produced at all, although wages were paid to workers and production costs were calculated. If one of the indicators in Khanin's formula has a negative value, labor productivity growth will also become negative. Therefore, the index of labor productivity will always be smaller than a unit and in some cases will also have the minus sign.

In my opinion, other alternative evaluations, the description of which can be found in the article: "Alternative Evaluations of the Results of Economic Activity," are of a similar nature. For example, the proposal to determine the index of the volume of output on the basis of a change in the ratio between production costs of exported products and export proceeds for them in constant world prices is doubtful. Thus, how, on the basis of such a ratio, to specifically determine the index of the volume of output produced in the country has remained an enigma.

The determination of the average out of alternative evaluations, even if they could be obtained by the methods proposed by Khanin, is illegitimate theoretically. First, such an approach contradicts the theory of average values, according to which only the averaging of individual values characterizing homogeneous phenomena is possible. Second, it is objectively subjective,

because the set of alternative evaluations and the selection of the statistics of one country or another depend entirely on the author himself. G. Khanin rested his gaze on the United States, but could have taken the statistics of Japan or Great Britain. Then the rates of growth of the USSR national income would have been different.

Nor does his assertion to the effect that he calculated macroeconomic indicators almost exclusively by the physical and material method correspond to reality. This method is widely used to determine the rates of growth of homogeneous output (electric power, mineral fertilizers, locomotives, and so forth), but is not suitable for industrial output as the totality of various consumer values. Developed countries produce hundreds of thousands of products. Obviously, for an evaluation of the rates of growth of the total output it is impossible to use the same number of indicators. Therefore, it is necessary to calculate indices.

No one has yet managed to determine the national income, fixed capital, capital-productivity ratio, labor productivity, and capital investments in physical units. All countries calculate generalizing indicators in monetary terms. Therefore, to determine the rates of their growth, they use the price method. While in a number of cases being inferior in accuracy to the physical and material method, it makes it possible to make comparisons.

The index theory is based on two initial principles. The first states that for heterogeneous values it is necessary to find a unity making it possible to obtain a common measure. The second: Since, when a common measure is found, values depending on more than two factors are usually obtained, for a description of a change in one of them it is necessary to disengage oneself from a change in the others, that is, to investigate a phenomenon under other permanent conditions.

For the calculation of indices of the volume of output comparable prices (1982 and 1983) are applied. Recently, quite often it can be heard that rates of growth of macroeconomic indicators are greatly exaggerated owing to the rise in prices. Such assertions are the result either of a lack of information, or of a deliberate disregard of the fact that the rates of growth of general economic indicators in the USSR are calculated only in comparable prices. Therefore, the effect of the price factor on them is ruled out almost completely.

We will analyze the reliability of the figures cited by G. Khanin. In the article: "Economic Growth: Alternative Evaluation," he asserts that in 1929-1941 the USSR national income increased 1.5-fold. This figure is obviously understated. According to S. Strumilin's calculations, the national income in 1928 in comparable prices of 1958 (on the price scale of 1 January 1961) was equal to 6.6 billion rubles and in 1940, to 34 billion rubles.<sup>1</sup> Comparing these data, we will see that in 1929-1940 it grew 5.2-fold, which, in my opinion, is quite realistic, because small figures in percent terms rise rapidly.

In violation of the rules of statistical science G. Khanin fully included the year 1941 according to the level of the first half a year. His data on the growth of the national income in 1929-1941 are understated 3.5-fold as a minimum. The 6.9-fold rise in this indicator in 1929-1987 was also understated significantly, because it was obtained as a result of multiplication of the "average" out of alternative evaluations of nine periods, including 1929-1941.

The unreliability of G. Khanin's calculations of the rates of growth of the national income during other periods is revealed when they are compared with the rates of growth of social labor productivity. According to his data, in 1942-1950 the national income increased 1.15-fold and social labor productivity, 1.12-fold. Dividing these two indicators by each other, we will obtain the rate of growth of the number of persons employed in material production—102.7 percent.

In my opinion, this figure contradicts the facts. According to published data, in 1941 the average annual number of workers, employees, and kolkhoz members was 20.3 million and in 1950, 26.0 million. That is, the rate of growth comprised 128.1 percent, not 102.7. The first of these figures is more probable, because in 1945 millions of demobilized soldiers engaged in labor activity. The number of persons employed in material production also grew during the war period as a result of the liberation of occupied territories.

Noncorrespondence of the rates of growth of the national income and social labor productivity calculated by G. Khanin becomes even more obvious if we compare the rates of growth of the number of workers in material production in 1942-1950, 1951-1960, and 1961-1970 obtained on their basis. It turns out that during the last two periods this number has increased by 122.7 and 107.0 percent. In my opinion, on the scale of the national economy such sharp take-offs and drops in the rates of the number of workers (102.7—122.7—107.0 percent) are impossible. Most likely, Khanin's data either on the rates of growth of the national income, or social labor productivity—but it is not ruled out that on both—are unreliable.

I will also illustrate the unreliability of the 6.9-fold growth of the national income in 1929-1987 obtained by Khanin on the basis of the average out of alternative evaluations by the following calculation: in 1928 the national income in comparable prices of 1958 was 6.6 billion rubles. With a 6.9-fold growth it would have totaled 45.5 billion rubles in 1987 (in prices of 1958). In

current prices the national income reached 600 billion rubles in 1987. It turns out that 1987 prices, as compared with comparable 1958 prices, increased more than 13-fold.<sup>2</sup> The purchasing power of the ruble decreased as manyfold. Whereas 1958 retail prices did not differ significantly from comparable prices, the standard of living of persons with a fixed income also declined approximately 13-fold. There is no need to prove that this was not observed in reality.

V. Selyunin's arguments that in 1929-1985 the USSR national income grew sevenfold are also unfounded. Their essence lies in the fact that in the United States in 1902-1972 the production of electric power increased 308-fold and the national income, sevenfold. Since the production of electric power in the USSR in 1929-1985 also grew 308-fold, the national income increased sevenfold (NOVYY MIR, October 1989, p 160). Following such logic, it can be asserted that the national income of the United States in 1902-1972 increased as much as did the national income of the USSR in 1929-1985.

This doubtful substantiation rests not on a calculation, but on an analogy, which cannot serve as proof. Moreover, the analog itself was chosen arbitrarily and the conclusion on the rate of growth was drawn without due regard for the differences in the conditions of production and consumption of electric power during various historical eras.

From the above stated it is obvious that the rates of economic growth obtained by G. Khanin and V. Selyunin on the basis of the average out of alternative evaluations, or by other methods not substantiated scientifically, do not deserve confidence.

With respect to official data on the rates of growth of the national income and other indicators in 1929-1987, to be sure, they need significant clarifications. It is well known that, in order to embellish the economic situation in accordance with the administrative-command procedure, appropriate, including statistical, bodies, were given instructions to exaggerate indicators. Errors by workers at statistical bodies, owing to the imperfect methodology, as well as report padding, did not play the least role. However, report padding, while distorting the volumes of output and of the national income, did not affect significantly the rates of growth during long periods.

In my opinion, official data on the rates of economic growth can be corrected on the basis of indicators of output in physical terms during a number of years and current comparable prices.

Table 2. Dynamics of Key Types of Industrial Products in Physical and Value Terms

Types of Products	Output in Physical Terms			Compa- rable Prices of 1982, rubles	Value of Output in Comparable Prices, mill. rubles			Rates of Growth, 1928=1	
	1928	1940	1987		1928	1940	1987	1940	1987
Electric power, billion kwhr	5.0	48.6	1665.0	0.017	85.0	826.2	28305.0	9.7	333.0
Petroleum, mill. tons	11.6	31.1	624.0	25.0	290.0	777.5	15600.0	2.7	53.8
Steel, mill. tons	4.3	18.3	162.0	113.0	485.9	2067.9	18305.0	4.3	37.7
Tractors, thous. units	1.3	31.6	567.0	7087.0	9.2	224.0	4018.3	24.3	436.8
Mineral fertilizers, mill. tons	0.026	0.8	36.3	175.0	4.55	140.0	6352.5	30.8	1396.2
Cement, mill. tons	1.8	5.7	137.4	20.25	36.5	115.4	2782.3	3.2	76.3
Paper, thous. tons	284.4	838.0	6191.0	415.5	118.2	348.2	2572.4	2.9	21.8
Leather footwear, mill. pairs	58.0	212.0	809.0	11.05	640.9	2342.6	8939.5	3.7	13.9
Knitwear, mill. items	1.4	58.6	255.4	5.17	7.2	303.0	1320.4	42.0	183.4
Whole milk products in terms of milk, mill. tons	1.9	6.5	32.5	243.6	462.8	1583.4	7917.0	3.4	17.1
Canned food, mill. standard cans	125.0	1118.0	20548.0	0.72	90.0	805.0	14794.6	8.9	164.4
TOTAL					2230.3	9533.2	110907.1	4.3	49.7

From Table 2 it is evident that the rates of growth of individual types of products both in physical and in monetary terms fluctuate within significant limits: in 1940 from 2.7 to 41.9 and in 1987 from 13.9 to 1396.2. On the basis of the presented data it is impossible to obtain a generalizing indicator of the rates of growth of all 11 types of qualitatively heterogeneous products. However, it is possible to compare their value, for example, in 1982 prices. As a result, we will see that in 1940 and 1987, as compared with 1928, the volumes of output increased 4.3- and 49.7-fold respectively.

Of course, the selected 11 types of products do not accurately reflect the rates of growth of the total industrial output produced in the country. Nevertheless, they show that the use of constant prices makes it possible to obtain generalizing data on the rates of growth of output in physical terms; that the rates of growth of the national income in 1929-1941 and 1929-1987 calculated by G. Khanin's method are understated significantly and differ little from the rates of growth of industrial output; that the data of state statistics on the rates of growth of the total output produced in the USSR and, consequently, of the national income are overstated significantly, since at sufficiently high rates of growth of the output of industry and some other sectors the rates of growth of agricultural production during the examined period were negligible (for example, in 1983-1987 the average annual grain output exceeded a similar indicator in 1928-1932 no more than 2.5-fold).

The presented price method of determining the rates of growth of output is not noted for an irreproachable

accuracy, because current (1982) comparable prices, which to some extent reflect the change in the quality of output as compared with the base period, are used. However, it makes it possible to obtain information suitable for a description of the dynamics of macroeconomic indicators. In my opinion, precisely by this method it will be possible to refine the official data on the rates of growth of key economic indicators. Only bodies of the USSR State Committee for Statistics, not individual persons or even scientific research institutions, can perform appropriate calculations. This conclusion does not rule out a critical evaluation of publications by statistical bodies, but they should be balanced and based on a scientific methodology and facts.

#### Footnotes

1. In the article "Why Did the New Policy Die and When?" G. Khanin, referring to S. G. Strumilin's works, tries to prove that by the end of the 1920's the USSR economy did not reach the 1913 level. Strumilin's data (VOPROSY EKONOMIKI, November 1969) refute this assertion: In 1928 the national income in comparable prices of 1926-1927 (within limits until 1929) was equal to 25 billion rubles and in 1913, to 21 billion rubles. Nor do other indicators presented by G. Khanin in this article deserve confidence. Having been borrowed from works written at different times, as a rule, they are not comparable and at times are even contradictory. For example, by the end of the 1920's, as compared with 1913, labor productivity declined by 23 percent and, at the same time, was at the level of 1913.

2. If to assume that S. G. Strumilin's data on the national income are overstated, the price rise would be even more significant.

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### **Economist Defends Own Results**

914A0866B Novosibirsk *EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA (EKO)* in Russian No 2, 1991  
pp 13-21

[Article by G. I. Khanin: "Answer to an Opponent"]

[Text] For a long time not only economists, but also the public, have not trusted official statistical data on the outstanding achievements of the Soviet economy. Personal experience and real working and living conditions refute this myth eloquently. People believe the exposures of the machinations of our statistics so easily, because internally everyone is ready for this.

As long ago as the juncture of the 1920's and the 1930's experienced specialists uncovered that generalizing economic indicators were distorted through a rise in prices, which was not taken into account, and report padding. At the end of the 1920's professional statisticians did not doubt that the calculation of the dynamics of industrial output in physical terms on the basis of the reports of enterprises did not reflect the real picture. They only complained that under conditions, when statistical bodies have to evaluate the fulfillment of plans, it was difficult to find a real alternative to such an approach. Nevertheless, at that time the Central Statistical Administration resumed the calculations of indices of labor productivity according to a set of representative types of products in physical terms. However, as soon as indices began to deviate from official ones, this work carried out under M. N. Smit's guidance was stopped.

Gradually, there were fewer and fewer statisticians among critics of official methods. At the beginning of the 1930's S. G. Strumilin with his authority supported the proposals to determine the dynamics of industrial output with the use of normative labor intensiveness as weights during the calculation of indices. A. I. Rotshteyn and later Ya. B. Kvasha relentlessly criticized the methods of calculating indices of industrial output, which became bankrupt. Even directors of official statistics did not burn with the desire to defend them. In time the voice of statisticians came to naught, although the ground for criticism did not disappear, because these methods continued to be applied.

Paradoxically, during the worst, Stalinist, times, when for a criticism of official statistics people were sent to prison or to the other world, it existed. When the danger was past, the critical mood of statisticians also ran low. I see the explanation for this in the fact that statisticians trained by the old system for a long time preserved their civic sentiments and responsibility to the people and

professional pride. The purge of bodies of state statistics and statistical departments of higher educational institutions and the difficult material and moral conditions, under which these specialists were placed, did not pass without a trace and did not favor the influx of fresh forces. Conscientious statisticians, who escaped repressions, left for economic science, where conditions for creative work were better and, moreover, wages were higher.

Finally, it seemed that changes also reached the statistical department. Its chairman V. Kirichenko admitted that the "distorted data on the rates, levels, and proportions of the country's social and economic development did not constitute a reliable basis for the adoption of major social and economic decisions" (KOMMUNIST, March 1990). He announced the intention to bring back the confidence of the people and of the world community in statistics. Right now the range of published indicators has expanded and previous evaluations of grain and meat production have been lowered. A desire has been expressed to refine the data on the development of the economy as a whole and, consequently, on the ratios of the levels of economic development of the USSR and other countries.

Unfortunately, the good intentions are not yet being realized. The State Committee for Statistics has not begun to refine the dynamics of economic development. It is impossible to take seriously its calculations of the price dynamics, for which the index of the gross national product in current prices is now being corrected. Who will believe the State Committee for Prices that in our country prices rise 2 percent annually, knowing about the annual rise of 10 to 15 percent of the mass of money in circulation?

The first steps by the new management of the statistical department have made us doubt the reality of positive changes. V. Kirichenko decided to lean on old personnel, with which he wittingly doomed himself to failure. Working groups for changing the methodology of statistics were also formed by the old method. As before, a place for critics of the existing statistical system was not found there.

The protesting voice of my opponent—T. Kozlov, a figure of many years' standing in Soviet statistics—was not heard when, according to the true words of V. Kirichenko, "the distorted ideological function of forming an illusion of well-being and infallibility of actions by the command-bureaucratic system was imposed" on this science. As soon as someone doubted the usefulness of this function, Kozlov rose to its defense. In the journal VESTNIK STATISTIKI (March 1988) he flatly denied the very possibility of significant errors in official data on the rates of economic development and in the methodology of their determination. He admits only "negligible inaccuracies." T. Kozlov accused those who doubted this (for example, V. Selyunin and G. Khanin) of a lack of substantiation.

In the published article by T. Kozlov not much remains from the previous scornful attitude toward alternative evaluations and a staunch defense of the infallibility of official calculations. Now he not only admits the need to refine the rates of growth of the national income and other economic indicators in 1929-1987, but has calculated the rate of growth of industrial output during that period (49.7-fold) and has reached the conclusion that official statistics overstated it more than threefold.

Nevertheless, having admitted the need to correct the data of the statistical department and having even taken a step in this direction, T. Kozlov is convinced that only this department can do such work. Of course, the State Committee for Statistics has more data for such calculations and it simply must recalculate its time series as soon as possible. However, why should the performed alternative evaluations be deprived of the right to existence?

It is characteristic that today the debate has shifted from the problem of legitimacy of alternative evaluations to their substantiation. Kozlov reproaches me for the fact that calculations confirming the reliability of data are absent from my works. I could talk for a long time about how I struggled with these works. Two methodological articles published in the journal *IZVESTIYA AKADEMII NAUK SSSR. SERIYA EKONOMICHESKAYA* in 1981 and 1984 were revised three or four times at the request of the editorial department. The suggestion about absolute results was even deleted. And the third article never reached its pages. I will not begin to blame the journal. Apparently, under those conditions this was inevitable. I am grateful to A. Anchishkin, who was the chief editor at that time, and the journal's associates for the fact that the articles, even if in an abridged form, were published.

For several years negotiations were conducted with the *Ekonomika* Publishing House about the publication of my book, which has 41 appendices and numerous tables with calculations. However, during the period of perestroika, after the publication of the article "A Sly Figure," they ended in failure. There is hope that, nevertheless, this book will be published in 1990 by another publishing house—*Nauka*. One has to be astonishingly forgetful about the possibility of publication during the period of stagnation and even at the initial stage of perestroika to reproach authors for the lack of calculations.

Incidentally, both T. Kozlov and statistical bodies, if they wished, could become acquainted with my calculations (as many scientists and writers on public topics did). However, they did not have such a wish. Moreover, they themselves could have performed calculations in accordance with the described methodology and become convinced of the correctness or fallaciousness of the published results. Several years were needed for T. Kozlov to attempt to do this.

### We Will Try To Examine

T. Kozlov believes that people reproaching official statistics for not taking into account the hidden rise in prices "either are not informed, or deliberately ignore the fact that the rates of growth of general economic indicators in the USSR are calculated only in comparable prices and, therefore, the effect of the price factor on them is ruled out almost completely." Well said! It is only unclear why, with such a perfect statistical methodology, a need arose for "a significant refinement" of official data, which T. Kozlov, who himself engaged in such refinements, also admits.

Why does my opponent incorrectly inform readers? Owing to "a lack of information or deliberate disregard"? New types of products are included in the total volume of industrial output at higher prices (as compared with similar old prices). Often there are no analogs of fundamentally new products at all in the country. Under the conditions of the enormous rise in prices during the 1930's-1940's, with the methodology adopted by official statistics, such an overstatement was inevitable.

The quotations cited by T. Kozlov have nothing to do with refutation. The article quoted by him discusses not constant ratios between types of products during individual years, but the fact that types of products selected for calculation with respect to the total volume of output "had approximately the same specific weight."

The quoted passage is taken out of context from the article: "Alternative Evaluations of the Results of Economic Activity of Industrial Production Units." I will cite the preceding passage in full in order to demonstrate the methods of polemics used by my opponent. "When the index of output is calculated by the labor method (as well as some other alternative evaluations), two specific problems arise at the sector level. An independent (irrespective of the enterprises forming part of a sector) calculation of the index by the indicated method is possible only on the basis of the part of the products list, on the production volume of which information is available in appropriate departments of the USSR Gosplan and in ministries. The share of a sector's output, which forms part of the products list of the USSR Gosplan and individual ministries, can fluctuate throughout the years of the analyzed period. Therefore, it is necessary..."—next follows the text quoted by T. Kozlov, which has a totally different meaning than that which he imparts to it.

My opponent agrees that for the calculation of the index of industrial output it is advisable to use labor intensive-ness as weights. However, he complains that there are no appropriate data on the entire products list. In my works I also repeatedly drew attention to the shortage of information for the calculation of individual indices. For example, not having data on normative labor intensive-ness, when determining the index of output of individual industrial sectors, I used wholesale prices during the year under review as weights. Offering Table 2, T. Kozlov acts

similarly. True, there is no newness in his arguments about the need for the price factor during the calculation of indices. I pointed out this deviation of calculations from theory in numerous speeches, including at the Scientific Research Institute of the USSR State Committee for Statistics.

However, there are differences in my and T. Kozlov's calculations. For example, I used 105 types of industrial products, while Kozlov limited himself to 11 (such a negligible number cannot characterize the dynamics of the total industrial output, which numbers dozens of sectors). Why were precisely these 11 types selected? In my opinion, this selection is not accidental at all: At the beginning of the period (1928-1987) canned goods, tractors, knitwear, and mineral fertilizers were hardly produced and the production of such a type of product as electric power was extremely small. However, my opponent did not draw attention to output, which had a significant proportion in the USSR industry in 1928: fabrics, bread and flour products, meat, commercial timber, and coal.

In order to obtain the general index of industrial output, I first determined the index of individual industrial sectors and used their share in the number of workers or in the wage fund as weights.

A legitimate question: Why different methods of evaluating the dynamics of output had to be used? Owing to the shortage of information and imperfection of the methods themselves. Different methods led to results that were close among themselves, but far from official data. Incidentally, even from Western scientists we have had occasion to hear more than once that it would also be good to calculate their indices by several methods.

T. Kozlov also criticizes my formula for the calculation of the index of labor productivity in industry. Through my carelessness the formula is presented in an erroneous form in the article. However, I performed the calculations themselves according to an accurate formula. Finding only one mistake in my articles, he extends it to all the other alternative evaluations, in particular, the evaluation obtained by the sixth method, which is only the modification of the second. There is nothing enigmatic in it. The dynamics of labor productivity (and then of the volume of output) is determined on the basis of a change in production costs, but this time per ruble of foreign currency proceeds (from which, for the sake of comparability, the inflationary component is excluded). Exports are enlisted, because the quality of output is revealed most accurately on the foreign market.

Even though during the base year output with production costs of 90 kopecks gives 1 ruble of foreign currency proceeds, during the year under review (after the exclusion of the rise in prices of these products on the world market), 1.1 ruble. If we assume an invariability of the structure of material expenditures, the magnitude of production costs also makes it possible to calculate the dynamics of labor productivity. The hypothesis of the

invariability of the structure of material expenditures is justified for short periods of time (five-year plans) and is confirmed by foreign statistical data.

Refuting "the obviously understated" figure of the 1.5-fold growth of the national income in 1929-1941, T. Kozlov ostensibly turns to S. G. Strumilin's calculations, according to which this indicator rose 5.2-fold. Doubting that Strumilin himself calculated the index of the national income, I turned to the article, to which my opponent refers, and discovered that the academician cited the data of the USSR Central Statistical Administration, not his own calculations.

One should refute either the method, or the initial data, and not confine oneself to Strumilin's authority. I, however, referred to Strumilin's works from the 1920's, in which he presented his own calculations or those of the Gosplan department headed by him.

Nor do I have contradictions in the rates of labor productivity growth in 1929-1941, as T. Kozlov wants to assure the readers. It is a matter of different indicators—labor productivity in the national economy and in industry.

The attempt to prove that I am guilty of the inability to determine the increase in the number of people employed in material production is also unsuccessful. T. Kozlov's conclusion on a 28.1-percent rise in this indicator during the 1940's evokes surprise. How is this possible with losses of a minimum of 27 million people, mainly of the able-bodied age, during the war?

Let us turn to the handbook "Narodnoye khozyaystvo SSSR v 1967 g." [USSR National Economy in 1967] (p 649). Summing up the number of workers and employees alone (without kolkhoz members) in material production sectors, we will obtain higher figures than T. Kozlov cites for all employed people: 1940—25 million people, not 20.3 million (in 1941); 1950—30.4 million, not 26.0 million. Consequently, the number of workers and employees increased by 21.6 percent.

The number of kolkhoz members apriori should have increased more slowly, even if because priority was given to nonagricultural sectors. The dynamics of rural inhabitants characterizes the tendency toward a change in employment in agriculture. From 1 January 1940 to 1 January 1950 their number decreased from 131.7 to 109.1 million people.

Official statistics did not publish the number of kolkhoz members and individual peasants. We will try to reconstruct it. In the middle of the 1930's their total number reached 30 million<sup>1</sup> and by the beginning of 1941 it should have totaled about 35 million with due regard for the 17-percent population growth (in connection with the annexation of new territories in 1939-1940). The number of kolkhoz members and individual peasants decreased just as did that of all rural inhabitants—by 6 million. Then, taking into consideration the fact that the number of workers and employees increased by 5.4

million, the total number of people employed in material production should have been reduced by 0.6 million.

In my opinion, the fact that during peace time, in the 1950's, there was a significant increase in the rates of growth of those employed in material production is not surprising at all. However, so much has been written about the reasons for the decline in these rates during the 1960's that it is hardly worth repeating them.

T. Kozlov, having compared the 1987 national income in 1958 and 1987 prices, reached the following conclusion: If to believe V. Selyunin and G. Khanin, during that period the price level should have risen 13-fold. People with a fixed income would not have endured such a leap. I will add: with a nonfixed income as well. However, it is not a sin to recall how the notorious figure of 6.6 billion rubles was obtained for 1928, a figure on the basis of which Kozlov proposes that the calculation be performed. Its roots lie in the vastly exaggerated data of the Central Statistical Administration on the growth of the national income, which we refute.

The data presented by V. Selyunin to the effect that, with the same growth of electric power production in the USSR and in the United States, the rates of growth of the national income calculated for our country according to alternative evaluations proved to be different made no impression on T. Kozlov. The meaning of this comparison lies in the obvious interconnection between the production and consumption of electric power, on the one hand, and the dynamics of economic development, on the other.

The attempt to justify official data "with the logic of Selyunin's proofs" seems totally sacrilegious. As though, according to this logic, it is possible to ascribe our official rates of growth of the national income to the Americans. Of course, this is flattering to the United States. However, as far as I know, neither American, nor Soviet, economists doubt the objectivity of American statistics of the national income. Especially as T. Kozlov himself admitted the need to refine our official rates of growth of the national income.

Despite the widespread opinion, my and V. Selyunin's alternative evaluations even overstate the real rates of growth, in particular, because they are based on certain assumptions; for example, on the supposition about an unchanged level of material expenditures, although both facts and calculations point to a constant increase in material intensiveness. We used the overstated data of the State Committee for Statistics on the dynamics of output of agriculture, railroad transport, individual types of products in physical terms, and so forth without corrections. In reality, owing to the growing wastefulness of the Soviet economy, the ratio between the dynamics of general economic indicators and the consumption of material resources in the USSR, as compared with the United States, was obviously higher. Thus, it is more legitimate to criticize us for an exaggeration, not underestimation, of the rates of the Soviet economy.

#### Footnotes

1. M. A. Vyltsan, "Zaversheniye etapa sozdaniya kolkhoznogo stroya" [Conclusion of the Stage of Establishment of the Kolkhoz System], Moscow, 1978, p 195.

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#### Exchange Conference Focuses on Needed Legislation, Operations

914A0856A Moscow *EKONOMIKA I ZHIZN*  
in Russian No 15, Apr 91 pp 12-13

[Article by O. Prokofyev under the rubric: "The Stock Exchange Herald: They Have Decided To Unite Themselves. Notes on the Interregional Exchange Conference"]

[Text] As has already been reported in a previous issue of the "Herald," (*EKONOMIKA I ZHIZN* No. 11), an interregional conference of stock exchanges has taken place in Moscow. It was convened at the initiative of the Moscow Commodities Exchange [MTB], the Russian Soviet Federated Socialist Republic [RSFSR] Supreme Soviet Commission for the Budget, Planning, Taxes, and Prices, and the Association of Enterprise Managers of the USSR. Whereas initially, in accordance with the plans of those who organized the conference, its aims were limited to "familiarizing themselves with work experience" gained by the existing commodity and money exchanges and "discussing draft legislation on the exchanges," the question was subsequently raised of the need to create an organization that could coordinate the activity of the exchanges in the country.

#### The Participants

Since conception of the exchange movement in the country (not counting the period of New Economic Policy [NEP]), the Moscow conference has become very representative. According to the organizing committee that made the preparations for and held the conference, representatives of 196 organizations from 13 republics of the Soviet Union attended, including the Baltic republics and Georgia and Moldova. The actual number of those attending was double the expected number, at about 300, and together with the officially invited guests and representatives of the mass media totaled about 500 people.

Analyzing the makeup of the participants, the cochairman of the MTB Exchange Committee, Yuriy Milyukov, noted that when the conference opened, 75 organizations that have declared themselves to be exchanges had made applications and registered, and there were 89 organizing committees to set up exchanges, 32 organizations representing brokers' offices, brokerage cooperatives and so forth that have direct relations with exchange business. In addition, some organizations that wanted to take part in the work of the conference were unable to do so because constituent conferences for exchanges were going on at the same time.



The very impressive number of exchange formations and their rapid growth in recent months are explained, first, by the unique mode in the exchanges and the attractiveness of the idea of having the local authorities set them up. Second, there is the lack of any standard base that could be used to delineate between the exchanges and other enterprises engaged in brokerage activity. And it is not so easy to do that because virtually all the commodity exchanges actually functioning in the country have little in common with the traditional types located throughout the world.

To use the graphic expression of the chairman of the Association of Securities Dealers Council, Anatoliy Levenchuk, these are not exchanges but "exchangoids," or structures that are more like the auction houses seen throughout the world that when there is a trade deficit and monopoly by commodity producers act as a "means of attracting the strong purchaser."

At this moment the essential conditions for the normal operation of the commodity exchange as the classic institution of a market economy are missing—free pricing, free marketing of most commodity resources, competition among sellers and buyers, quotes for output in the exchange, and so forth.

Meanwhile, many exchanges have already been set up and are operating, and in their activities they are encountering numerous problems of a legal nature. They are all having to deal with the lack of exchange legislation and other legislative enactments providing legal guarantees for exchange operations.

#### Is a Law Needed?

This was the main subject at the conference. Among other documents the participants received draft versions of RSFSR laws: "On the Commodity Exchange and Exchange Trade," and "On Circulation of Securities and Money Exchanges in the RSFSR," prepared by experts from various organizations.

When discussing these documents some of those attending the conference expressed themselves against the adoption of a special law on exchanges and exchange activity. Here they referred to the practice in some of the industrial developed countries of the West where there are no such laws at all or where there were none for a long time and they have only just appeared recently (for example, Great Britain). In this case, general provisions about the exchanges are stipulated in some legislative enactment (or acts) dealing with general economic issues (as, for example, in the Law on Enterprises and Entrepreneurship or the Civil Code), while the standards and rules binding on those involved in the exchange process are drawn up independently.

Most of the speakers, however, did support the idea of a separate law that would underpin the social and legal status of the exchanges. General provisions relating to the concept of the exchange could be reflected in it—the possibility that the exchanges could exist not in one (only

as a closed organization) but several forms, and definition of the subjective makeup and object of dealings, with variations depending on the nature of an exchange. At the same time speakers noted that it is impermissible to write a law in such detail as describing the process of the institution of the exchange, the names and competence of its management organs, the powers of officials, and so forth. All these matters can be decided by the exchange itself.

In our opinion, the latter approach is more realistic and is in line with the conditions prevailing during the transition to market relations. It is opinion of Mikhail Ring, a professor at the Moscow Institute of Law, that it would be incorrect to "use the exchanges in the West or the East as analogues" because a developed market economy exists there. In the scholar's opinion, the exchange legislation itself could include three levels. At the first level Union law would operate, setting the conditions for economic space overall. At the second level republic legislation could be passed on commodity, currency, stock, and universal exchanges. And at the local level the exchange itself would introduce rules and standards to regulate its internal activity, that is, draw up provisions regarding the structure of subdivisions and their interaction, define the rules for exchange trading and forms for standard contracts, and draw up constituent documents and charters, and so forth.

#### Will Everything Temporary Become Permanent?

It will take a great deal of time to draw up and pass special exchange legislation. But a legal foundation is needed right now, today, for normal operations in the exchanges that have been set up. Obviously the solution here is to adopt interim provisions on the exchange in the form of a decree of the Russian Council of Ministers. The draft of such provisions was circulated among those attending the conference. During the course of the discussion a working group was set up, and on its behalf a number of substantial changes were made to the draft.

In fact, in its initial form one of the main provisions of this document was retained, namely, permitting trading in commodity exchanges at free (market) prices for goods produced over and above the state order or produced in order to meet interrepublic obligations. Expansion of the market sector is a question connected with the very existence of the commodity exchanges.

For example, most of the turnover now being handled by the universal exchanges is with computers and audio and video equipment, even though these commodities do not come under the criteria for a normal exchange commodity. The fact is that they make up part of that small group of products for which it has been permitted to set free prices. But the rest of the range is being distributed either at state (product-list) prices or contract prices, which also depend on state wholesale prices and are therefore not free prices. As a result, enterprises are not interested in going to the exchanges, but solve their own problems by setting up barter deals.



The clause in the draft dealing with licensing for exchange activity was discussed very attentively. This is in fact related directly to the question of what kind of organ will issue licenses and what are the principles that must be met by an organization wishing to obtain permission to engage in exchange trading.

Those attending the conference did not succeed in forming a unified position on the question of forms of management for exchange business at the republic and Union levels. There are some misgivings that these functions may be handed over to those who have no interest in developing the exchange movement. It is possible that state regulation per se is premature because most exchanges are still in the stage of being formed and have not yet commenced operations. Even today there is a real danger that a powerful restrictive state structure will be created. True, Aleksandr Pochinok, deputy chairman of the organizing committee for the conference and deputy chairman of the RSFSR Supreme Soviet commission, did state that no organs to manage the exchanges will be created by the Russian government or parliament. The best solution might be the formation of a structure to offer guidance, made up both of representatives of the exchanges actually operating and state organs.

#### **What To Think About the Commodity Exchange**

Regardless of who issues licenses, it is essential to adhere strictly to the standards that are introduced for organizations wishing to become exchanges.

First, provision should be made that the commodity exchanges may exist in different forms and be set up as both as state organs and on joint-stock (shared) principles. They may be voluntary economic associations of enterprises or organizations, brokerage firms, or citizens.

Second, the founders and members of a commodity exchange are obliged to ensure conditions for public trading (set times and venues for exchange sessions made known in advance to those who want to know them, mandatory notification of all applications for supply and demand during a session), and recording of all deals concluded during a session.

Third, the exchange itself cannot engage in brokerage activity. This provision is one of principle since it brings the Soviet exchange closer to the classic exchange. For the purpose of the exchange is not to derive maximum earnings from its activity but to promote in the best possible way the development of trade and the regional market overall, determine the objective level of market prices for commodities (quotations), and underwrite deals. Here, all those involved in the exchange process should enjoy equal conditions.

This provision will raise a major barrier against the automatic conversion of various kinds of brokerage organizations and the commercial centers of the State Committee for Material and Technical Supply into exchange structures. As an example, the cochairman of

the Russian Commodities and Raw Materials Exchange [RTSB], Aleksey Vlasov, pointed to the negative results of activity by the so-called "zero" brokerage office, which conducts operations on behalf of the RTSB, which has placed other brokerage firms on an unequal footing. Therefore, trading and brokerage activity should be done only by members of the exchange, brokerage firms, and independent brokers. A small percent of the worth of deals is deducted for the exchange itself to cover operating costs.

Fourth, a lower limit for startup capital is being introduced for commodity exchanges. The actual amount has become the subject of sharp debate. The draft provisions on commodity exchanges set it at 10 million rubles. Those who wrote the draft explained this figure by the fact that an exchange is a "respectable" enterprise that should guarantee protection for the interests of investors and fulfillment of its obligations in organizing trade. A majority of those attending the conference disagreed with this.

The fact is that at the regional level it is not always possible to gather together such a substantial sum. Many people reckoned that it is an artificial limit. Moreover, it holds the danger of monopolization of exchange activity in the future, which cannot be permitted. The figure of 5 million rubles was proposed as a compromise solution, although many speakers were totally opposed to any kind of restrictions on startup capital. It is obvious that this is not a final decision and that the last word has yet to be spoken.

Fifth, commodity exchanges independently set the standards and rules for their own activity.

Among the issues that are constantly being raised is the problem of taxes on exchanges and brokerage firms. No procedure has yet been worked out for taxation on this kind of enterprise. However, placing it on the same footing as brokerage organizations and imposing taxes for very high profits (when profitability is greater than 30 percent) will quickly lead to a decline in exchange activity. The brokerage offices will suffer in particular because they finance their activity from their own profits.

This was precisely why those attending the conference proposed that when taxes on profit are imposed for exchanges and brokerage offices, permission be granted to use the method of deductions against profitability, as applied in the case of trade enterprises. Here, the commodity circulation organized, not the commodity circulation itself, is what is used, that is, the volume of deals concluded at the exchange. In the future, with the switch to the nonprofit principle of work, exchanges must be made totally tax exempt, with payments made only by the brokerage offices. In this regard, and many speakers drew attention to this, there should be no kind of protectionism with respect to any particular exchange.

The opinions of those who spoke were also divided on the question of allowing barter deals in the exchanges.

Some suggested that barter operations be permitted, and that a clear-cut methodology be devised for conducting them. Others (representatives of Moscow's exchanges) spoke in favor of rejecting barter in its pure form because in this it becomes impossible to quote prices. If he wants to, a broker may, on his own responsibility and at his own risk, conclude two opposing deals on instructions from a client.

The question of training skilled experts for the exchange business was also urgent. Training centers are now operating at many exchanges, and in their work they are encountering shortages of experts and a lack of good methods for teaching and providing information. And so the idea of mandatory qualifying examinations for people working in exchanges and brokerage offices was not supported by most of those attending the conference. Experience has shown that it is impossible to solve this problem at the individual level.

It is also impossible for individual exchanges to set up a system for communicating and passing on commercial information. Two of the very large exchanges in Moscow—the RTSB and the MTB—are engaged in an attempt in this direction, but the rest have been assigned the role of mere passive observers. Moreover, the exchanges already operating today are finding that it is necessary to compile standard documents to regulate internal exchange and brokerage activity. No unified principles have been worked out for quotes, and this is leading to the dissemination of incomplete and distorted information on prices. Development of the exchange movement is being held back because of lack of legal guarantees for workers in exchanges and brokerage organizations.

### The Interregional Union

The resolution of these and other problems requires unification and coordination of the efforts of exchanges already in operation and those being formed. It should be noted that before the conference started its organizers did not make any specific plans regarding the creation of a union or association of exchanges. Although the need for this kind of organization is obvious, the situation has been complicated by two circumstances.

First, the preparations for the conference, and indeed the conference itself, took place in a strained atmosphere of fierce confrontation between the MTB and RTSB. Naturally this conflict between the two largest exchange structures, which was widely publicized in the press, did not promote any closing of the "exchange ranks."

Second, too ill-assorted a representation of participants attended the conference, sometimes pursuing different goals. All of this notwithstanding, common sense and the real need for united efforts did prevail over personal ambitions and differences. On the final day of the conference it was decided to found the Interregional Exchange Union (MBS) as a public organization, and it was decided that the following should be its main tasks:

- coordinating the activity of exchanges and brokerage organizations;
- preparing and providing expert evaluations of standard documents to regulate exchange and brokerage activity;
- developing and standardizing the networks and facilities used to disseminate commercial information;
- opposing protectionism and implementing antitrust measures;
- training and certifying personnel;
- protecting the social interests of those working in exchanges and brokerage organizations and providing legal guarantees for them.

Along with adoption of the recommendations of those attending the conference on draft interim provisions for exchange activity in the RSFSR, these were the two main results of the forum's work.

An organizing committee was also formed to make preparations for the first MBS congress, which is to take place in late May this year in Moscow. It was also assigned the task of preparing within one month drafts of the MBS statutory documents. The more than 40 members of the organizing committee include the president of the material-technical base, Gennadiy Poleshchuk, and the chief executive of the RTSB, Konstantin Borovoy. In addition, the RTSB leadership abandoned the idea of holding its own conference of exchanges, which had been planned for April this year, and transferred the right to do this to the MBS organizing committee.

### Problems of Conversion Examined

914A0874A *Moscow FINANSY SSSR in Russian No 1, 1991 pp 21-27*

[Article by V. M. Tkachuk, student at the Academy of the National Economy; under USSR Council of Ministers: "Economics of Disarmament"]

[Text] For two years conversion has been proclaimed as state policy, but neither the plans for conducting it, nor any concept, have appeared. The Presidential Council, having considered the draft of the Conversion Program, stated firmly only the existence of various points of view and, has already become a tradition, sent back the document for additional work. Meanwhile, the reduction of military production orders has already affected the plants in the defense complex. The reduction of budgetary financing for scientific-research and experimental-design projects and, as a consequence, the annulling of the contracts with the customers, have led to a reduction in the number of NII [scientific-research institutes] and KB [design bureaus] and to the firing of some of the workers from experimental production entities and laboratories.

The transition from the economics of armament to the economics of disarmament and conversion as a mechanism for implementing the socioeconomic benefits of disarmament, saturating the market (primarily with technically complicated output), expanding the export capabilities, and lowering the level of military preparations contains within itself a considerable potential for economic and scientific-technical growth. Under present-day conditions it is becoming a persistent necessity.

Without a doubt, the economy is put in motion by policy. After 21 March 1989, when the Ukraine of the Presidium of the USSR Supreme Soviet, entitled: "Reducing the USSR Armed Forces and the Defense Expenses" appeared, during the course of 1989-1990 the country officially entered a completely new period in its life.

The peculiarities of conversion in the USSR Ministry of the Radio Industry are determined by the accumulated scientific-technical, production, and intellectual potential. It resolves vitally important national-economic problems involved in saturating the market with consumer goods, medical technology, equipment for the APK [agroindustrial complex], trade, and light industry, and means of ecological monitoring, not to mention such traditional directions as computer technology, control systems, and radio and electronic appliances. In 1989 alone this branch increased the production of consumer goods by 24 percent.

During the first nine months of 1990, the defense enterprises considerably increased—by almost one-fourth—the production of nonedible consumer goods. Unfortunately, the breakdown of monetary circulation in the country makes it possible to see on the shelves of our stores what one can call in plain terms a gigantic spurt by industry.

The output coming off the conveyor belts of the plants in Minradioprom [Ministry of the Radio Industry] alone every month includes more than a half-million television receivers, including almost 400,000 color television sets, more than 30,000 refrigerators, 36,000 washing machines, 45,000 electric vacuum cleaners, et. Is this the result of conversion? Yes and no.

The Soviet defense industry never did confine itself to meeting purely military needs. It is simply that, behind the shroud of complete secrecy, many persons did not even suspect that we are surrounded by the most ordinary things that were manufactured at plants identified only by number. In 1988 (prior to conversion) they produced approximately 2000 different items of commodities intended for cultural and everyday purposes.

The work indicators of the enterprises specializing in defense production can be kept at the level surpassing the average work indicators for the country's industry as a whole, and individual enterprise are preserving practically the same rates of output of production that existed prior to the beginning of conversion.

And this is not only the result of a command issued from above, "Produce more consumer goods!" There is also an economic explanation for this, and it is despite the current opinion concerning the superprofitability of producing military technology. According to a survey by the International Labor Organization (according to official 1989 data for our country), at the Gorkiy Television Plant, which is known as a defense enterprise, 55.4 percent of all the workers produced military output, the share of which constitutes only 43.5 percent of the total volume of production. The remaining workers are engaged in the production of civilian output—television receivers, the value of which constitutes 56.5 percent of the value of the total output. The production of civilian output, at least of the technically complicated radio and television appliances, is economically more profitable.

However, conversion is not simply the mechanical transition of a part of defense production to the production of peacetime output, but is a fundamentally new policy. The breaking of the mechanism governing the existing and activity of defense enterprises occurs in economics, technology, and psychology. And that break occurs extremely painfully. Thus, as a result of the first steps of conversion, the losses of the volumes of output for Minradioprom constitute approximately 2.5 billion rubles; profit, 700 million rubles; and the economic incentive funds, 400 million rubles.

One need not think that conversion is something that production has difficulty in experiencing as a result of some specific peculiarities that are inherent only to socialism. The reduction or freezing at a constant level of expenses for purchasing military output, which reduction or freezing was caused, in particular, by the events in the East European countries in late 1989; the consumers' changeover from concluding contracts with the payment of the supplier's costs to contracts based on firm prices; the reduction of the profitability of contracts; the increase of expenses for NIOKR [scientific-research and experimental-design projects]; and the undesirability of developing complicated systems for domestic consumer alone cause serious financial difficulties for the West European companies that are the manufacturers of armaments and military technology.

In those countries there has been an intensive reorganization of branches with a military orientation. (A probable exception in Italy, where that reorganization has been made difficult by the fact that most of those companies are controlled by the state—a factor that limits the degree of freedom on transactions among them.) Specific problems of reorganization are resolved by the companies with the following methods: the sale of military enterprises; the organizing of joint enterprises; the reduction of the production of output intended for military purposes, at the expense of the diversification of production and the partial changeover to the production of civilian output; and the acquisition of enterprises specializing in the same production area from other companies, with the intention of obtaining profit after carrying out efficiency-improvement measures. For

example, in 1989 the Ericson company, a producer of military radio-electronic equipment, suffered losses amounting to \$8.2 million and within the near future is planning to sell a number of military enterprises. At the (Rekal) company, the share of military sales in the 1970's was 75 percent; at the present time, as a result of the diversification of production, it has been reduced to 15 percent. In 1990 it is expected to create a joint Aerodynamic enterprise (weapon guidance system) by the British Aerospace company (Great Britain) and the (Tomson-KSF) company (France) ("Merger and Division of West European Companies That Produce Military REA [radio-electronic equipment]," "Radioelektronika za rubezhom" [Radio Electronics Abroad], "Moscow, NIEIR [Scientific-Research and Experimental Institute of Radio Electronics], 1990, No. 17, p 22].)

A peculiarity of the present-day situation is the fact that the process of conversion in the USSR is affected by questions of the changeover to market relations. It is not surprising that, under these conditions, enterprises that operate at a loss or with a low rate of profitability are beginning to appear in the branch for the first time. In 1991 there will be approximately 60 such enterprises, and for their normal activities in the new system of taxation there will be a shortfall of 300 million rubles of profit.

Today we are observing the breakdown of the production structures that were created by incredible efforts and gigantic expenditures of resources. But time will pass and once again the question of improving the technological base will arise, and there will be a need for high-technology commodities which, if there is intelligent planning, can already be produced today.

The enterprises and scientific organizations in the defense complex are unique in their technological and personnel potential, and, it would seem, their preservation deserves becoming a nationwide task. It would seem that that should be promoted by another differentiating feature of conversion in the USSR—its implementation under conditions of an economy of shortages, a vast sales market, a practically bottomless demand for consumer goods. It is precisely that peculiarity that inspired the managers at all levels to give speeches concerning the rapid dividends of conversion. To the accompaniment of sounds of approval, the hide of the "potential bear" was divided. Time passed, but there was no commodity abundance, and there still isn't any. The problem proved to be more complicated than appeared at first. An air of pessimism began to exude from the pages of magazines and newspaper. And there is a good reason why it did.

All the best plans for conversion were implemented practically nowhere. Another plan that also was not fated to be implemented is the wonderfully detailed plan for conversion by a united committee of shop stewards of the British Lucas Aerospace military concern, the originators of which even received a Nobel Prize. It did not get beyond the theoretical computations. (V. Potapov, "Plans, Plans, Plans... Reflections of a Soviet Specialist

and Finnish Specialists About Problems of Conversion," NTR TRIBUNA, No 11-12, 1990.) The enterprises in the defense complex could produce more civilian commodities right now. If they had the materials to produce them with. The basic difficulty that the enterprises being converted come up against after they have defined for themselves their new area of production specialization is guaranteed supply. The resource support of conversion, to a decisive degree, can define its final results. The President's Ukase, entitled: "Urgent Measures To Stabilize the Economic Ties in the Fourth Quarter of 1990 and During 1991," has aggravated the situation even more. Aimed at the preservation and consolidation of the economic ties that have already formed and at the execution of the contractual pledges for the shipment of raw and other materials and components, that Ukase, essentially speaking, does not leave any room for the establishment of new ties. But the enterprises to be converted, when changing their orientation to civilian output, do not have any well-established ties and they must organize their network of suppliers "from scratch." Those ties have proven to be the least defended.

But the existing approaches to conversion, including those in the Basic Directions For Stabilizing the National Economy and Converting to the Market Economy, are characterized by two extremes. On the one hand, all the problems of carrying out the conversion are placed on the enterprises, and, on the other hand, there are declarations of the state's support of conversion, with a stipulation concerning the limited nature of financial resources to implement it.

And, then, operating in a consumer goods market, which outwardly is simple, is much more complicated and more dangerous than making very shrewd technology on the basis of production orders from the military. They have their own laws and their own leaders. The only ones who win are those who diversify the production on the basis of the existing technological schemes. It has turned out that it is better to use one's own experience in an area that is not up to everyone's capabilities as a result of a complicated technological scheme and high intellectual saturation. For the country as a whole as of today, the scientific intensity of military output is 20 times greater than the civilian.

Theoretically speaking, the rate of results in conversion is determined by the degree of resolution of a number of tasks:

- change in the investment policy; definition of the relationship between the expenses in the military and civilian spheres of activity;
- the freeing of material resources; the restructuring of their use; the elimination of disproportions;
- the freeing and retraining of labor resources, and the increasing of the effectiveness of their use;
- the preservation of the accumulated scientific-technical, economic, and personnel potential.

In March 1990 U.S. Secretary of Defense Cheney, speaking about conversion, stated that the United States cannot allow itself to reduce the expenditures for defense by more than five percent annually, since those reductions can result in negative social consequences. In our country, however, the Program for changeover to the market economy proposes reducing the expenses of the Ministry of Defense by 20 percent. (The Program referred to is the Program submitted by the President for review by USSR Supreme Soviet.) For which item can the basic reduction be made? Pensions for military retirees? No. Basically for purchases of arms and military technology and for expenditures for NIOKR. Thus the real level of conversion for the defense complex will be considerably higher. The question arises: can we allow ourselves that? The redistribution of expenses among the items of the defense budget to meet civilian needs is limited by the capabilities of converting the resources, in physical terms. The increase or decrease of expenditures is admissible only to the degree that it is supported by the appropriate technology, materials, products, and construction capacities, not even to mention the social consequences.

Today no one will deny that conversion must be planned long before its proposed implementation. For example, the bill introduced by U.S. Senator T. (Veys), entitled: "An Act to Regulate the Military Economy," recommends warning military contractors no less than a year in advance concerning the reduction of the level of financing the military program or a contract from the federal budget (or the complete cessation of financing). The reorientation of production requires time.

Like any other restructuring, conversion is inevitably linked with additional expenditures. Therefore it is necessary to guarantee the economic effectiveness of conversion. Otherwise the load placed on the state budget in the course of conversion not only will not be reduced, but will increase even more, especially at the initial stages. As has been shown by experience, the chief complexity for a specific enterprise is to find market niches which it can fill rather quickly with its output which, on the basis of technical and technological parameters, is not below the output being removed from production. Otherwise it is impossible to feel seriously that conversion, in and of itself (only by virtue of the fact that, instead of "guns," we will produce "butter"), will result in the improvement of the economy. If the costs of production at the enterprises that have changed their area of specialization are so great that their output will not find any sales, then, in essence, that conversion will become the unproductive expenditure of resources in a form that is different from military production. And, from the economic point of view, there will not be any difference about the form in which society "throws down a rat-hole" part of its wealth—in the form of military technology or commodities that no one needs.

A significant shortcoming in carrying out conversion is the underestimation of its social consequences. People in labor collectives are profoundly alarmed and concerned

about questions of the employment rate and the steady drop in the standard of living. There has not yet been any determination of the prospects for the development of arms production in our country, or, accordingly, the fate of many defense enterprises. In USSR Minradioprom alone, there are hundreds of thousands of highly skilled workers, ITR [engineer-technical workers], and scientists. To a large extent, they determine the effectiveness of scientific-technical progress in our country, and the maintaining of the necessary defense potential. Because of the unfavorable conditions that developed during the past two years, the branch has already lost approximately 50,000 persons. The most highly skilled and most dynamic specialists are leaving. It will be necessary to do a lot to make conversion part of the philosophy of the workers and specialists. It is necessary to remove the psychological tension caused by this indefiniteness. There must be openness and glasnost in conversion. Its program must be simple and understandable by the nation.

The structure of the military branches that developed historically is monopolistic in its essence. Without a doubt, for a period of many years the state did not stint on defense expenses, putting at the disposal of the military sector the best of everything in the country—personnel, raw materials, technology. And the military sector made a big leap forward. The existence of a large number of monopolistic enterprises objectively requires rigid state administration and regulation of their activities, especially under the conditions of carrying out conversion.

The geography of the enterprises in the defense branches encompasses all the country's republics and regions. The destructive processes occurring there are in contradiction to the objective requirements of modern science-intensive production. The enterprises in the defense complex are already being declared republic property; new managers are being appointed; and the status of enterprises as suppliers of military output is changing. The consequences of this policy can be catastrophic. For example, in the event of stopping the cooperative shipments to enterprises situated in Lithuania, the losses of output will be billions of rubles for Minradioprom alone.

The other extreme that is expressed by certain people's deputies and members of the USSR Supreme Soviet's Committee on Defense and State Security consists in isolating the production of military technology from civilian technology, and breaking up the defense associations into smaller entities. At first glance this would seem to be reasonable: the production of military technology has its own specifics, which, under the conditions of the introduction of market relations, will require the adoption of a special legal and economic mechanism. However, in the defense industry the existence of separate production of civilian technology is more frequently the exception than the rule: its production is eroded in the complicated grid of the association's infrastructure. It is difficult (and is it even necessary?) to isolate the

production of tennis rackets and ski poles made of plastics if that production entity occupies one floor out of four.

In our country the most competitive sector of the economy is the production of defense technology. Knocking it down and dragging it out to the various national areas means undermining that competitiveness, means causing irreparable damage to the economy of the entire country. However, that can become a reality against the background of the destructive criticism and attacks on the defense branches, and the attempts by the authorities at all levels to interfere in the administration of the defense enterprises. This places in doubt the need to preserve the country's defense complex, and, as a result, will lead to the uncontrollability of the conversion process itself, a process which, like any other nationwide program, could promote the unification of the Union.

If one proceeds from the assumption that the Union acts (together with the republics) as a sovereign state that has its own system of administrative agencies, then the successful carrying out of conversion requires the determination of the status of the defense enterprise as an object of unionwide ownership. In the defense branches, conversion programs must be developed with the participation of the customer who is responsible for the prospects and directions in the development of military technology. These programs receive the government's legislative support and are tied in with the actually possible financial resources. One of the basic goals of these programs is the preservation of the scientific-technical potential of the defense branches. It is also necessary to carry out the following measures:

- 1) to form a fund to promote conversion, in the amount of 40-50 percent of the reduced volumes of military technology (in the draft, two-three percent);
- 2) to concretize the mechanism for intrabranh distribution of the conversion fund, granting the appropriate powers to the agencies of state administration;
- 3) to stipulate the informing of the enterprises of the state's conversion program two years before the beginning of its implementation, in order to have the necessary time to prepare the scientific-technical, financial, and resource support;
- 4) to give, in the necessary instances, to civilian output being produced within the framework of the conversion program the status of a state production order, which would simplify at first the organization of a new cooperative system.

With regard to the first point, I would like to note that in our country we have had the shameful practice of direct issuance of funds from centralized sources. This does not occur anywhere else in the world. Between the state and the enterprise there stands a bank that acts as a completely equal partner (in our country, on the other hand, the bank participates in this operation only as the account holder). The granting of funds must be carried

out in accordance with a specific program for the conversion of a specific enterprise. The right to receive funds must be proven to the bank experts, who then determine the desirability of investing the capital.

The changeover to conversion must be comprehensive and economically verified, and a factor that takes on special importance here is the correct price and tax policy.

An uncontrollable market will exert a pernicious effect upon our branch of the national economy, in which there is broad cooperative actions and in which the bulk of the final articles, especially those for defense, must have firm prices.

The planned liberalization of prices in our country can proceed along two paths: the introduction of a system of free prices or the use of a system of contract prices, when the value of the component parts depends on the level of the price of the final article. Taking into consideration the direct dependency between the value of the military output and the budget capabilities, it would seem that the most desirable system is the contract system for establishing prices. However, the customer and the lead executors must have a definite reserve for compensating the unforeseen expenditures.

It is necessary to consider urgently such a fundamental question as the establishment of prices for science-intensive output, which prices include the expenditures for development. Worldwide practice attests to the fact that the prices of the final output enable the companies to compensate all the expenditures mentioned. For our branch, as a result of the proposed sharp reduction in budgetary financing, both for defense production and for civilian, the changeover to the new model of pricing would make it possible, to a certain degree, to resolve the question of self-financing. For the transitional period it is necessary to stipulate an economic mechanism for compensating the losses in the profit of the defense enterprises that are linked with the existence of firm wholesale prices for the final defense output and the free prices for material resources. When making the decision about introducing, effective 1 January 1991, new wholesale prices and coefficients to them, additional payments should have been introduced, to be added to the prices of military output.

In order to resolve the key questions of the reform being carried out to make the transition to the market, it seems to us to be necessary to delegate to the agencies of state administration the rights of the owner of state property and to allocate to them the appropriate funds. They must guarantee the conversion of their subordinate enterprises and organizations to market relations, while preserving the priority of state interests, on the one hand, and the corporative interests of their enterprises, on the other.

Simultaneously those agencies must become legal entities operating under cost accountability in that part which is linked with the receipt and use by them of dividends for controlling packages of shares, branch

financial resources controlled in commercial banks, and other attributes of a market economy.

A factor of tremendous importance is the fundamental restructuring of the finance and credit policy, and the creation of a flexible tax system. From the point of view of the interests of the defense industry, the necessity of supporting the conversion, the development of cooperative ties that guarantee the rapid increase in the production of consumer goods, we need an effective system of tax benefits and preferential credit.

In particular, we propose freeing from taxation the entire increase in profit that is channeled into the development of science and production; establishing reduced taxation for defense enterprises that assimilate the production of consumer goods; and, in individual instances, preserving the subsidies for the production of the types of output that are in shortest supply, that are socially significant, but that are produced at a loss. With a consideration of the specifics of the defense complex to be preserved in the state sector, and the intensification of the monitoring of the effective use of capital investments for defense needs, we will not be able to do without state appropriations for those purposes.

Serious objections in our country caused the decree of the USSR Council of Ministers, entitled: "Measures to Demonopolize the National Economy." The requirement that all structures must refrain from making economic decisions unless their antimonopolistic directedness is guaranteed seems to be unrealistic. In addition, any enterprise will always strive (especially under conditions of the market) to use innovations that are unknown to its competitors in order to extract greater profit. But since they can sometimes be unprofitable for a certain period of time, the tax legislation must determine the policy.

In the normative documents that have been issued (the laws governing the enterprise in the USSR and property in the USSR; decrees of the USSR Council of Ministers, entitled: "Measures to Demonopolize the National Economy," "The Creation of Small Enterprises," etc.), there has been omitted such a very important detail as the impossibility of the direct application of many of the principles in the documents to the defense branches of industry, with a consideration of their specific nature, without a real threat of destabilizing that very important complex in the national economy.

One cannot fail to keep in mind the obvious fact that the approaches to questions of deconsolidation; privatization; the granting to enterprises of the freedom to leave the ministries and to enter into any kind of voluntary associations, or to leave them; the transformation of enterprises from state union property into a different kind; material-technical support; pricing and taxation when making the changeover to the market must be different for different branches, both with regard to the deadlines and the depth of those reforms. Whereas, for

the consumer sector of the economy (trade, public nutrition, personal services, light industry, the agroindustrial complex), the overwhelming majority of the principles stated in the mentioned programs and documents are definitely acceptable, for the defense branches, with their very high concentration and coordination of science and production, their rigid intercooperation, and economic-contract discipline, many of them are either completely unacceptable or are acceptable with definite limitations. And yet the drafts of the programs for changeover to the market which are being reviewed do not take that peculiarity into consideration.

The destabilization of the work of the defense branches has taken on a threatening nature and has been caused not only, and not so much, by conversion as it has been caused by the large number of other factors—the disorganization of the system of material-technical supply, the destruction of the cooperative ties, the leakage of skilled cadres into cooperatives, the use of payments in kind, the disorganization of production as a consequence of strikes, blockades, etc.

All this is fraught with irreparable losses of the scientific-technical and production potential of the defense branches, which will reflect not only on the country's defense capability, but also on the contribution made by those branches to the resolution of tasks in the national economy.

Summing up everything that has been stated, one cannot fail to note that today, as never before, conversion needs economic and legal protection. Populist tendencies in the approach to conversion are completely inadmissible. The idea is being suggested to the people that it is possible, without doing anything, by means of issuing directives to require the plants in the military-industrial complex to undertake the production of the necessary civilian output, thus assuring that all the problems of the technical and technological backwardness of entire branches will be resolved as though by one wave of a magic wand. And no one knows what there is more of in this approach: militant dilettantism or a conscious desire to destroy those few things that still, perhaps by virtue of the existing inertia, represent an economic and organizational force.

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#### **Defense Industry Minister Belousov on Conversion**

914A0830A Moscow *RABOCHAYA TRIBUNA*  
in Russian 7 Jun 91 p 2

[Report by Valeriy Badov on Round Table organized by *RABOCHAYA TRIBUNA*: "All About Conversion. I. Makers of Weapons on the Road to the Market"; passages in boldface as printed]

[Text] **What will conversion bring to the national economy? What will its impact be on workers of the defense industry? These were the issues discussed at the**



**Round Table organized by RABOCHAYA TRIBUNA [RT].** Today we begin publication of its materials. Other aspects of conversion discussed at the Round Table will be published in subsequent issues of RT. The first speaker at the Round Table was Boris Belousov, Minister of Defense Industry.

**[RT] What have the country and the people to gain from conversion in practical terms?**

[Belousov] More than a million people are affected by the conversion program. It involves our industry more than any other. Between 1988 and 1990 we significantly reduced the output of multiple-launch rocket systems, tanks, infantry fighting vehicles, shorter-range missile systems, ammunition and other types of military hardware and armaments. I must tell you, this is no simple matter. Behind each "product" there are people, families, social problems.

But we are finding solutions, albeit with difficulty. We put forward the idea of additional measures for the social protection of worker collectives. Nikolay Ivanovich Ryzhkov supported us at the time.

The second problem which we must resolve is the replacement of "eliminated" output with civilian products. This is where numerous conflicts arise. Everyone wants everything to be done in a hurry. But we have to balance our reserves made available in the process of conversion.

The productivity of one worker at a military production conveyor is six-eight times higher than in civilian production. Sometimes even 10 times higher. Yet no one takes this into account except the specialists. We are sometimes accused: how come that you have "eliminated" a billion rubles' worth but made up only 800 million? You're working poorly, they say. It's wrong to heap accusations on people engaged in work. The fact is that sometime in 1992 we'll replace virtually all that was "eliminated" from our total output. And we will no longer have grave economic problems. But today, if I produce less marketable output the economic incentive funds decline. Unfortunately, the latter circumstance is not fully taken into account. I would like our economists to have a deeper understanding of the situation and help us.

Now on the subject of conversion. Whereas in 1988 civilian products accounted for 35 percent of our total output, in 1991 we will be having 65 percent civilian output.

Our ministry manufactures more than 3,000 items of consumer goods. This year conversion accounted for an increase in 2.8 billion rubles' worth of goods for the counter. Look: in 1990 alone the output of radio receivers increased 123.5 percent, in terms of units, tape recorders—139.6 percent, washing machines—130 percent, electric food blenders—250 percent, electric meat grinders—341 percent, etc. We are manufacturing 177.9 million rubles' worth of toys alone. In furniture the

growth was 125.6, in perfumery 338, in detergents 167 percent. So as a result of our efforts last year we rose from one ruble 27 kopeks' worth of manufactured goods per ruble of wages to one ruble 67 kopeks. We aren't dependents of the people.

We have involved 62 plants of the defense sector in the implementation of centralized assignments. Since 1988 output has increased by more than 190 percent. By 1995 we intend to increase deliveries to the agrarian sector 4.8-fold. This is, obviously, quite a lot of help. But, unfortunately, so far we haven't managed to achieve systemic work with our partner.

Why? Because there is no coordinator in agriculture who would help the collective farms, state farms and individual farmers have their orders filled. So far the Gos-snab system is operating. It is a purely formal system. It takes no account of either the dynamics or the specifics of consumer demand. We have been forced to set up a service of our own which would contact directly with the customer.

The light industry people manufacture 76-80 billion rubles' worth of consumer goods a year with equipment built by the Ministry of Defense Industry. By 1995 we must double the output of this manufacturing equipment. We have 50 plants of the defense sector involved in solving this problem. There are plenty of failings. Communication with customers is poor.

Things went from bad to worse after the Ministry of Light Industry was terminated. Orders were being filled, but as a result we built equipment which no one now takes. For example, for many years our country purchased automatic silk reeling machines from Japan. The former Ministry of Light Industry Machine Building was assigned to develop similar equipment. They spent eight years on this and eventually failed. We gave top priority to those automatic machines and built them. Now orders for such machines have suddenly declined sharply, actually down to nothing. Why? Because the mills which were to receive them under long-range plans simply haven't been built yet. This is what happens when you work for a customer at the whim of an intermediary, out of sight, so to say. We are coming to the conclusion that it is, of course, necessary to have more obligatory relations with the customer. So now we are trying to deal directly with factories, spinning and weaving mills so as not to allow such blunders.

We ourselves have offered light industry officials, in the person of the USSR State Light Industry Committee, to develop, jointly with branch institutes, a reconstruction program for factories, spinning and weaving mills. In their time the light industry people had rejected our STB weaving machine. We launched another program and organized the manufacture of a machine in Novosibirsk under import license. It is a modern, rather complex machine. By agreement with the Light Industry Ministry we ceased production of the STB in Novosibirsk and sold Cheboksary STBs for exports to Middle-Eastern



countries. Then suddenly our light industry people started to clamor: Why had we reduced deliveries of STB machines? But, we told them, you yourselves had rejected them! So now we're again forced to restore production of the STB at the Novosibirsk plant. Now they tell us it's a good machine. We've even limited some exports to more fully meet the demands of our domestic consumer.

We need 106,000,000 rubles to implement programs agreed with the government. The light industry cannot find this money. For that reason we can't sign a business contract. The situation is similar with production equipment for the agroindustrial complex.

**Paradox: The Ministry of Defense Industry, where there is science, moreover, very potent science, and the people to tackle these things at the lowest cost for the economy, cannot realize its potential. Because no funds are allocated for civilian science. It's simply beyond comprehension. This year we need 670,000,000 rubles for civilian science. So far just over half this amount has been allocated. If we do not find the money, 80,000 specialists will have to be laid off, including 20,000 in Moscow.**

I have already said that conversion is linked with the well-being of the workers of the industry. In 1991, our centralized sources for non-industrial construction were reduced by 83 percent. How are we supposed to finance housing construction? As far as I know, no one has repealed the Housing-2000 Program. How is one to explain what is happening to the worker collective, to a person who was in line for housing?

What is the situation of enterprises which were engaged in developing and building missile systems? The SS-20 missiles were products of our Ministry of Defense Industry. Now the plants that built those missiles are engaged in, among other things, manufacturing marine drilling equipment. These are extremely complex systems. We once bought a set from the Americans. It cost somewhere around 30,000,000 dollars. Our Perm, Nizhniy-Novgorod and other plants participating in the program. There are unique solutions which preclude any discharge of oil into the sea in case of an accident at the drilling rig.

Our comrades who develop missile systems are making a self-propelled unit which drives piles into the ground non-destructively, by vibro-oscillations. Or here is another interesting job. We use our own gun-powders to "resuscitate" wells at oilfields. We lower a powder charge down and burn through paraffin-coated places, increasing bed yield 20 to 25 percent.

Or a mobile operating room, a "cross-country ambulance." On another of our missile transporting vehicles we have mounted a crane which can lift 100-ton loads. We have a highly efficient automatic sugar compacting line...

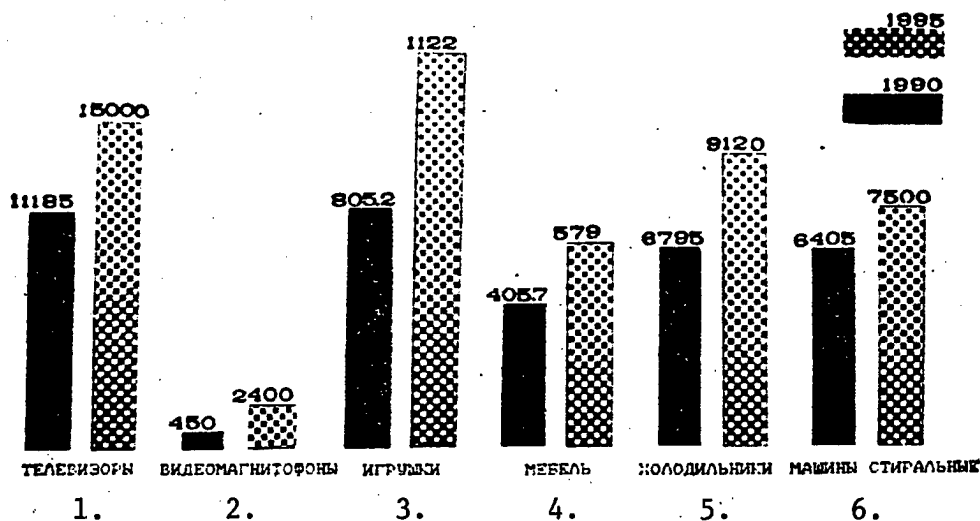
**[RT] Boris Mikhaylovich, our readers were gratified to hear that the Ministry of Defense Industry was one of the**

**founders of the Unemployment Protection Fund. Thank you for supporting the paper's initiative. In this connection, what is happening to the personnel and specialists of work collectives? Will they run away from you to America?**

[Belousov] Look at what's happening now. The Nizhniy Novgorod Machine Building Plant has found a unique solution for a district boiler room. The Finns and other countries are already ordering it because of its high efficiency. Before, the Nizhniy Novgorod people used to build engines for various ships, and now they're building these boilers. One of our chemists has built a line for baking ice-cream cones. Six thousand cones an hour. Yes, he is a high-class chemist, but life has forced him to do new things. His installation has, incidentally, been certified for a State Quality Seal. Now about jobs. For various reasons—either funding is lacking or specialists and plant managers have dallied in developing programs—our lag in the realization of technological backlogs inevitably results in people leaving. We are currently engaged in a virtual struggle at our plants to keep competent personnel, engineers, technicians and scientists, and skilled workers. After all, whatever people may say, the qualifications of our engineers and workers are very high.

For example, the State Optical Institute in Leningrad employs five corresponding members of the Academy of Sciences, 80 doctors of technical sciences, and 800 candidates of science. If we lose that institute then one can bid farewell to state-of-the-art optics in our country. Of course, we cannot tolerate such damage and will look for a way out, but... We are greatly undercut by free-wheeling cooperatives. Nowadays, with the high cost of living, wages decide everything. It is hard to compete with wages in cooperatives, which pay twice as much for less qualified work. We, too, had originally opted for numerous cooperatives to be set up alongside our plants. We are chastised even for this. Currently we have 481 cooperatives alongside our plants. What kind of cooperatives are they? Many produce output, but in most cases cooperatives were not born of good life. They ease bottlenecks.

What does a director do? A bottleneck appears with respect to some parts or operations, so he hastily organizes a cooperative, where the pay is higher. But when we analyzed productivity and whether it matched the rapid increase in pay, we once again found that productivity in the cooperative was still at times virtually one-half lower. Yet the pay was double! And now the answer to the question you asked: Will the best personnel go away or not? As a practical worker I can say: Not all will leave, of course, but some will certainly give up their jobs if we don't create the necessary conditions. They may, of course, be worse than in the West, but at least bearable. Otherwise the "brain drain" will begin. That is what I consider to be the most terrible thing that can happen in our economy, in our society. Because any civilized country, when something goes wrong in the economy or



Output of consumer goods in ministries of the defense complex: TV sets, VCRs, refrigerators, washing machines—in thousands of units; toys and furniture—in millions of rubles.

Key:

1. TV sets
2. VCRs
3. Toys
4. Furniture
5. Refrigerators
6. Washing machines

technology lags, looks for talented and knowledgeable people all over the world. They buy them and take them away. That is no secret.

### Higher Customs Rates for Foreign Goods Explained

914A0883A Moscow *RABOCHAYA TRIBUNA*  
in Russian 22 Jun 91 p 3

[Article by Natalya Kozlova: "The Customs House Gives 'Good'"]

[Text] The heavy traffic on the roads began on Saturday, 15 June. By 8:00 AM the lines at the customs house in Brest had were already a kilometer long.

The reason for this nervousness was the announcement which had flashed through certain mass media about the new regulations to be introduced as of 1 July at our customs house. If we believe these reports, after that fateful date it will be very, very expensive to bring goods into the Soviet Union. Understandably, everyone was trying to get in under the wire.

So, what really happened? Nothing. No one had even come close to touching the existing regulation. Everything remained as it had been. It is true, the customs duties went up slightly. This is explained by the fact that the prices in our country have increased, while the customs duties remained the same. I asked Valeriy

Gavrilovich DRAGANOV, a representative of the Customs Committee governing board and a 3rd rank state customs service advisor, to explain who specifically would be affected by this, and in what measure.

[Draganov] The overwhelming majority of people crossing the border do not encounter customs duties at all. That will continue to be the case. Everything that people used to bring in at the sum stated in the declaration, goods which they had bought for money they earned abroad or received as gifts, they will continue to bring in **duty-free**. However, if they bring in wholesale shipments of goods intended for sale, they will have to pay duty. The logic here is simple: By importing and selling, the person will not only receive money himself, but will also pay tax to the state. This is done throughout the world.

And one more important principle. Foreign trade activity is no longer a state monopoly. Today there are very many participants in foreign trade relations in the country. These are state enterprises, as well as joint enterprises, cooperatives and private individuals. There had been an import tax for them. It was computed on the basis of the cost of the deals with the foreign partner.

And so, our comrades in business, for whom profit at any price and to the detriment of all became a unique motto, began to circumvent this tax on a mass scale. Looking at the customs service with innocent eyes, they assured us that the cargo was their own personal property, and that

they were ready to pay the customs duty for large shipments, but based on passenger regulations instead of foreign trade regulations. And in this case it was much lower than the import tax. Such people, as a rule, are well known to the customs service. They regularly perform not one and not two trips a year, carrying large shipments of goods. It is specifically for such and only for such people that the maximal customs tax rate has been established.

Prior to 1 July it was the same for everyone. Now there are two rates. The minimal rate is applied if there are more goods than one needs for oneself, but not enough to comprise a wholesale shipment. The maximal customs rate will be paid by "wholesalers."

Last year 34 million people crossed the border. This year there will be even more. According to the observations of customs officials in Sheremetyevo, Brest, and Nakhodka, of the tourists almost no one ever pays customs duty, and will not do so in the foreseeable future. This also concerns those who cross the border on work passports. People who work [abroad] and continually cross the border bring in what they have earned, and very rarely encounter that which is called a customs duty. This leaves the ones who go abroad at private invitations and bring back wholesale shipments of goods. The percent of such people is still very insignificant. However, it has a tendency toward growth. This must be economically regulated.

Recently many used foreign automobiles have appeared on the country's roads. Many people are interested in the new regulations for their import. Here they are. The duty on importing a vehicle with engine size up to 1,000 cubic centimeters is 10,000 rubles [R]. Up to 1,600 cubic centimeters—R20,000, and over 1,500 cubic centimeters—R30,000. But, I emphasize, this is the commercial rate, so to speak. The import of an automobile which a person has bought for himself for his official earnings will cost him only 20 percent of this sum.

For three days the customs officials on the western border worked at an overload. There have been lines here before, but never such an instantaneous upsurge. It was necessary to call in all the forces. But at last report, the lines have begun to subside and are getting back to normal.

### New Customs Tariffs May Hurt Consumers

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Union Edition p 2

[Article by Aleksandr Protsenko: "Chimney Tax"]

[Text] On July 1, new customs tariffs will be introduced for the import of food products and consumer goods into the USSR.

There is reason to believe that the exorbitant prices for consumer goods in commercial stores, which had seemingly begun to come down in the past two months, will

increase again in the near future. The reason is simple: As of July 1, new customs tariffs will be introduced in our country for items that are shipped to the USSR from abroad or brought in by citizens crossing the USSR border.

There is a direct connection between these two expected events. As is common knowledge, a considerable portion of all the goods sold in commercial stores are just such items—goods that citizens bring with them as they cross our state border. While foreigners bring in a small percentage of these goods, our own citizens bring in most of them. For in their efforts, by hook or by crook, to somehow escape their unrelieved and degrading poverty, Soviet citizens who somehow manage to go abroad are exhibiting incredible cunning and resourcefulness in contriving ways to bring back from their business trips and even tourist excursions masses of goods of all kinds. Some of these items are for themselves and their families, while others are to be sold.

To be honest, I don't see what's so bad about this. Given our general shortage of all kinds of consumer goods and food products, one would think that we should even thank the tourist who spends his meager foreign currency to fill our store shelves. One can sympathize with officials of our foreign institutions who develop stomach ulcers abroad in order to later bring back to the Soviet Union a container full of odds and ends. In the first place, it's their ulcers. Second, they're bringing back things that we don't have—what's wrong with that?

Strictly speaking, this is practiced in many countries—especially developing ones. But so-called "commercial tourism" is for some reason on the rise even in Western Europe of late. And "their" tourist firms, having sensed the demand, have immediately begun opening up suitable routes to satisfy it. State institutions have no objection.

However, here too we have decided to go our own way. Naturally, with the best intentions. Perhaps there first arose someone's opinion to the effect that social justice is being violated here: one segment of the population (the one that travels) is making money off another segment of the population (the one that doesn't travel). And then Valentin Pavlov's government decided—no, not to ease the lot of those at whose expense the money is being made—but to get a piece of the action. And now the Soviet tourist who travels abroad and wants to make some money on his return, say, by selling an extra pair of pants he bought abroad, will first have to pay his state a customs tariff in the amount of five rubles. Bringing in an extra blouse will cost you 15 rubles, a jacket 35 rubles, and a suit 70 rubles. And so on and so forth.

Let me say from the outset that these regulations do not apply to items intended for personal use. This is stated explicitly in the order issued by V. Bolyarov, chief of the USSR Council of Ministers Main State Customs Directorate (an organization that has all but been renamed the USSR Customs Committee): "A citizen...has the right to

bring into the USSR, without paying customs tariffs, goods and other articles that are intended for the personal use of that citizen or members of his family." But try and prove to a customs officer that you need those two dozen handkerchiefs for "personal use" in view of your susceptibility to frequent colds. And if you can't prove it, you'll have to pay fifty kopeks for each one.

But 50 kopeks is nothing. That amount will be required from a citizen crossing the USSR state border if he is an upstanding person (and not some speculator) and is bringing with him goods and food products in an amount that "exceeds the limits of personal use by an insignificant amount." Such a person will have to pay customs tariffs of at least 70 rubles per kilogram of small plastic toiletries, but just 15 rubles per kilogram of automobile tires. One hundred rubles for an expensive fur, but just 20 rubles for an electric iron. And so on. But if these goods are brought in "in amounts that exceed the limits of personal use by a significant amount," the tariffs will be quite different. Those same toiletries will cost you 180 rubles per kilogram; automobile tires, 40 rubles per kilogram; 300 rubles for the fur; and 70 rubles for the iron. And so on and so forth.

Incidentally, what do you think: Who is given the right to determine how many, say, liters of cognac "exceed the limits of your personal use by an insignificant amount" (in which case the tariff will be 40 rubles per liter), and how many exceed that limit by a significant amount (60 rubles per liter)? Or how many square meters of a machine-made carpet you can bring in at the rate of 70 rubles per meter, and how many at 250 rubles per meter as "significantly in excess"?

Naturally, this "all-knowing" person is to be the customs official. He is the one who will determine, when a Soviet citizen returns from a long foreign trip, how many refrigerators our "returnee" will be allowed to bring in after paying a tariff of 350 rubles apiece, and for which one (the second, the third, the 10th?) he will have to pay 1,000 rubles. It is the customs official who will determine how many calculators, audioplayers, and VCRs "exceed the limit by an insignificant amount" and will be assessed tariffs of 20, 120, and 400 rubles respectively, and how many of them exceed that limit by a significant amount, for which that person will have to pay 150, 250, and 1,000 rubles apiece.

What do you think could be the possible result of granting such sweeping powers to a modest and not particularly high-paid customs official? Yet it would be enough to introduce in customs regulations the concept of the "lot of goods" and to set an exact amount at which it would begin. Then there would be far fewer grounds for mutual recrimination between those crossing the state border and those who stand guard over it.

But these are technical details, so to speak. They can be more or less well thought out or more or less degrading for our fellow countrymen and guests of our country

"when crossing the USSR state border." However, let's get back to the most important point: Why is all this being done?

I have no idea. I personally do not find convincing claims that all these measures are aimed exclusively at combating wholesale speculators. I want to know just who finds it necessary to wage this struggle, whom it benefits. After all, even if we assume that the state will thus hit some brazen underground businessman "in the pocketbook" in its effort to protect the "average Soviet citizen," I have to ask the following question: Why, as soon as the state begins to look out for the average Soviet citizen, do things for that citizen immediately get worse than they were before the state began looking out for him?

For example, we once jacked up customs tariffs for the import of personal computers. At the time, this too was attributed to the need to combat various "shadow economy" swindlers. Economic experts and specialists in the information field warned Nikolay Ryzhkov's government: A huge mistake is being made. At a time when the country itself is unable to produce sufficient numbers of personal computers, we need to encourage their import into the USSR, not restrict it.

However, these voices were not heard, and today no one knows to what extent the introduction and widespread use of computers in our national economy has been slowed or what our country has lost as a result.

It is known, however, that the import of computers into the USSR did not stop but even increased; for despite the high tariffs, it remained a profitable undertaking. But for the "average Soviet citizen," access to personal computers became more difficult.

It seems that today too, the union government is expecting that the import of consumer goods into the Soviet Union will continue despite the inflated customs tariffs. And in this way, the state budget will get its share of the profits—and even more, because the state, by provoking higher prices in the commercial stores as a result of these tariffs, will increase its income twice: After all, the store pays 10 percent of the sale price of each item to the tax service.

However, I think this policy is not only immoral, since it will fleece the very average Soviet citizens whom the full power of our state is supposed to protect. This policy is not only at odds with the proclaimed principles of primacy of the interests of the citizen over the interests of the state. In the final analysis, this policy is shortsighted, at a minimum—for it will not fill our store shelves, but further empty them.

We know from our school textbooks that in prereform czarist Russia, most peasant huts were heated with unvented, soot-belching stoves by no means because there weren't enough stovemakers in the villages. Rather, there was a high tax on stove chimneys, and that

tax forced the peasantry to live in huts without chimneys. Aren't we dealing with the same sort of "chimney tax" in the form of the customs tariffs?

Finally, information about the customs rates being introduced is already circulating throughout the country. Unflattering things are being said about the USSR Customs Service. I want to stick up for the customs officials: They have nothing to do with this. All this is the handiwork of our union Cabinet of Ministers, which has decided, in this way, to put the state's finances in order at the expense of you and me.

Incidentally, a new document is now being drafted deep within the USSR Cabinet of Ministers—a document on customs tariffs for the export of goods from our country. Who knows what new surprises the future has in store for us.

### **USSR Arbitration Court Structure, Functions Explained**

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Union Edition p 2

[Interview with Veniamin Fedorovich Yakovlev, chairman, USSR Supreme Arbitration Court, by Yu. Feofanov, IZVESTIYA commentator: "A Court for the Marketplace"]

[Text]

[Feofanov] I'm somewhat familiar with the operation of the former Gosarbitrazh [State Board of Arbitration]. It was under government administration and used to examine disputes solely between state enterprises. There were also departmental arbitration boards. But, in essence, the State Board of Arbitration was also departmental: it was maintained by a single proprietor—the state. Now the situation has changed, albeit theoretically. And has your court also undergone some changes? Or is it only the name and method of formation that have changed? Is it simply a matter, Veniamin Fedorovich, of pouring old wine into new bottles?

[Yakovlev] The State Board of Arbitration originated in 1922 after the transition to the NEP [New Economic Policy] had been made. It was a time when an end had been put to that structuring of the national economy which constituted an "integrated factory." Economic interests began to be manifested at enterprises, and the need to settle economic disputes arose. And it was this which brought the State Board of Arbitration into being. As the NEP was gradually curtailed, enterprises continued to conclude contractual agreements among themselves, but they were already tied to the state's "pocket-book": a considerable portion of the enterprises' profits were taken from them and then allocated—this undermined *khozaschet* [the principle of cost accounting] and the economy in general. Naturally, the Arbitration Board was also gradually transformed into an appendage of the administrative-command system. It became half court, half administrative organ. Moreover, it was assigned yet

another function: that of setting norms. The State Board of Arbitration used to approve certain regulations which were mandatory for participants in economic relations: for example, instructions on the procedure for receiving and accepting goods with regard to quantity and quality, etc. Thus, the State Board of Arbitration combined within itself the following three powers: executive, judicial, and legislative.

[Feofanov] But none of them were to the full extent. Has everything changed now?

[Yakovlev] The situation has changed nowadays. It's been several years since the State Board of Arbitration ceased to be under the jurisdiction of the USSR Council of Ministers and ceased to be subordinate to the government; it no longer had the right to abrogate its decisions. Now the State Board of Arbitration at the Union level has been transformed into the USSR Supreme Arbitration Court. This process is also taking place in the republics, where laws have been prepared regarding arbitration or economic courts.

The Supreme Arbitration Court has been relieved of all functions other than the juridical one. It will not even have the right to initiate cases on its own, but merely to examine and consider disputes brought by the parties concerned, i.e., to hear suits brought by any state, cooperative, leasing, shareholding, private, individual, Soviet, or foreign organizations, as well as joint enterprises, etc.

[Feofanov] Don't you get the feeling that we are now at that stage of repairs when the new furniture has been brought in, but the old furniture is still in the apartment? The administrative-planning system is still holding everything in its hands, there is still no market-type economy, and God only knows when there will be one. But your court, as far as I understand it, has been created for the marketplace.

[Yakovlev] With the transformation of the arbitration boards into courts, we have not outpaced development, but neither have we lagged behind it; that is to say, we are keeping abreast of practical life, with the development of economic processes. Yes, a great deal of the administrative method of running things is still being retained: state regulation of prices, planned distribution of material resources, etc. We have to settle disputes, taking into account the law as it now exists, mandating the concluding of contractual agreements in accordance with planned assignments. But, in my opinion, matters will have substantially changed by the beginning of 1992, and we must be prepared for this. And that's why the arbitration court was set up ahead of time.

[Feofanov] Could you please cite some specific cases so that our readers may get an idea of the nature of present-day economic disputes.

[Yakovlev] Of course. As of now, these disputes attest to the complete distortion of normal economic relations.

Judge for yourself what kind of "economy" or "economics" this is by the following example. In concluding a contractual agreement with the Brest Meat-Packing Combine for supplying the latter with natural gas, the Zapadtransgaz Association of the Gasprom State Concern attempted to get from its potential customer 150 tons of meat, partly in the form of sausage. Quite often one party insists on a contract agreement being concluded, whereas the other party refuses or declines to do this. The Khimvolokno Association within the system administered by the USSR Ministry of the Petroleum Refining and Petrochemical Industry submitted an item to the Gornel Glass Plant concerning cutting its deliveries of fiberglass in half. The plant initiated an action, i.e., a lawsuit, inasmuch as it lacks the opportunity to buy raw material anywhere else. Now I ask you: Is there anywhere in the world where people would refuse to accept orders?

During the first quarter of this year, according to the terms of contractual agreements, there was a shortfall in deliveries amounting to 7 billion rubles.

[Feofanov] What about forfeits?

[Yakovlev] Hm, forfeits... You know, the number of contract violations during the last few years has sharply increased, while the number of claims and suits has declined. Why is that? The buyers, since they are dependent upon the suppliers, are simply afraid of appealing to the arbitration boards or courts and thereby "spoiling" relations. Everything has become distorted, and only a normal marketplace will restore normal business circulation.

[Feofanov] Inasmuch as the economic court, if we can call it that, in our country has no experience, or only very specific experience, I'd like to find out how "other people" settle disputes similar to those that you will have to settle.

[Yakovlev] "Other people," of course, would also include those in Old Russia. We have studied the pre-revolutionary experience. At that time there were commercial courts which settled such disputes. Abroad there are two procedures for settling economic disputes. The first consists of "third-party," or "arbitration" courts, i.e., courts chosen by the parties involved. Disputes are also settled by state courts. Such a procedure exists in countries all over the world. By the way, our country does have "third-party" courts, for example, the Arbitration Court within the Chamber of Commerce and Industry, which examines disputes if a foreign partner is involved in the case. Our court's activity does not at all exclude "third-party" courts. The way cases are handled in our court does not differ, in principle, from the commonly accepted norms and international standards.

[Feofanov] Arbitration courts are, obviously, emerging in the republics, and now they are being officially recognized by the sovereign states. Will your decisions be

binding on them? Will you interpret the laws or their application, as is done by the USSR Supreme Court Plenum?

[Yakovlev] I've examined the draft laws concerning the arbitration courts of the Russian Federation, the Ukraine, Belorussia, and certain other republics. They basically echo ours, i.e., they've worked out unified, integrated approaches. There are also differences. Whereas previously the arbitration boards at the Union and republic levels constituted an integrated system, nowadays each court—whether at the Union, republic, or oblast level—will function independently. This includes those at the oblast level. But we must retain the opportunity to appeal decisions of a lower court to a higher court, at least at the republic level, if there are disputes between enterprises situated on its territory. And if the dispute is between enterprises from different republics, then, obviously, there must be an opportunity to appeal to the Union-level arbitration court.

We intend to create a plenum of the USSR Supreme Arbitration Court; and it could include representatives of the arbitration courts of the Federation subjects. A plenum having such a composition would be able to interpret the laws and assist in working out a unified or standard practice of interpreting them.

[Feofanov] And will they try cases just as in ordinary courts?

[Yakovlev] No, as a rule, a case will be examined and tried by a single judge, and—in special cases—by three judges, but they must all be professional lawyers. Judges will be elected by the Supreme Soviet and—for the first time in our practice—will be elected for life. I don't exclude the possibility that specialists, for example, bankers, could be invited to take part in trying economic disputes.

[Feofanov] When state enterprises used to have disputes, it was a conflict between "socialist subjects." But what if a "socialist" subject has a dispute with one that is already "capitalistic"? Let's suppose that a scarcely breathing kolkhoz "at death's door" has a dispute with a flourishing, "grasping" cooperative. Or a decaying state wretch of a factory with a millionaire businessman. Which one will be cursed in all the newspapers? Are you confident, Veniamin Fedorovich, that an objective settlement to the conflict could be reached?

[Yakovlev] Well, how could I give you such guarantees? All we can do is hope that market-type relations will put things in their proper places.

[Feofanov] What if enterprises, cooperatives, or private businessmen should have claims against our own Ministry of Finance, for example, or the State Committee on Prices, or even against the Cabinet of Ministers itself, would the court accept all of them? Let's suppose that the Cabinet had issued an illegal or, for example, an unexpected decree, and, as a result of this, a private person was harmed. Would he find protection from you?

[Yakovlev] In accordance with the existing legislation, an enterprise shall have the right to appeal acts promulgated by administrative organs and to demand that these acts be recognized as invalid if they contradict the law and infringe upon the interests of participants in economic relations. But it must be emphasized that what we are talking about here is appealing acts which are not normative in their nature. Last year the USSR State Board of Arbitration examined and considered more than 700 such claims, in particular, with regard to state orders. In half the cases these suits were recognized as well-founded, and satisfaction was obtained. The state orders were recognized as unjustified in those cases where they, in particular, have been brought to enterprises with violations of the established rules. Nowadays the question is being posed of possibly appealing the actions of the tax organs. The arbitration court will examine such claims. In particular, the draft Russian Law on the Supreme Arbitration Court provides for the possibility of appealing the actions of tax organs to the arbitration court.

As to acts passed by the USSR Cabinet of Ministers, according to the existing law, the Supreme Arbitration Court does not have the right to examine and consider claims on recognizing its acts, nor the acts of the Union republics, as invalid. A special procedure has been established for them. What kind of a procedure? To put it briefly: only the Supreme Soviet can abrogate or nullify governmental acts.

[Feofanov] In our country the division of rights into "public" and "private" has not been accepted. The latter include trade, promissory notes, in short, everything connected with market-type relations. If I understand it correctly, in the field of "private" rights the state is only a subject of the "relations;" it has no advantages or priorities over a "private" person. State control on business is very limited, whereas that of the government is even more limited. And, in general, our country has no civil law appropriate to the marketplace. But can there be a court without law?

[Yakovlev] It's hardly correct to say that the capitalist state does not regulate private business. We must distinguish between regulation and interference, i.e., unjustified control. And normal, legal-type regulation is very developed in the present-day world, particularly when business affects the consumer. One of our great delusions is that private business can do everything that it can think up. This is just not so. The state acts as an intermediary between private business and the consumer. There is a category of so-called "prescribed conditions," i.e., conditions which the state prescribes in relations between businessmen and citizens as consumers. There is also a whole range of prohibitions. It is forbidden, for example, to give citizens contract forms containing a great deal of very small print for the purpose of deceiving the consumer. Business with these "other people" is not something wild or savage, but instead, civilized, refined, and ethical. In our country we have extremes: either everything is over-regulated, or

there is freedom without any limitations or restrictions. In short, a civilized marketplace assumes a limited amount of regulations, but without commands. And so if we are to speak about state regulation of economic relations, let there be no "private law."

Our civil law is based on Roman law; and there are many elements of the Napoleonic Code. The trouble is that our civil legislation existed only on paper. In reality administrative law regulated the economy. In our country there was even a "theory" of economic law. Its advocates stated the following: Let civil law operate where the citizen enters into a relations with an enterprise; let "business" law, rather than civil law, operate in relations between enterprises. The RSFSR Civil Code of 1922 contained such concepts as a joint-stock company, limited company, full responsibility, and a fidelity-type company. In 1964 all this was removed from the Civil Code. We must restore such institutions as deposits, securities, promissory notes, etc.

For many years the advocates of the concept of business law prepared several drafts of the USSR Business Code. But it did not appear. Then they began to propose the Fundamentals of Business Legislation. Nor did this go through. So nowadays all this has been forgotten. In the field of legislation we must return from fruitless or barren innovations to the "eternal" values of the law.

## INVESTMENT, PRICES, BUDGET, FINANCE

### USSR Law on Amendments to Income Tax Law

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Union Edition p 3

[USSR law: "On Changes and Additions to the USSR Law 'On Income Tax From USSR Citizens, Foreign Citizens, and Individuals Without Citizenship'"]

[Text] The Supreme Soviet of the Union of Soviet Socialist Republics decrees:

To introduce into the USSR law of 23 April 1990, "On Income Tax From USSR Citizens, Foreign Citizens, and Individuals Without Citizenship" (VEDOMOSTI SYEZDA NARODNYKH DEPUTATOV USSR I VERKHOVNOGO SOVETA USSR, 1990, No. 19, p 320) the following changes and additions:

1. In point 2 of Article 2, replace the words "at the official exchange rate of the USSR Gosbank" [State Bank] with the words "at the commercial rate of the USSR Gosbank."

2. In Article 3:

in point 1:

present subpoint "j" in the following wording:

"j) sums received as a result of the sale of property belonging to citizens by virtue of a title to ownership,

except for income from the sale of products and other property in the performance of commercial activity";

in subpoint "o" replace the words "USSR state banks" with the words "banks in the USSR," and after the words "treasury commitments of the USSR" add the words "and republics";

present subpoint "t" in the following wording:

"t) the sums of material aid rendered in connection with natural disasters and other extraordinary circumstances and also in cases when this aid is rendered on the basis of decisions of the USSR Government or the governments of the republics, regardless of the amount of the sum paid; the sums of material aid in monetary or in-kind form rendered in cases other than those indicated in subpoint "a" of the present point—up to 1,000 rubles [R] per year, inclusive";

present subpoint "s" in the following wording:

"s) the sums of wages and other incomes of citizens subject to taxation used to buy property of state enterprises, buying shares, and paying off credit issued for these purposes, and also dividends received from shares and used to acquire shares in the joint-stock company or enterprises from which the dividends were received. When this property and these shares, which were previously exempt from taxation, are sold, they are subject to taxation on a general basis";

augment the point with subpoints "t," "u," and "v" with the following content:

"t) compensation payments in monetary and in-kind form in amounts established by legislation of the USSR and republics, with the exception of compensation for unused vacation upon discharge;

"u) wages and other kinds of monetary remuneration for workers, employees, and other citizens on an equal footing with them for tax purposes, in an amount of up to R160 per month received at their main place of employment (service, training);

"v) incomes (except for those indicated in subpoint "u" of the present point) not in excess of an average of R160 per month when the citizens do not have a main place of employment";

in point 2:

augment subpoint "a" after the words "USSR Red Crescent" with the words "youth compensation funds" and after the words "ecological funds"—the words "USSR state fund for inventions, regional funds for financing scientific and technical developments on the basis of inventions, and enterprises, institutions, and organizations for the development of invention activity";

3. In Article 4:

in point 1;

declare subpoints "a," "b," and "c" invalid;

In subpoint "g" replace the words "or during the time they are in meetings for training or tests" with the words "or at the location of meetings for training or tests";

present subpoint "n" in the following wording:

"n) men living in rural areas who have reached 60 years of age and women who have reached 55 whose farms have been exempted from the payment of agricultural or land tax—according to their incomes from business activity conducted by both individual and collective business people";

augment the point with subpoints "o," "p," "q," and "r" with the following content:

"o) students in higher educational institutions and secondary educational institutions who have been sent to work in organizations, institutions, and enterprises as members of student detachments formed on the basis of warrants from republic, kray, oblast, and city staffs of student detachments and labor associations of youth, and also instructors and other workers, graduate students, and residents of these educational institutions, appointed according to the established procedure by leaders of student detachments—for wages and other payments received for work performed in student detachments;

"p) workers, employees, students, and other citizens sent by enterprises, institutions, and organizations for agricultural work to kolkhozes [collective farms], sovkhoses [state farms], and other agricultural enterprises—with the wages and other payments received for the performance of these jobs;

"q) the following citizens who suffered as a result of the Chernobyl disaster—with all the income they receive:

"citizens afflicted with radiation sickness brought about by the consequences of the Chernobyl disaster and also disabled persons for whom it has been established that their disability is directly linked to the Chernobyl disaster, including:

"individuals (including those sent or stationed temporarily) who participated in the cleanup after the disaster in the off-limits zone or were employed in the operations or other work at the Chernobyl nuclear power plant;

"leaders and rank-and-file workers of internal affairs organs who served (are serving) in the off-limits zone;

"military service personnel—officers, warrant officers, ensigns, military servicemen in the emergency service, military service women, noncommissioned officer and enlisted personnel on active duty in the USSR Armed Forces, troops and organs of the USSR Committee for State Security, internal and railroad forces, and other military formations, and also reservists called to special meetings and enlisted to work in the off-limits zones helping with the cleanup after this disaster;



"individuals evacuated (left voluntarily) in 1986 from the off-limits zone and also those who are living (lived) since 26 April 1986 in the evacuation zone and in the zone where they have the right to evacuation;

"individuals (including those temporarily sent or stationed) who participated during 1986-1987 in the work for cleaning up after the disaster at the Chernobyl nuclear power plant within the off-limits zone or other work at the Chernobyl nuclear power plant;

"military servicemen listed in the fifth paragraph of the present subpoint and reservists called to special meetings and enlisted during 1986-1987 to perform work related to cleaning up after this disaster, regardless of where they were stationed or the work they performed;

"supervisory and rank-and-file personnel of internal affairs organs who served in the off-limits zone during 1986-1987;

"r) citizens registered as seeking work—in the amount of the unemployment stipends received during the period of occupational training and retraining from the state employment fund";

in point 2:

present subpoint "d" in the following wording:

"d) for military servicemen and military reservists called up for training and examinations who performed their international duty in the Republic of Afghanistan and other countries in which combat activities were conducted—50 percent of the earnings, monetary allowances, and other such incomes they received";

in subpoint "g" replace the words "engaging in individual labor activity, including members of labor and farm enterprises," with the words "engaging in business activity both individually and as collectives of businessmen, including members of peasant farms."

4. Augment Part 1 of Article 5 with a sentence with the following content:

"Moreover, the sum of incomes received in foreign currency is turned into rubles at the commercial rate of the USSR Gosbank on the day the income is received."

5. Article 7:

Augment point "a" with the following words:

"including incomes formed as a result of granting workers material and social benefits at the expense of the funds of enterprises, institutions, and organizations";

in point "b":

in the third paragraph, after the words "banks and their representatives," include the words "in foreign diplomatic, consular, and other official representations and representations of foreign mass media organs."

6. Present Article 8 in the following wording:

"Article 8. Tax rates

"From the incomes listed in Article 7 of the present law, tax is collected in the following amounts:

Amount of monthly income	Sum of tax
from R61 to R1,000	12 percent of the sum in excess of R160
from R1,001 to R2,000	R100.80 plus 15 percent of the sum in excess of R1,000
from R2,001 to R3,000	R250.80 plus 20 percent of the sum in excess of R2,000
from R3,001 and more	R450.80 plus 30 percent of the sum in excess of R3,000

7. Declare point "b" of Article 9 invalid.

8. In Article 10:

Present the title of the article in the following wording:

"Article 10. The amounts of taxation of payments for work in locations with severe climatic conditions and one-time remunerations for length of service (tenure)";

replace the words "13 percent" with the words "12 percent";

add Part 2 to the article:

"Tax is collected at the same rate from sums of one-time remunerations for length of service (tenure)."

9. Augment Article 13 with point 5 with the following content:

"5. According to the procedure envisioned in the present article, tax is withheld and transferred into the budget by businessmen operating both individually and as parts of collectives of businessmen and by other citizens who pay wages and other incomes to workers and employees they employ."

10. In Article 14:

in point 1:

in subpoint "a" replace the words "if they are not systematic in nature" with the words "and other agreements of a civil-legal nature";

augment subpoint "b" with the words "if the sum of this aid exceeds R1,000 per year";

present point 2 in the following wording:

"Tax on incomes indicated in the present article are collected in the following amounts:

Amount of monthly income	Sum of tax
1	2
from R5 to R10	2 percent of the sum of income

Amount of monthly income	Sum of tax
from R11 to R30	R0.20 plus 3 percent of the sum in excess of R10
from R31 to R50	R0.80 plus 5 percent of the sum in excess of R30
from R51 to R100	R1.80 plus 6 percent of the sum in excess of R50
from R101 to R500	R4.80 plus 9 percent of the sum in excess of R100
from R501 to R1000	R40.80 plus 12 percent of the sum in excess of R500
from R1001 and higher	at rates indicated in Article 8 of the present law

11. In Article 15 replace the words "according to the procedure envisioned in Chapter II of the present law" with the words "according to the procedure envisioned in Article 13 of the present law."

12. In Article 17:

in point 1:

in the first paragraph eliminate the words "under the condition that the remuneration is paid at the established rates";

present the table of tax rates in the following wording:

Amount of annual income	Sum of tax
up to R120	2 percent of the sum of income
from R121 to R360	R2.40 plus 3 percent of the sum in excess of R120
from R361 to R600	R9.60 plus 5 percent of the sum in excess of R360
from R601 to R1,200	R21.60 plus 6 percent of the sum in excess of R600
from R1,201 to R6,000	R57.60 plus 9 percent of the sum in excess of R1,200
from R6,001 to R12,000	R489.60 plus 12 percent of the sum in excess of R6,000
from R12,001 to R24,000	R1,209.60 plus 15 percent of the sum in excess of R12,000
from R24,001 to R36,000	R3,009.60 plus 20 percent of the sum in excess of R24,000
from R36,001 and higher	R5,409.60 plus 30 percent of the sum in excess of R36,000

13. In the second paragraph of point 2 of Article 18, replace the words "R8,400" with the words "R12,000."

14. Present the name of Chapter V in the following wording:

"Chapter V. Taxation of incomes from business activity and other incomes not related to the performance of labor duties."

15. Present point 1 of Article 19 in the following wording:

"1. According to the procedure and in the amounts envisioned in the present chapter, citizens conducting business activity both individually and in collectives of businessmen and also citizens with other incomes not listed in Articles 7, 13, 14, 16, 22, and 29 of the present law are responsible for paying taxes.

"Individuals running peasant farms are taxed according to the procedure and in the amounts envisioned in Chapter VI of the present law."

16. Present Article 20 in the following wording:

"Article 20. Tax rates

"From incomes indicated in Article 19 of the present law, tax is collected in the following amounts:

Amount of annual income	Sum of tax
1	2
up to R6,000	in an amount equal to the sum of tax paid for the corresponding number of months by workers and employees at the rates in Article 8 of the present law if there is no place of primary employment or at the rates in Article 14 of the present law if there is a place of primary employment.
from R6,001 to R12,000	R489.60 plus 12 percent of the sum in excess of R6,000
from R12,001 to R24,000	R1,209.60 plus 15 percent of the sum in excess of R12,000
from R24,001 to R36,000	R3,009.60 plus 20 percent of the sum in excess of R24,000
from R36,001 and higher	R5,409.60 plus 30 percent of the sum in excess of R36,000.

17. Present Article 21 in the following wording:

"Article 21. Procedure for calculating and paying tax.

"1. The tax is calculated from the overall annual income on the basis of declarations from the taxpayers of the incomes actually received during the course of the year, materials from investigations of the citizens' activity conducted by tax organs, and other information about the incomes of the taxpayers.

"Tax is calculated from the actual income by the tax organ in the place of the taxpayer's permanent residence.

"2. During the course of the year taxpayers make quarterly payments into the budget of 25 percent of the sum of annual tax calculated from the income for the past year, and for taxpayers paying taxes for the first time—25 percent of the annual sum of tax calculated for them by the tax organ for the anticipated income over the current year.

"The following deadlines are set for advanced tax payments: 15 March, 15 May, 15 August, and 15 November.

"When there is a significant increase or reduction of the taxpayer's income during the course of the year, the advanced tax payments may be recalculated for the forthcoming tax payment deadlines.

"3. When over the course of the year income is received from enterprises, institutions, and organizations, they withhold the tax from the source of payment of the income. With each subsequent payment the tax is recalculated on the basis of the overall sum of income paid during the current year at the given place of payment. The withheld sums of tax are subtracted by the taxpayer when making the next tax payments, which is reported to the tax organ that calculated the advance tax payments for the current year.

"4. At the end of the year, all taxpayers must, no later than 15 January, submit to the tax organ in their permanent place of residence a declaration of the overall sum of income received during the past year. The difference between the sum of annual tax calculated on this basis and the sum of tax paid during the course of the year is subject to collection from the taxpayer or return to him no later than 15 March.

"5. When a source of income appears during the course of the year, citizens submit declarations within five days after the first month after the day of the appearance of the source of income; these indicate the amount of actual income during the first month of activity and the amount of anticipated income up until the end of the current year.

"If the source of the income disappears during the course of the year, the declaration of income received must be submitted within five days from this time, and the recalculation of the tax and the collection or return of the calculated tax sums are completed within 15 days of the receipt of the declaration.

"6. Information about payments to citizens and sums of tax withheld from them must be submitted by the enterprises, institutions, and organizations no later than 15 January of each year to the tax organs in the place where they are located, and these tax organs relay this information to the tax organs in the place of permanent residence of the recipient of the income.

"7. For purposes of taxation, the overall incomes of a collective of businessmen are distributed among them as agreed upon among themselves, which is indicated in the declaration of income of the collective of businessmen submitted to the tax organ."

18. Declare Chapter VII invalid.

19. In Article 28:

in the second paragraph of point 1, replace the words "Chapters IV-VII" with the words "Chapters IV-VI";

augment the second paragraph of point 2 with the following sentence:

"In the future the declaration of anticipated incomes is submitted annually before 1 March of the current year";

in point 4:

in the first paragraph, after the words "must be confirmed" include the words "by central";

in the second paragraph, eliminate the words "with the agreement of the USSR Ministry of Foreign Affairs."

20. In Article 32:

in the second paragraph of point 1, eliminate the words "Citizens guilty of violating the policy for engaging in individual labor activity, for whom there is a special ban, and also";

in point 2 replace the words "at a special rate of the USSR Gosbank" with the words "at the market rate of the currency exchange of the USSR Gosbank."

21. In the text of the law, replace the words "USSR Council of Ministers" and "by the USSR Council of Ministers" with the words "USSR Cabinet of Ministers" and "by the USSR Cabinet of Ministers."

[Signed] *President of the Union of Soviet Socialist Republics M. Gorbachev, Moscow, Kremlin, 11 June 1991*

**The full text of the law, taking into account changes and additions made by the USSR Supreme Soviet, will be published in the next issue of the newspaper.**

#### **Law on Amendments to Repeal of Tax Law**

914A0885B Moscow IZVESTIYA in Russian 24 Jun 91  
Union Edition p 3

[USSR law: "On Making Changes and Additions to the USSR Law 'On Stage-by-Stage Abolition of Income Tax for Bachelors, Single People, and Citizens With Small Families in the USSR'"]

[Text] The USSR Supreme Soviet decrees:

To introduce into the USSR law of 23 April 1990 "On Stage-by-Stage Abolition of Income Tax for Bachelors, Single People, and Citizens With Small Families in the USSR" (VEDOMOSTI SYEZDA NARODNYKH DEPUTATOV USSR I VERKHOVNOGO SOVETA USSR, 1990, No. 19, p 322) the following changes and additions:

1. In Article 1, replace the words "from 1 July 1990" with the words "from 1 April 1991" and the words "not exceeding 100 rubles" [R] with the words "not exceeding R160."

2. In Article 2:

In the first paragraph, replace the words "from 1 July 1990" with the words "from 1 April 1991" and the words "from R101 to R150" with the words "from R161 and higher";

Present the table of tax rates in the following wording:

Amount of monthly income	Sum of taxes
from R161 to R200	5 percent of the sum in excess of R160
from R201 and higher	R2 plus 6 percent of the sum in excess of R200

Add to the article point 2 with the following content:

"From USSR citizens' incomes received elsewhere than in their main place of employment and also income not related to work duties the tax is collected in the amount of six percent of the sum of income."

3. Augment the law with Article 6 with the following content:

"Article 6. Abolish the collection of taxes from bachelors, single people, and USSR citizens with small families who suffered from the consequences of the Chernobyl disaster and also the husbands of female victims:

"a) from citizens who fell ill and suffered from radiation disease caused by the consequences of the disaster at the Chernobyl nuclear power plant, and also disabled persons of Group III for whom a direct connection has been established between their disability and the Chernobyl disaster, including:

"individuals (including those temporarily sent or stationed there) who participated in the cleanup after the disaster within the off-limits zone or were employed in operations or other work at the Chernobyl nuclear power plant;

"leaders and rank-and-file personnel of internal affairs organs who have performed (are performing) service in the off-limits zone;

"military servicemen—officer personnel, warrant officers, ensigns, military servicemen on emergency duty, military service women, noncommissioned officers, and enlisted personnel serving in the USSR Armed Forces, forces and organs of the USSR Committee for State Security, internal and railroad troops, and also reservists called up for special training and work related to cleanup after the aforementioned disaster;

"individuals evacuated (voluntarily departed) in 1986 from the off-limits zone and also people who are living (have lived) in the evacuation zone and the zone where they have the right to evacuate, since 26 April 1986;

"b) from individuals (including those temporarily sent or stationed) who during 1986-1987 participated in the cleanup at the Chernobyl nuclear power plant within the off-limits zone or who were employed during that period in operations or other work at the Chernobyl nuclear power plant;

"c) from military servicemen listed in the fourth paragraph of subpoint "a" of the present article and also reservists called up for special training and enlisted in

1986-1987 in the performance of work related to the cleanup, regardless of where they were stationed or the work they performed;

"d) from leaders or rank-and-file personnel of internal affairs organs who served in the off-limits zone during 1986-1987."

[Signed] *President of the Union of Soviet Socialist Republics M. Gorbachev, Moscow, the Kremlin, 11 June 1991*

### Decree on Enacting Amendment Laws

914A0885C Moscow IZVESTIYA in Russian 24 Jun 91  
Union Edition p 3

[Decree of the USSR Supreme Soviet: "On Enacting the USSR Law 'On Making Changes and Additions to the USSR Law on Income Tax From USSR Citizens, Foreign Citizens, and Individuals Without Citizenship' and the USSR Law 'On Making Changes and Additions to the USSR Law on Stage-by-Stage Abolition of Taxes on USSR Bachelors, Single People, and Citizens With Small Families'" ]

[Text] The USSR Supreme Soviet decrees:

1. To enact the USSR law "On Introducing Changes and Additions to the USSR Law on Income Tax From USSR Citizens, Foreign Citizens, and Individuals Without Citizenship" and the USSR law "On Making Changes and Additions to the USSR Law on Stage-by-Stage Abolition of the Tax on USSR Bachelors, Single People, and Citizens With Small Families":

a) regarding the income tax:

—for wages and other monetary and in-kind remunerations and payments related to the performance of labor duties, beginning with payments for work and other activity performed after 1 April 1991, and in relation to subpoint "r" of point 1 of Article 4 of the USSR law "On Income Tax From USSR Citizens, Foreign Citizens, and Individuals Without Citizenship," after 1 May 1991;

—for other incomes of citizens, beginning with income received in 1991;

b) regarding tax on USSR bachelors, single people, and citizens with small families:

—for wages and other monetary and in-kind remunerations and payments related to the performance of labor duties beginning with payments for work and other activity performed after 1 April 1991, and with respect to Article 6 of the USSR law "On Stage-by-Stage Abolition of the Tax on USSR Bachelors, Single People, and Citizens With Small Families," after 1 May 1991;

—for other incomes of citizens, beginning with incomes received in 1991.

2. To establish that in 1991, beginning with earnings for April, the taxable income of workers, employees, and individuals on an equal footing with them does not include sums paid to workers of enterprises, institutions, and organizations for the higher cost of food in dining rooms and cafeterias up to 50 rubles per month, the cost of complete or partial pay for passes for therapy or recreation, including passes for their children to Pioneer and other children's health camps, and also the sums of fares paid by enterprises, institutions, and organizations for travel for their workers to work and back on urban and suburban transportation.

This procedure for tax breaks extends to students in higher educational institutions and secondary specialized and vocational and technical educational institutions.

3. Beginning in 1992, to extend the benefits envisioned in subpoint "r" of point 1 of Article 4 of the USSR law "On Income Tax From USSR Citizens, Foreign Citizens, and Individuals Without Citizenship" and the articles of "On Stage-by Stage Abolition of the Tax on USSR Bachelors, Single People, and Citizens With Small Families" to individuals who suffered from radiation disease and were disabled as a result of radiation accidents and their consequences at other (than the Chernobyl nuclear power plant) nuclear facilities of civilian or military significance.

[Signed] *Chairman of the USSR Supreme Soviet A. Lukyanov, Moscow, Kremlin, 11 June 1991*

## INDUSTRIAL DEVELOPMENT, PERFORMANCE

### Atommash Diversifies to Consumer Goods Production

914A0878A Moscow *RABOCHAYA TRIBUNA*  
in Russian 15 Jun 91 p 2

[Article by *RABOCHAYA TRIBUNA* correspondent Gennadiy Belotserkovskiy: "Atommash: Controlled Breakup"]

[Text] Volgodonsk—Exactly a year ago the Rostov teletype "RT" transmitted an article to Moscow: "Give the Job to Atommash." It sounded an alarm: the 20,000-man collective of the unique giant enterprise was on the brink of ruin. The Chernobyl catastrophe impacted it as well, leaving the machine builders without orders for equipment for the AES [nuclear electric power station]. Their construction was stopped everywhere, including on the shore of the Tsymlyansk Reservoir, 13 kilometers from Atommash itself. The specter of unemployment loomed ahead. Difficult tasks faced the Ministry of Atomic Energy and Industry and the collective of the enterprise itself: How can this cluster of intellect and supermodern technology be saved for future generations?

It can now be said: correct decisions were made in many things. Atommash is operating, although not in its main specialty. Even under the conditions of chaos in our economy, when its own ministry can give very little help. But what has maintained the collective?

**V. Yegorov, general director of Atommash Production Association:** In the last year, nuclear orders in total volume of production dropped to 15 percent—a blow, as the saying goes, below the belt. But we not only held up but also increased the volume of production. We became a multibranch industry. We were overloaded with the orders of metallurgists, petrochemical workers, and builders—finish one thing and start another. It gets difficult, for the orders are all small series, and at times even single items. Each time everything has to be done all over—drawings, instruments, and equipment. This is an additional service and expense.

The output of commodities for the people grew to five million rubles. Technically complex satellite communications antennas that make it possible to receive foreign television stations appeared, and house trailers. The first sets of equipment for the cleaning of sewer drains were manufactured—they will be very suitable for small and average cities. We are trying to manage lines that produce up to 8 million bricks per year. We are filling an order from a Japanese firm for heat exchangers and tanks. The order is not large, and it is somewhat experimental: If we ensure quality and dates, they will link us up with a big job.

**A. Chausovskiy, director of enterprise No. 1:** We literally called our novelty—a baby tractor—Atommashets. It has 12 horsepower, and uses a meager amount of fuel. It plows beautifully. On the highway it can do 30 kilometers per hour; moreover, with a trailer cart. A test model of the machine has already been working a year on a suburban farm, and there has not been even one serious breakdown. There is simply nothing to break down, and the power train has been simplified to the maximum. One farmer was ready to lay out 25,000 rubles for it, and he pleaded with us to sell it.

Of course, for mass production of the novelty it will be necessary to go through formalities associated with agricultural science, state testing, and the like. Colleagues from the Minsk tractor plant promised to help accelerate this—the Atommashets took their fancy very much. Especially that which is assembled from parts and junctions that our industry already produces.

**V. Yegorov:** We would not be able to cope with all of this under the old system of association management, when everything was centralized. We required that Atommash

be broken up into 30 independent lease enterprises. In addition, work is proceeding best of all in the smallest of them.

But these, of course, are forced measures. The aim of what has been done is to stay afloat until we understand that we will fail without nuclear energy, and we will live by candlelight. Especially in comparison with the West, which is not even thinking of rejecting AES's. I believe that a turning point in the public conscience in our country should occur very soon. Incidentally, we are also working to provide nontraditional sources of energy. We have produced equipment for the Crimean solar station. We are working on a big order for wind-driven installations. We are only "for." We will do it: Take it, please, and you will be convinced that all of this is too little to support our life and our economy.

We are now preparing new managers for Atom mash. About two years ago we asked engineers: Who would like in time to become the general director, a chief engineer? Do not be bashful! We selected five promising bold spirits. They are now going through probation periods at all of the works and services. We set up conditions for them for salaries and vacations. We are coaching them. To be honest, I envy them—I did not have such opportunities.

**Yevgenniy Kovtun, chief of the Atom mash personnel department:** Recently, the local newspaper alarmed all of Volgograd by putting out the prediction—soon, they said, a thousand Atom mash workers will be without work. I gave "assurances" to the same newspaper: Last year only 13 persons were released. And they themselves wanted to get three months of allowances. Although, frankly, they could have been placed in other sectors after brief retraining.

I noticed that many people have a panicky fear of retraining and mastering associated professions. Give them work, and that is all! As a rule the reasoning is this: "What, have I been trained in vain?" But after all, we now have 600 vacant jobs. Anyone who is not afraid and is not lazy can become very useful.

This year, the ASU [Automated Control System] "Kadry" ["Personnel"] will start to work in our association. We are entering data into the computer on each worker, and he will be evaluated each day. As a result it will be much simpler to search for a person ordered, for example, by the chief of a shop. We will give him a specialist with any set of the necessary qualities—if there is such a person, of course, in Atom mash.

With time we will also switch to cost accounting. Our advice, according to the idea, should be expensive. In the West the search for a manager costs a firm at the very least millions on occasion. But on the other hand, he returns this a hundredfold. In our country managers have not evaluated such services in full measure. But, after all, if we earn money we will be better able to

finance and qualitatively improve the training of workers, for which we allocate a ridiculously small amount in this country.

But, generally, the main thing for us today is to lead Atom mash through the nuclear calm with minimal losses. To make its "breakup" and decentralization controlled, and, when necessary, reversible. We will try to do everything so that here, with such equipment, as the saying goes, "nails are not hammered in with microscopes" and people with high qualifications are not lost. But this is a pledge that nuclear reactors, when we start to produce them again, will be of high quality. And this means, secure.

### Krasnoyarsk-26 Faces Conversion Problems

914A0858A Moscow *EKONOMIKA I ZHIZN*  
in Russian No 14, Apr 91 p 11

[Article by V. Khrebtov under the rubric "Conversion":  
"The Secret Combine"]

[Text] This city is not on a single geographic map. Yet, nevertheless, it exists—with a population of several hundred thousand people and large industrial enterprises. Until recently, only a small circle of people knew that the world-famous Molniya, Gorizont, Ekran, Raduga and Luch series of communications satellites and the communications system for Buran are made here and that this is the place where the nuclear fuel for military and peaceful vehicles is produced.

But the era of total secrecy has passed. Krasnoyarsk-26, commonly known under the name of Devyatka [Nine], has opened its barriers for people's deputies and journalists. Our EZh [EKONOMIKA I ZHIZN] journalist was one of the first to visit it. How do the secret city and the combine live?

It turned out that they live just the same as we all do, with problems. The reduction in nuclear arms, for which our country is striving, on the one hand, and the anti-nuclear sentiments of the public, generated by the Chernobyl tragedy, on the other hand, have made conditions extremely complicated for the local mineral chemical combine. The demand for nuclear fuel has decreased and this means that the combine, possibly, will be forced to reduce the volume of its mining operations and, consequently, the number of workers. A large number of extremely acute economic and social problems are arising, which should be solved even this very day. How?

A clear-cut program for the conversion of production was developed here three years ago. One of its basic items was the construction of a fuel reprocessing plant (RT-2). The first such plant is already operating successfully in Chelyabinsk Oblast. The fate of the second has turned out to be less fortunate—its construction was "frozen" half a year ago.

"We are viewing this decision as a temporary one," said V. Lebedev, director of the mineral chemical combine.

"It does not do away with the majority of the problems—economic, ecological and social. All the nuclear powers have such plants and we, having halted its construction, have assumed an "ostrich-like" position: having accumulated radioactive wastes in storage sites, we are pretending that we have solved the problem of their use."

What was the "initial spark?"

The fact is that contained in the spent fuel assemblies in the reactors is a large amount of valuable components—plutonium, uranium 235 and 238 and other elements. At an RT-2 plant, it is possible to enrich them and use them again, saving quite a few of the assets used for extracting the fuel and preserving nature. And, in addition, the plant could make full use in its own shops of the specialists freed up from the basic production, solving the problem of employment.

Alas, public opinion does not wish, for the time being, to accept these arguments.

But, whereas everything is more or less clear regarding the construction of the RT-2 plant—it has been halted, another project also belonging to the combine and known to the people of Krasnoyarsk under the name of Site No 27 is generating quite a few questions today.

Originally, it was intended for landfill-type burial of liquid radioactive wastes. In order to transport them, a special 2.4-kilometer-long tunnel was dug under the Yenisey River. On the whole, around 30 million rubles [R] have been spent on the entire complex since the start of construction.

And here we have it—in the final stage of the work—once again, the public has interfered in the matter. Numerous meetings and protest actions have led to a construction shutdown. The project, developed within the bowels of secret institutes, has collapsed.

Of course, it would be possible today to discuss its merits and shortcomings and the "hotheadedness" of the opponents and the "cold, calculating nature" of the proponents of Site No 27. However, something else seems more important to us: what is to be done with the project, into the construction of which many millions in assets have been invested? For now, the inhabitants of the secret city and the managers of the mineral chemical combine have no answer to this key question.

The most serious problem is the tunnel. Situated far from the large highways, it cannot become the shortest path which would connect the two shores of the Yenisey. There is nothing to connect inasmuch as there are only mountains and the dense forest around it. The hotheads have suggested using the tunnel for growing... mushrooms. An original thought, but too expensive. The fact is that just the yearly maintenance of the tunnel will cost R400,000 and so, they would have to grow "gold" mushrooms.

Within the framework of conversion, the combine is gearing up to produce especially pure substances needed

for the production lines of microelectronic devices and computer equipment—gallium arsenide, germanium, tellurium and bismuth.

But a special area of conversion, which can be carried out at the mineral chemical combine, is the production of consumer goods. Set up here has been the assembly of electronic circuits for the Rassvet television sets which are extremely popular both in our country and abroad. And even though one section is ready to increase the production volume of its own products, it is not yet able to do this—there is a shortage of components.

I would venture to assume that increased interest on the part of consumers will be generated by the news about the start of production at the mineral chemical combine of tanks... milk tanks with a volume of 1,000 liters. As is well known, this product, which is intended for the pasteurization of milk and milk products, is enjoying increased demand among the rural populace. The defense enterprise's specialists have introduced into the basic model a number of serious design changes and, as a result, with a slight increase in the price, the tanks have become twice as productive and their operating life has increased by the same factor. Over the course of this year, the processing sectors' enterprises will receive nearly 1,500 units of this item.

To put it briefly, conversion at the mineral chemical combine has been quite tangible. Whereas, three years ago, the percentage of peaceful products in the overall volume of the production line amounted to a negligible two percent, it has currently increased many times that figure. Almost all these products are being produced and realized by the combine based on direct contracts and are enjoying increased demand among the consumers.

### Ministry Becomes Joint-Stock Association

914A0898A Moscow IZVESTIYA in Russian 2 Jul 91  
Union Edition p 2

[Interview with N. Panichev, president of the state joint-stock association Stankoinstrument, by V. Romanyuk: "Minister Becomes President"]

[Text] Beginning 1 July 1991, the USSR Minstankoprom [Ministry of the Machine Tool and Tool Building Industry] was converted into the state joint-stock association Stankoinstrument. The first question is banal: What is it—another sign change in order to keep the staff and high salaries?

"Not at all," objects GAO [joint-stock association] President N. Panichev. "When I took over the ministry several years ago, it had 1,450 employees. The association's current staff is 348 people."

[Romanyuk] Former Prime Minister N. Ryzhkov had also been tightening administrative apparatus and merging ministries. Some branches-conglomerates had become totally unmanageable.

[Panichev] We have 511 enterprises and organizations for our 348 administrative staff members. We see our task not in commanding and administering them, but in creating favorable conditions for enterprises—the main producers of goods—to work.

[Romanyuk] Most enterprises reject ministerial structures. What sense do they see in creating all sorts of associations after they have barely acquired the desired economic freedom?

[Panichev] The ministry worked by government directives and by plans put together in the USSR Gosplan [State Planning Committee]. Then, when the economy started to disintegrate to such a degree, it became necessary to search for new forms of economic administration. Since the idea is to move toward a market, we, together with the enterprises, had to create structures that would allow enterprises to operate successfully in a market environment. We became interested in the structure of the Austrian firm Voerst Alpine, four-fifths of whose property is in the state sector; we learned many useful things at Italian FIAT and at the American company General Electric. In the end, we voluntarily gave up management by order and began building our relations with enterprises on the basis of partnership.

[Romanyuk] Are you trying to say that you have already been operating as an association for quite a while?

[Panichev] Absolutely correct. We have already formed all the necessary market structures. For instance, the department of material and technical supply had 120 functionaries with a guaranteed salary whose business was to copy papers received from the USSR Gosnab [State Committee for Material and Technical Supply]. We have converted it into a self-supporting Stankosnab [Machine Tool Material Supply Company] which deals with enterprises on a contract basis. To help Stankosnab, we created a GAO stabilization fund, for which we allocated 10,000 machine tools and 3,000 presses. In exchange, we will be receiving metal, ball bearings, and other things.

There was another unmanageable task—obtaining credits. Instead of relying on other banks, we formed our own Stankinbank with a charter capital of 100,000 rubles [R]. Now its turnover is about R1 billion. In addition, we introduced financial pools into practice. If, for instance, we need to buy a license, we collect money from interested enterprises and buy it. As of today, 42 financial pools are in operation in our industry branch. We try to join various republic programs. For instance, the Government of Russia is allocating R70 million for a program to build 200 brick factories in the republic.

[Romanyuk] Much is now being written about the fiasco of the Ivanovo machine tool association where they used to make manufacturing centers with foreign-made components; now there is no hard currency to buy components and they have to switch to making woodworking universal boring. Is this your baby?

[Panichev] All this sham at Ivanovo was created under the sponsorship of the CPSU Central Committee Politburo in opposition to the ministry. There was an attempt to resolve the problem of disposable syringes through the same apparat methods. The CPSU Central Committee Politburo ordered us to produce rotor lines for this purpose, although it was clear from the very beginning that this technology was not workable from an engineering point of view. We have wasted much time and resources but not a single line is working to this day. Thank goodness, we put in a parallel operation, a discretionary version, and produced thermoplastic automatic machines with multiple press forms.

[Romanyuk] Nikolay Aleksandrovich, what have you lost as a minister and what have you gained as a GAO president?

[Panichev] I have lost an ambiguous position of a man without rights and economic levers whose only duty was to sit at government meetings and to be held responsible. I have gained much. If you mean the financial side, my personal salary is now R2,000, twice higher than the one I had as a minister. By established norms, expenses on the maintenance of GAO apparatus comprise 0.08 percent of the volume of realized production, but not more than 0.65 percent of profits remain at enterprises' disposal.

[Romanyuk] So what is it—GAO Stankoinstrument? Each fragment of this abbreviation brings out questions.

[Panichev] This is a voluntary association. Not a single enterprise had been accepted without a protocol of its collective's general meeting making a decision to join the GAO. Why joint-stock? Because we are convinced that this is a realistic way to make each employee an owner of the productive capacity, to stimulate him to invest not only his labor, but also his money into the development of production. So far, six plants have switched to a joint-stock form. Now the largest in the industry collective—Krasnyy Proletariy—is going joint-stock. A new form of administration is being introduced at the plant imeni Lenina in Sterlitamak. Here they created 14 self-supporting entities on the basis of factory shops and issued shares. By the way, there is now a department that will be involved in the implementation of new ownership forms.

[Romanyuk] The republics declared their sovereignty. Can it happen that the GAO will fall apart after the Union Treaty is signed?

[Panichev] I have in my hands an inter-republic agreement signed by the prime ministers of four republics—the Ukraine, Russia, Belorussia, and Armenia. Our branch is, so to speak, the chief technologist of the machine-building complex. Internal cooperation encompasses up to 45 percent of production volume. To destroy the unity of the branch is to allow the production to fall to one-half of its present level. Enterprises can work on a joint-stock basis, on leaseholds, and even convert into cooperatives, but at the same time they need



to be a part of the system of internal technological cooperation inside the branch.

In this respect we have things to learn from Europe. For instance, from the European Committee on Machine Tool Building. Its task is formulated this way: If a manufacturing center arrives in Germany from Italy, five hours later it has to be assembled into a system of machines and start producing output. Something else: If today you are making grinding machines, you cannot switch to making harrows tomorrow. You can fail in the market today, but you have no right to lose your skills. This is the basis of many European firms' good reputation.

[Romanyuk] Have all enterprises in the branch joined the association?

[Panichev] Not all! Two plants located in Lithuania have not joined, as well as two in Lvov. Two concerns were formed before the GAO was organized: Seven out of 24 woodworking plants and 14 tool building plants went there. Just recently five plants returned to us, and two more from the defense industry joined in—our doors are open for everybody. They come to us because we do not try to run them; instead, we provide a unified technical policy, science support, take upon ourselves foreign economic activities, and support the functioning of market structures we ourselves have created.

## AGRO-ECONOMICS, POLICY, ORGANIZATION

### Land Ownership Questions Explored

#### Discussion by Gosplan Worker

914B0183A Moscow SELSKAYA ZHIZN in Russian  
1 Feb 91 p 1

[Article by Valentina Petrenko, senior scientific worker of the NIEI [Scientific Research Institute of Economics] of USSR Gosplan [State Planning Committee] and candidate of economic sciences, Moscow: "Dictatorship of the Referendum"]

[Text] Do you want to know the most just solution to the land problem? Here it is: "The right to private land ownership is revoked for always. Land cannot be sold or bought, or leased or mortgaged; it cannot be made alienable in any other manner. All land... is transformed into a national good and is transferred to the use of all those who work on it."

What has been said above is nothing new. I have simply cited, word for word, the first point of the peasant land mandate, a generalization made on the basis of many local peasant mandates even before the October Revolution of 1917. As we know, this very peasant mandate was the basis for the Land Decree that was passed at the Second All-Russian Congress of Soviets. Thus in essence this document was not imposed on peasants from above, but simply documented the recognition by the higher powers of those realities of peasant life that developed during the years of serfdom, and landowner and usurious oppression.

"Land for the peasants and factories for workers"—this is the main and founding idea of Soviet power as the masses of those times understood it. In our country power was confirmed under this slogan, and it has always been identified with it. Moreover, that same peasant mandate about land—a true goldmine of many centuries of folk wisdom—attests unequivocally to the nature of the understanding of the slogan, "Land for the peasants." "All citizens of the Russian state wishing to work the land through their own labor, with the help of their family, or in a partnership, and only while they have the strength to work it, have the right to use land. Hired labor is not permitted...Farmers who as a result of old age or injury give up forever the possibility of individually cultivating the soil lose the right to utilize it, but in exchange for this receive a pension from the state...The land of members who leave returns to the land fund; moreover the priority right to receive the parcel of a former member is given to the nearest relatives and to individuals indicated by the person who is retiring."

Such was the voice of folk wisdom with regard to the land question during those ancient times. Yet it has turned out that "forever" (there is no private land ownership) has lasted only seven decades. On 27

December 1990 the RSFSR Supreme Soviet passed a Law that permits private land ownership within the republic.

There is no reason to be surprised at this turn of events in our contemporary history. Long ago we got used to the idea that here everything is possible. It is something else that surprises us with its incomprehensibility: in the so-called democratic press these events are propagandized as an unequivocal celebration of democracy. Is not this a mockery of the idea of the word "democracy"? As we know, democracy means the power of the people. The people implement this power through soviets of people's deputies as well as directly, including via the referendum. This is stated by Article 1 in the first chapter of the USSR Law on National Elections (USSR Referendums). Moreover, according to this law the referendum is understood to be a method for passage by the citizens of the USSR via national elections of USSR Laws and other decisions concerning the most important questions of national life.

Is not the introduction of private land ownership unequivocally a most important question in our lives, one that cardinally alters everything, rejecting the wisdom of our forefathers and establishing new parameters for our new "bright" futures? For this reason, shouldn't the decision on private land ownership have been preceded by a referendum on this subject? Since this was not done, what kind of democracy can we speak of?

Now about the forms. As we know, Russian Soviet authorities are striving to have central Soviet authority in effect only within the limits of those powers that will be considered necessary to delegate from below, and only from below. From the point of view of pure democracy this is correct, for only by this means can the power of the people be implemented. But then the Russian Soviet authorities must act and implement solutions only within the framework of the authority that is delegated to them from below. And who gave the Russian deputies the right to make decisions about the introduction of private land ownership within the republic, or even to mention this question?

Did many of our Russian deputies include as a part of their pre-election program the demand to introduce private property here, or private land ownership in general? I do not know of any. Incidentally, it is unlikely that those who presented this demand in their program would have been elected and taken to the Mount Olympus of power. The pre-election program of any deputy elected by the people is the authority which he has been given, and nothing more. Overstepping the bounds of this authority is nothing other than the usurpation of power, or the imposition upon the people against their initial expression of will of some kinds of authoritarian ideas about the new order. What kind of celebration of democracy can we have here? Essentially, we have a regular dictatorship.

The fact that private land ownership was not an initial expression of will is confirmed by the demand heard everywhere to hold a national referendum on this question. Evidently, in connection with this our president announced at the Fourth Congress of USSR People's Deputies that the introduction of private property in our country will be decided according to the results of a national referendum. We should be happy about this turn of events! But the coercion of the will of the people has already occurred to a certain degree, because the fact that the law allowing private land ownership in the republic has already been passed will affect the results of the referendum. It is a post-factum effect, in other words. All of our former life has convinced the people that once a step is taken, it is useless to go back.

And in general, was land ownership an issue? Did it stir the peasant or not? In searching for an answer one quickly comes to the conclusion that it has been raised by the people from the sidewalk, but not from the fields and farms. Moreover, the total propaganda of private property is concentrated primarily in the urban environment, and not unsuccessfully. Many city residents in our country fully believe in such a necessity. It is within this sphere that a considerable number of new hysterical people have appeared who stand up wherever possible for private land ownership.

Alas, this reflects our inborn susceptibility to the magic of words. Isn't this one of the telling features of our national character?

It is clear that city residents, whose national consciousness has been more processed within the sphere of accepting private land ownership here, will impose their will in the process of the referendum on those who live on the land and work it by the sweat of their brow. Won't the slogan, "Land for the peasants," once again lose its initial meaning for village residents? For the imposition on them of a way of life on the land, no matter by whom, is a dictate that a peasant will hardly approve of. It is from the peasants themselves that concern for the condition of the village and principles and ideas for developing agriculture must come.

For example, let us look at the development of the farmer's enterprise. As we know, the attitude toward such forms of management is not very optimistic in the village. The very newest farmers and those who are observing them and conceptualizing for them have noted this with regret. It is said that envy on the part of those who do not like to work is the reason for this. Bureaucrats, apparatchiks and so forth are at fault. But perhaps things are simpler than this. Everything that is taking place and being implemented in the village is not the peasant's will, and for this reason it is received as something foreign. In other words it reflects people's natural immunity to dictates. Let us recall the words of K. Marx: "Society is based not on law. This is the phantasy of lawyers. On the contrary, law must be based on society, it must be an expression of its general interests and of the needs that arise from the given

material method of production." It is for this reason that we feel that the Law on Private Land Ownership will not restructure our agriculture.

The hope that private land ownership will become a stimulus for many villagers to work the soil from dusk to dawn is an illusion. Yes, a poet has said that, "the soul must work day and night, day and night." But this is hardly fair to the body. And it is doubtful that someone will want to pass this on to his children and relatives.

At the beginning of this discussion I spoke about the meaning of Soviet power to the people during the period of its establishment. What is its meaning now? Can it be that private land ownership no longer contradicts the very idea of Soviet power, i.e., that idea, for the sake of which the October Revolution was implemented? Can it be that the meaning of the essence of Soviet power has been transformed so much? No and no again! It is for this reason that many of our pseudodemocrats are making believe that they do not notice the contradictions here. Without doubt they are being cunning. Incidentally, among them there are those who are throwing off cunning and who are trying to eliminate this contradiction, trying to convince the masses of people of the depravity of Soviet power itself. Moreover, they openly demand its replacement. For example, we have the public statement of G. Kh. Popov, a democrat who is well-known in Moscow: "The Soviet system must be replaced in politics as it was in economics."

Thus the question of private property in general and with regard to land in particular is the essence of the question of our Soviet power. It would behoove all participants in the future referendum to remember this. Personally, even though I have not broken my ties with the world of the village, I am a city resident and under no circumstances will I dictate what the peasant needs and does not need.

#### Follow-Up: Peasants Not Heard

914B0183B Moscow SELSKAYA ZHIZN in Russian  
15 Jun 91 p 1

[Letter to the editor by I. Chizhikov, village of Znamenskoye, Znamenskiy Rayon, Orel Oblast: "Dictatorship of the Referendum" (1 February)]

[Text] I will say directly that this article was written by a person with a pure heart and with a great love of the village resident. But when the subject is land in the Supreme Soviets of the USSR, RSFSR and other republics, people's deputies make every effort to impose their views regarding land as a form of property and of land transference. If you look objectively at television, you feel it is both laughable and an insult. No one knows the opinion of the peasant and everyone is expressing concern for the village in word only. Can it be that deputies did not draw any conclusions from what happened in 1990? No type of weather weather would have interfered

with harvesting operations if kolkhozes had had equipment and fuel and if threshing floors had had roofs. But the form of private land ownership will not yield anything in and of itself.

### Supreme Soviet Looks at Obstacles

914B0183C Moscow SELSKAYA ZHIZN in Russian  
28 May 91 p 2

[TASS article: "What is Interfering with Land Reform"]

[Text] On 24 May the USSR Supreme Soviet allowed itself a short break from lawmaking. A joint meeting of houses, chaired by A. I. Lukyanov, began examining the question of implementing the "Basic Laws of the USSR and Union Republics On Land" and the course of implementation of land reform.

Land reform is taking place within the country in one way or another. Almost everyone who spoke at the meeting noted the significant role that was played here by the basic national land law. It was used in 23 republic laws and 21 resolutions of the Supreme Soviet and by republic councils of ministers. But of course the matter does not lie in quantity. Most importantly, the basic law fulfilled the function that it has been assigned—it has become the general legal foundation for republic land laws.

At the same time we must focus attention on a number of contradictions between national standards and some republic codes. First of all this applies to the relationship to private land ownership. Six republics foresaw the possibility of viewing the land fund as a market object. The lack of agreement on this point, noted the speakers, is having a negative effect on the course of land reform. The absence of economic factors also does not facilitate its implementation. Sometimes they are replaced by administrative pressure and force. Unfortunately, these methods are already being used in some republics and oblasts in the development of certain land funds, when up to 10 percent of land area is confiscated from kolkhozes and sovkhoses without their agreement.

It has been noted that in order to develop a dependable economic mechanism for land reform it is essential to introduce land taxes already this year. Taxation principles must be uniform throughout the country, but specific rates should be differentiated in each republic according to specific circumstances.

### Progress on Land Reforms Discussed

914A0834A Moscow KHOZYAIN in Russian No 8,  
May 91 pp 8-9

[Interview with USSR People's Deputy, Chairman of the Agrarian and Foodstuffs committee Professor Aleksey Yemelyanov by Igor Kovler: "What the Union Government Cannot Do and Does Not Want in Agrarian Policy"]

[Text]

[Correspondent] Can this statement be considered true: To solve the issue of property on the land means to open the path to market relations in the countryside?

[Yemelyanov] Land relations are only a segment of the needed agrarian reform. More importantly, in many ways, the most complex issues lie beyond land relations. Our starting principle here must be the future socioeconomic face of the countryside. And this is, above all, the different modes. The nature of the very structure depends upon them; they determine the face of any means of production. That is why, when we now speak of the restructuring of the countryside, the broadest question arises: what types of farms and what forms of property will appear as its result.

We will resolve the main thing: there must be a multifaceted economy in the countryside, comprising the private-peasant mode with private property; in principle the issue of property will be more easily solved.

The problem of land relations can be reduced to how to give the land over to new modes, which are useless without it, and which differ from the kolkhozes and sovkhoses that monopolize the land. We speak of the farming mode, private plots, for which there are in effect absurd limitations upon allocation of the land: Better let it go to waste than give it to you.

Both the kolkhozes and sovkhoses, the chief land monopolists, must be forced to move: either they should pay to own the land, or put in the position of competitor. For the time being, they are sitting on the land like a dog in the manger.

As we know, some things have been accomplished at the legislative level: a union law affirms the lifelong right to inherit land, which is very important. The peasant is gaining confidence. And secondly, the function of land allocator has been transferred to the local soviets. However, the most important thing is not yet here: the individual property of the peasant farm on the land.

[Correspondent] That is the most important thing.

[Yemelyanov] And that is why a number of republics, including Russia, have gone further, introducing private property on the land, despite opponents' arguments; they say this will lead to exploitation and that shadow economy capital will buy up the land.

What can we say here? The typical practice of farming [fermerstvo] is a family that has left the farm [khozyaystvo], and is working on their own land. Where is the exploitation here, the mastery of the labor of others? After all, the use of hired labor (which is not inherently exploitation, incidentally) can be forbidden to the peasant. But it could be permitted for certain periods: harvest time, in case of illness.... Exploitation does not stem from the fact of private property on the land. Nor does it mean the free turnover of land. The state strictly regulates these matters in all civilized countries. But we will manage to forbid it! Yet the opponents' arguments

cannot be so easily discarded, and so for tactical reasons, they introduced at the Russian congress a formula permitting land to be sold only in 10 years, and only to organs of power.

[Correspondent] The union congress to a greater extent, and the Russian congress to a lesser extent, adopted limited programs of agrarian reform. In your view, what are the reasons for this?

[Yemelyanov] The issue of land, more than any other, manifested the supremacy of ideology over common sense. While recognizing the need for peasant farming, we do everything possible to interfere with its practical development. No one, from Gorbachev on down, has the courage to say honestly and plainly what sort of property this is. And since there is not enough courage, the word "property" has altogether disappeared from the union law on land. Those of us from the committee were forced to write not "private property" but "individual-labor peasant property." But even that was not allowed; they tried to clean up the nasty bits to suit Mikhail Sergeyevich. We recognize the peasant farm, but for ideological reasons we cannot admit that its property is private property (not personal, not social property). Meaning that we cannot conceptualize the situation correctly, nor make the right decisions.

[Correspondent] But all the same, the Russian Law on Land has been adopted. Its realization now is a matter for the executive power: the government, local organs. Do their desires and opportunities coincide?

[Yemelyanov] First of all, there is no mechanism well worked out. It is one matter to adopt a law, and other to forge the working documents for its realization. This is a matter for the executive, and partially, the legislative power. Let's say that the Russian parliament has to a large extent created an action mechanism for the law, but the union parliament hasn't, even though Russia's mechanism is far from perfect. This even supports those who want only to interfere, not to decide. To get nothing done, the most convenient thing of all is to stop half-way. That is why our leaders cite the incomplete nature of the mechanism itself.

Secondly there is the strong opposition of the social forces who are having the ground knocked out from under them by the land reform. These forces—managers, in effect, the entire system—seem destroyed only to certain people; if the system were to be destroyed, nobody would oppose it. The system organically tears away the principle of land reform, as well as the new type of peasant mode. That is why it will create a foundation for development from the bottom up, after which will follow the destruction of the entire vertical command system, from rayons to the center. And the destruction will be far more radical than in the industrial sector. Reforms from above signify the life of the system, its inner mimicry, its adaptability to new conditions without changing its essence. A breakthrough from below means its end.

[Correspondent] How is the adaptability of the system manifested?

[Yemelyanov] Why do peasant agrarian unions appear, hanging out various shingles, like mushrooms after it rains? The same managers are clustered in them. Among the new structures, only one has been created by the peasants themselves, the AKKOR association [Association of Peasant Farmers and Agriculturalists of Russia]. But I was told a few days ago that the according to the order of Russian Minister of Agriculture Kulik that there will be created yet another association of peasant farms. The question arises, why? In order to regulate, to command, as before. To winnow out the new.

[Correspondent] We have gotten to the point where the executive power cannot conduct agrarian reform, since this deprives it of authority.

[Yemelyanov] But what is the nature of this authority? It consists primarily of people of the former system. Their goal is obvious—to preserve in other forms what exists now. And to this day, many of the measures being implemented by the president are conducive to its viability—allowing the compatibility of the posts of partkom secretary and local soviet chairman—there you have it, all in the same hands. What sort of reforms can we expect? The factors of the opposition to the land reform also interfere with the emergence of new modes. The ideal must be the peasant mode and various types of cooperatives. That is how it is the world over. We have to proceed from the fact that now, and not some time in the future, the country can be fed. And that means that the countryside must be that way. The spread of opinions is vast. For example, Yuriy Chernichenko feels that the kolkhozes and sovkhozes must be broken up. Others see salvation only in them. The truth, as usual, is somewhere in the middle. The extremes won't help.

It is clear that the mistake was made a long time ago, back in 1917, when a single mode was adopted. We did not draw man close to the land within the framework of large farms. Man's link to the land was lost; consequently, the earth became a no man's land. Small farms are needed—the world has not thought up anything else. But scientific and technological progress is necessary for them to operate successfully; it would run through a system of vertical and horizontal cooperation and integration. We do not have this. This is our reality, we have to get away from it.

What is the social basis of farming [fermerstvo]? Are there many people who want to get land? The people of three generations have been squandered through the "agrogulag" system of the kolkhoz-sovkhoz structure, which made them the executives. The wages at the sound farms today are decent; the personal farms feed them, you can keep two cows now, and piglets—just ask and they'll cut you a piece of dirt. Whatever kind of earth it is, it's still a defense.

[Correspondent] The policy of little indulgences to the peasant will probably hold him back from making the transition to becoming a farmer.

[Yemelyanov] To a certain degree and concretely today for many managers, this opportunity weakens the leash holding the peasant. But objectively, this process well permit him to acquire the features of a property owner. Whether on the leash, or in the kolkhoz, for whose elimination there are no objective prerequisites. And what does elimination mean? If the farm is strong, it satisfies the majority of peasants. But if someone wants independence, he must have the opportunity to leave freely, as stipulated by the law.

[Correspondent] Having divided collective property beforehand. If you go, you'll get your share.

[Yemelyanov] Only which division to use here, the actual one or the conditional one?

[Correspondent] Apparently, everything is still conditional.

[Yemelyanov] Yes, that's it, conditional. A person must know what he will receive upon leaving the farm, in money or in basic resources. But an artificial division, as proposed by some academicians, should not be used. This stems from an ignorance of the countryside.

This is what they say: weak, unprofitable farms must become the basis of the broad development of farming [fermerstvo] during the transition to a market. I recall that it was written in the "500-Day" program that at the beginning of 1991, one-third of the farms [khozyaystvo] would be declared bankrupt, and disappear from the face of the Earth—and that, they said, was to be the basis for the farmers. This is ignorance of village life and an example of Western-style thinking. There, sure, you declare bankruptcy and go. But there is a most principled difference—bankruptcy can only be declared by someone who was an owner, who had normal socioeconomic conditions equal with others.

But our kolkhozes and sovkhoses have been ravaged by the state, society, and party policy. And we can never forget it. Nor can we forget that there remain in the backward villages old men and women who have lived on crumbs all their lives. The state has robbed them, and now, it seems, they say, go wherever you want, you are bankrupt. There must be the wisest possible policy with regard to the weak farms; each instance here is like a critically ill person. If there are people to be found there who want to work independently, give them land, help out; an enterprise can take upon itself a farm, even though this is not the best way out; but give it away at any rate; if the average city-dweller wants to come, again, give out land.

In the countryside, not in the city, all existence is tied solely to the given farm, the entire tenor of life. To ravage the farm is to leave millions of people without a means of livelihood.

Incidentally, military servicemen released into the reserves are an enormous reserve to shore up weak farms. If our leaders would look a bit ahead in agrarian affairs, it would be possible to do a great deal at the expense of the military budget. Now, former soldiers are creating tremendous social tension in the cities. And in the countryside, they are not exactly spoiled people; their families could be involved too. In a year or two, something could be done in the village with the efforts of those selfsame construction battalions, but alas...

[Correspondent] Can the government programs to support farming have a real influence on the course of reforms?

[Yemelyanov] The Russian government has allocated R3 billion for these needs. Of course, that is just crumbs, but there is no more. The kolkhozes and sovkhoses could give something, but they are not concerned with this. Here, everything depends on the personality of the manager. The total resources are limited, and there will not be enough. But the apparatus, through parallelly created associations, strives to intercept even this puny channel of funding to the peasant.

[Correspondent] Under the present material poverty, appeals to fight for land in general smell of provocation.

[Yemelyanov] I would even expand the question. It is a provocation to the same extent as are the lines of our leadership toward the renewal of society. The leadership never tires of repeating that it stands for the power of the people, but it is unready for such turnarounds, above all, in world-view. If you like, its announcement is cunning, hypocritical, whatever you will. But in fact it will achieve its goal in a veiled manner.

[Correspondent] As before, we are trading in agricultural equipment, and we probably could provide for this program.

[Yemelyanov] In general, it's high time for us to reconsider assistance to other countries. But what is real is that what we receive in return for our equipment is a drop in the bucket. In recent years, we have paid an average of USD 23 billion annually for foodstuffs. If we could just readjust our brains a bit, we could reduce these losses without any particular effort, and cease to buy part of our produce, freeing up some sort of resources.

But now new problems with resources have arisen, financial resources. Previously, if kolkhozes and sovkhoses did not receive enough money through prices, they were given credit. There's nothing special about that. All over the world there are state support programs for agriculture. But now they say, we are moving toward a market (they used to say, we are moving toward communism). And under the fashionable slogan, the central leadership spurns all the issues which by their nature are resolved by the government, all over the world. They up and reorganized Gosagroprombank into a commercial bank. And from it, zilch in credits to the peasant. And what kind of interest rates? You pay for 12

percent, and then you get 24 percent. And the high rate is set not only for credit being issued now, but for credits already issued as well.

Our committee's appeal both to the government, and to Gosbank, to Gerashchenko, was beaten back. On the other hand, just try to get away from the talk in support of the countryside in the government's most recent program. That's its concrete policy. And in spite of all this, no increase in the rate for credit in purchase prices is foreseen. It's an easy choice: take the resources from production, or sell yourself into servitude.

[Correspondent] But what about the Russian government?

[Yemelyanov] To block this decision is to begin yet another war of laws. They have to have the resources for competence, and they don't. And the price reform has hit the village hard. Sixty rubles in compensation—that is about R30 billion for agriculture, but its entire profit last year comprised R57 billion. We talk a lot about the priority of the village, but no one thought about how to pay the compensation to the countryside—that's the logic and actions of the government.

[Correspondent] In your view, is there a limit beyond which the system will "not permit" the agrarian reform?

[Yemelyanov] I think that the main barriers are arising right now. Property is changing. Even under the current circumstances, with kolkhozes and sovkhozes, we are gradually going over to intermediary forms of property. There are interesting examples in Veprev's farm: a peasant family, in a kolkhoz, but an independent farm was allocated, the land was assured them, then two or three families living in the kolkhoz, and you already have a little cooperative. At some point they'll introduce stock, also an alteration in property. If this process grows at the grass roots, the barriers will weaken, but some time will pass before that.

[Correspondent] Can the various organizations that have stated their aspirations to defend the interests of the peasants, including the Peasant Party, accelerate this process? Or is this here more a matter of political ambitions?

[Yemelyanov] We are now at the stage when political defense is the creation of socioeconomic conditions for survival, and it is complicated to separate the functions. For example, it is a trap to say, "Let AKKOR take care of the land, and we, the party, will take care of the politics." We have to work together.

[Correspondent] But they have different interests.

[Yemelyanov] Not in everything. You have to understand that what AKKOR wants, and what Starodubtsev's Peasant Union wants—new structures, born in the bowels of Gosagroprom and the RSFSR Ministry of Agriculture. But they must be worked with as well, compromises must be sought, without yielding on principles.

In my view, one of the miscalculations of the Peasant party is that they set themselves up in opposition to AKKOR. This is because of ambitions, not on principle. And what is this party? What can it offer the peasant? It's just talk. We must also struggle, and work together. What do confrontations with Yeltsin, Silayev, and Khlystun from the land reform committee do to them? Only damage.

The party must defend, but not as Yuriy Chernichenko said, "The kolkhozes and sovkhozes are hungry, they must be broken up." I understand him as a journalist. And in this sense, the party must be led by people from the land, people like Veprev, who, incidentally, is prepared to become its co-chairman. The Peasant Party will never have power if it is going to unite only farmers. All the healthy forces of the countryside must gather in it, including kolkhozes and sovkhozes. Then an effective alternative to Starodubtsev's union will be created. When this healthy core must break away from the CPSU, which would leave there only Polozkov's supporters. Then that would be a force, whether in the elections, or anywhere.

There is nothing to be gained by opposition. The kolkhozes and sovkhozes will always crush the peasant if they wish to do so. But there is no getting along without them. Whether he wants to or not, the farmer must deal with the structure laid down for the kolkhozes and sovkhozes. But now the situation is such that the farm managers will have nothing to do with Chernichenko.

Or, for example, Moscow Soviet Chairman Popov has announced that he will take from the farms land for residents of the capital. He intended to expose someone. The chop up of the field by force—conditions will create 300 such farms, you won't want any land. But the people are offended, nervous—apparently, that is just what someone needed.

[Correspondent] Some people feel that upon rescinding state order in the countryside, market relations can be introduced with a wave of the hand.

[Yemelyanov] That is the simplified idea coming from the West. The abolition of state order automatically entails the abolition of provision with resources. Free trade will appear. The cause will only lose from this. The strong farms will survive, but the weak ones, the farmers, will perish; they can neither sell the produce, nor obtain resources. We are not ready for such a market.

[Correspondent] Aleksey Mikhailovich, you have somehow shown yourself to be a man with a peasant's cleverness.

[Yemelyanov] Well, perhaps not always clever enough, but I do have a knack for it.

[Correspondent] So, would you yourself become a farmer today?

[Yemelyanov] So I have to put myself in the position of a person making a choice. If I lived in the country, I would probably get a farm. In general, there are more

thrifty people in my generation. The family inculcated these habits; that was the inclination. If I had been born a bit earlier, in the 30's I would have been just right for Siberia. But now a farmer needs both boldness and the ability to take risks. I don't know if I have enough of these qualities, I can't say. I have in mind the scope of honest entrepreneurship. Not the kind you hear about all over, not the kind where you "make money" with primitive speculation. But I do think that Soviet power has not destroyed the farming genes in me.

### Starodubtsev Discusses Peasants' Concerns

#### Interview on Peasant Wants, Union Role

914B0187A Moscow SELSKAYA ZHIZN in Russian  
14 Jun 91 p 1

[Interview with USSR Peasant Union Chairman V. A. Starodubtsev by SELSKAYA ZHIZN correspondent E. Petrakov: "Has the Peasants' Voice Been Heard? On the Second Phase of the USSR Peasant Union's Constituent Congress"]

[Text] A year ago a constituent congress was held by the USSR Peasant Union, an organization uniting in its ranks kolkhoz farmers, sovkhoz workers, agro combines, agro firms, other similar formations, owners of individual peasant farms, and members of various agricultural cooperatives. At that time it was announced that the congress would not complete its work but merely recess. On 17 June the second phase of the congress begins. SELSKAYA ZHIZN correspondent E. Petrakov has asked USSR Peasant Union Chairman V. A. Starodubtsev to answer several questions.

[SELSKAYA ZHIZN] Vasily Aleksandrovich! Congress delegates are preparing for its second phase. What is this all about?

[Starodubtsev] A year ago the delegates proclaimed the creation of the USSR Peasant Union. At that time the congress sent a declaration to the president of the USSR and the country's Supreme Soviet stressing that perestroika is impossible without fundamental improvement in the social and economic situation of the peasantry.

Attached to the declaration was a list of urgent and just financial measures to resurrect the peasantry and its economic, social, and legal protection. A year has passed. Now we need to take stock: what's been done both for the problems that demanded immediate resolution and for those that will determine the countryside's prospects for development. This is what the constituent congress decided: let's meet after a year of work and verify how well the country's leadership has heeded the peasants' voice.

[SELSKAYA ZHIZN] I remember how alarming the situation was during the congress's first phase. Its declaration contained a substantial package of peasant demands for the country's government. Has nothing really been done in response?

[Starodubtsev] You couldn't say that. Some of our demands have been met. For instance, pension security has been improved for kolkhoz farmers and sovkhoz workers, and the first steps have been taken toward improving land legislation. I emphasize: these are first steps. Debts have been written off for weak farms. In the countryside various forms of property and labor organization have begun to be actively developed. For the first time in the postwar period, relative price parity has been achieved between agricultural output and other branches of the economy. So the congress did not convene in vain.

Still, though, to our great regret, more than 20 issues raised by the congress have yet to be resolved. And they concerned the very vital issues of scientific-technical progress in agro-industrial production, material provision, construction, the development of the social sphere, and just financial relations with the state. Moreover, these issues are now beginning to be resolved with unprecedented difficulty. What is most disheartening is that the majority of the government's decisions on agrarian issues bear a half-hearted and contradictory nature.

[SELSKAYA ZHIZN] But after all you can't discount the extremely complicated political and economic situation in the country today. Under these conditions it's not so easy to satisfy the demands of all strata of the population. After all, they are being heard not only from the peasants' quarter.

[Starodubtsev] We understand that the basic difficulties were engendered by both the political instability and the economic chaos reigning in our country now. You don't have to be that wise a politician to understand a simple truth: If it's bad for the peasant it won't be good for anyone in society. And you have to look for the solution not in increasing the pressure on the person working the land but in creating the most propitious regime for him possible. The first step toward stabilizing society is removing the difficulties in food provision. Without this, talk of a market and entrepreneurship will only intensify destructive processes, especially those like speculation and the growth of the shadow economy.

[SELSKAYA ZHIZN] That's all true. But perhaps it would be better to gather up patience and wait for the government to carry out, step by step, its planned program for solving the crisis. You yourself have admitted that some of the union's demands have already been met. On price parity, for example.

[Starodubtsev] The price parity of which I spoke has lasted all of three months. Since the beginning of this year wholesale and retail prices for all means of production, building materials, and services have been set "free" and have doubled or tripled.

Look at the changes in the indexes for wholesale prices for the output of the base branches. In just one quarter of the current year they rose substantially for the indicators



most important for us—the output of tractors and agricultural machine construction, the chemical industry, and building materials.

[SELSKAYA ZHIZN] And retail prices for agricultural output?

[Starodubtsev] They are still fixed. As a result, an additional 82 billion rubles [R] are being extracted from agriculture, and its estimated profit is all of R62 billion. This means that tomorrow we'll all be bankrupt, right? It leads you to believe that someone has once again thought of a way to close enormous gaps in the state budget deficit at the peasants' expense. Read what the USSR Cabinet of Ministers proposes in its resolution of 31 May of this year with the loud title "On compensation in 1991 for additional expenses of enterprises and organizations of the agro-industrial complex in connection with price formation reform." The maximum the peasants can get out of this resolution is R10-11 billion.

Or let's take the issue of material-technical provision of the countryside. This remains at the level of 1990, the worst in all the preceding ten years. What does it mean to receive 40 percent of your stock lumber or 66 percent of your cement? It means undermining all construction in the countryside.

[SELSKAYA ZHIZN] So we're hearing ultimatums? But after all, society is so tired of these multitudinous confrontations. Do you in the Peasant Union have some kind of positive program?

[Starodubtsev] I have already repeated many times that I am an opponent of extreme measures. And our congress is not meeting for confrontations with the government. As for a positive program, sure. Give us the hard currency we're spending on purchases of grain abroad, and we'll put it to creating a material and social base for the country's agricultural complex. I'm sure that we would have long since been exporters of output, not importers. Escape from the branch's crisis is possible. I firmly believe that. But to this must be subordinated the structure both of agriculture and of those branches of the economy without which it is impossible to create modern agro-industrial production, with its new technologies and equipment and its new forms of economic pressure ensuring equality for all partners in agriculture and industry. Also constructive, I think, would be the proposal that will be heard at the congress: conclude a governmental accord with the peasants for full normalization of mutual relations. Bread, meat, milk, and other produce are needed. And for this we need to provide all the necessary material resources and financial means in full and in a timely fashion, as is done in any country. We are acutely aware that the conversation ahead of us is not simple, but there's no getting along with it—the situation demands it.

I think that the peasant congress will proceed in a businesslike atmosphere, without excessive emotion, but

with a maximally sober analysis of reality and, certainly, with a persistent search for a way out of our highly exacerbated situation.

[SELSKAYA ZHIZN] And a final question: What kind of activity is envisioned for the Peasant Union in the future?

[Starodubtsev] Our field of activity is very broad, and we have no roads laid.

The peasant union is a public organization. We will be defending more actively the political, economic, and social rights of the peasantry. We will be generalizing all the best that appears in the life of the countryside and disseminating that across the country by all available means. Gradually our union will also be drawn into pragmatic organizational activity. This process is going on right now through association, but it does not yet affect the entire circle of issues demanding attention. To take one issue as an example: bringing output processing closer to the point of production. Right now only 20 percent of farms have these kinds of operations, and the greater part of those are in the Ukraine. The shutting down of defense enterprises must be accelerated—ahead lies an enormous volume of productive activity that the country sorely needs. Subsidiary branches must be activated. Right now in the kolkhozes and sovkhozes 230,000 different shops are operating that produce output worth nearly R30 billion and in the interseason employ over two million kolkhoz farmers and sovkhoz workers. The output the people need could be produced in a rural locale and in quantities five to six times greater. Production and the supply of equipment must be organized, as well as assistance with raw and other materials. As yet no one has seriously taken up this matter. In order for this necessary and useful matter to gather speed, our union must collaborate more closely with the country's Scientific-Industrial Union, the USSR Union of Leasers, the Association of Peasant Farms, and other organizations that have constructive programs and that understand the importance of rural labor and the place of the peasant in the life of society.

[SELSKAYA ZHIZN] Thank you for the interview.

#### Chairman's Report to Peasant Congress

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18 Jun 91 p 2

[Report by USSR Peasant Union Chairman V. A. Starodubtsev: "From the Peasantry's Revival to the Country's Prosperity"]

[Text] In characterizing the social-political and economic situation in the country, the speaker noted its contradictory nature. The decline in the gross national product, income produced, and public labor productivity and the disarray in the financial-credit system have put the entire peasantry in a difficult situation.

The economic and social position of the people, the speaker stressed, is determined to a significant degree by the state of the agro-industrial complex (APK). Whatever programs are undertaken, without a fundamental change in attitude toward the countryside, there will be no pulling the country out of its crisis. For the last two years production has undergone an irrepressible decline. And this is not only a matter of a poor crop. We can't even harvest what we raise. Last year, for example, 218 million tons of grain were obtained in net weight. This is one of the highest gross harvests in the entire history of the country. A decent crop was raised for other crops as well. However, deficiencies in the organization of labor, unfavorable weather, and the lack of serious assistance from industrial enterprises in carrying out harvesting work did not permit a complete harvesting of the crops raised. Nearly 6 million hectares worth of grain was left in the field, a million hectares of sunflowers, and 400,000 hectares of potatoes and vegetables. As a result, procurement of these crops was sharply curtailed, and the country did not obtain a large quantity of food goods.

Many farms could not fully complete the autumn cycle of agricultural work and they made preparations for the spring sowing under complicated conditions.

Serious difficulties arose in livestock raising. The steady increase in volumes of production of output in this branch in the first years of the five-year plan were replaced by a sharp decline. Last year meat production declined over 1989 in 11 union republics, milk production in 9, and egg production in 12. The situation is not improving this year either. Over the five months as compared with last year meat production declined by 12 percent, milk production by 11 percent, and egg production by 6 percent. Quantities of cattle and poultry are decreasing. The situation in poultry farming has been exacerbated especially harshly. One can say outright that one of the most stable working branches is falling apart before our very eyes.

All this has caused a curtailment of output of many food products and an increase in tension in the consumer market. The material and spiritual foundations of people's lives have been undermined. The people are alarmed as never before. And this alarm is well founded.

The fall in production as a result of poorly thought out economic policy has led to a drastic worsening in the financial position of kolkhozes, sovkhoses, and other enterprises and organizations of the APK. As we know, the introduction of new purchase prices for agricultural output, the expansion of the application of contractual prices, the change in taxation procedure, and other measures ensured by the end of 1990 an equilibrium between purchase and proposed prices for industrial goods and services. This created favorable opportunities for the further development of the APK and its increased efficiency.

Price parity, however, has existed for three months. Processes that began in the very first days of the current year have put the countryside under threat of total financial ruin.

The governments of the union and the union republics, the departments, and their enterprises have passed resolutions that have entailed major additional expenses for the production of agricultural output. According to preliminary data, the extent of the rise in prices for material-technical means, capital construction, tax payments, and other expenses amounts in the current year to about R82 billion. As a result already a significant portion of farms have been forced to cut back on housing construction and other social-cultural and production sites and have been deprived of the means for acquiring equipment, fertilizers, and fuel and, in many instances, for wages.

Look what's happening. If before a farm paid R15,500 for a K-701 tractor, then now it pays R57,700. For a DT-75 the corresponding figures are R3,700 and R17,000, for a Niva combine R7,000 and R20,000, for a KSK-100 R15,000 and R59,000. In just the first quarter of the current year wholesale prices for electrical power rose 177 percent, for refined oil 218 percent, for industrial chemicals 183 percent, and for industrial building materials 213 percent, which has practically become a kind of racket in the economy.

So it works out that we talk about the priority of the countryside but in fact are entering the market once again on the peasant's hump. Agricultural enterprises, peasant farms, and their associations have found themselves unprotected from the tyranny and monopolism of suppliers in the transition to the market. Instead of real state financial support, the process of "pumping" funds from village to town has intensified.

Nor will this issue be resolved by the recent resolution of the USSR Cabinet of Ministers on compensation in 1991 for additional expenses in the APK. Of course, the financial press on the kolkhozes and sovkhoses will let up somewhat, but the resolution gives no firm guarantees that industrial and construction enterprises are not going to continue to jack up prices for their output. Moreover, all these measures are being introduced as of the second half of 1991. And who is going to compensate for the additional expenses incurred in the first half?

Farms are experiencing great difficulties in connection with the destruction of the Agro-Industrial Bank (Agro-prombank) system. The control of limits for giving credit for seasonal expenses has been lost. The regional commercial banks that are being created in the locales are not yet rendering the necessary services to the kolkhozes and sovkhoses. As a result a majority of APK enterprises cannot take advantage of credits. Life is insisting on the creation of a Peasant Bank.

One of the reasons agriculture is lagging is the ever worsening provision to it of material-technical resources. For the last five-year plan the APK was shorted 148,000

tractors, more than 4,000 grain combines, 13,000 feed- and maize-harvesting combines, 54,000 tractor mowers, 132,000 press-selectors, over 44,000 trucks, a great number of spare parts, mineral fertilizers, and protective means for plants. In other words, agriculture was shorted funds totaling its annual norm.

The introduction of new equipment does not even cover its actual depreciation. For the provision of normal production technology, agricultural output is lacking more than half its machine designations. The problem, emphasized the speaker, is that material-technical supply as well as agricultural machine building itself are falling apart as a system. The Ministry of Automotive and Agricultural Machinery has shut down construction of more than 60 plants producing agricultural machinery. In addition, existing productive capacities are being utilized at only 75 percent capacity. The situation is intensified as well by the fact that recently demands are resounding more and more loudly from the locales about the transfer of agricultural machine-building plants to republic subordination. This will inevitably lead to the destruction of cooperative links, cut-backs in the resources market, and a decline in the volume of production.

We support the appeal of the leaders of the chief automotive and agricultural machine-building enterprises to the presidents and governments of the country and union republics not to break them up among the republics and to ensure priority supply of material resources. The Peasant Union is insisting as well on the reinstatement of Agricultural Supply (Agrosnab), without which it is impossible to ensure the normal supply of material-technical resources.

Highly limited funds are being allocated for the development of the processing industry. And even those are not being systematically assimilated. For the twelfth five-year plan, over R2 million were not used. The plan for introducing capacities for the production of vegetable oil, groats, sugar, and other products was wrecked. Even last year, when the situation in the consumer market was exacerbated to the maximum, state purchases for the introduction of enterprises in the branch were only 36 percent filled. The supply of their technological equipment, cable production, and pipes was extremely unsatisfactory. At the same time, one has to admit that in many enterprises existing productive capacities are not being satisfactorily utilized and machines and equipment purchased abroad are not put on line for years.

In the accelerated development of the processing industry, the shutting down of defense branches must offer considerable assistance. However, the implementation of the state shutdown program is under threat of total ruin. And one of the basic reasons is the customer's lack of the necessary funds.

By now it is clear to everyone, continued the speaker, that the elimination of specialized ministries for the meat-dairy and food industry has helped contribute to

the situation in these branches. It has led to a decline in technical progress and decreased efficiency of scientific research and has destroyed the system for training personnel. It is essential to work out a complex state program for the development of the processing branches in order to ensure in the coming years maximum processing of agricultural raw materials and on that basis to increase significantly the output of food products.

Issues of capital construction are causing great concern. The program passed in the locales for the social development of the countryside and the putting into operation of new productive capacities is going to be implemented at a maximum rate of 50-60 percent, and that on condition that the anti-crisis program works and deliveries of material resources are made.

The APK possesses considerable scientific-technical potential. It is served by nearly 900 research institutions and research-productive associations, systems, and design bureaus. It is not satisfactorily utilized, however. We lag far behind world science. Many of our elaborations suffer from a lack of system; often a good beginning is not carried through to the end. Hence the decline in the efficiency of production, the degradation of the soils, and the enormous losses in production. We appeal to the president and the government of the country to examine the state of affairs in agricultural science and establish a system of concrete measures for its development.

In our congress's first phase of work, reminded the speaker, much attention was paid to the social development of the countryside. And that is correct. The economic ascent of agriculture is impossible without profound transformations in the social and spiritual life of peasants. But the peasant's situation remains difficult, as before. Housing, kindergartens, elementary schools, clinics, roads, gasification, trade—all this is much worse than in the towns.

At present two thirds of the points of inhabitation do not have general education schools, every fifth school is running two or three shifts, and children's preschool institutions are provided at only a 40 percent level. On the territories of many settlements and villages there are no medical institutions or even nursing-midwife posts. The situation for laborers in the countryside not only has not improved but, on the contrary, continues to worsen. As before, the peasant remains alone with his troubles and cares, his hopes for a change for the better in the situation are collapsing, and life becomes increasingly complicated and desperate with each passing year. In the chase after high earnings, movie rentals, concert organizations, and other institutions of culture have sharply curtailed service to the rural population. In many villages the financing of institutions of culture and sport has been cut off altogether.

For the purpose of joining efforts in the defense of the interests and development of the village, the USSR Peasant Union, the Union of Councils of Kolkhozes, the Federation of Trade Unions of the USSR AKP, along

with other organizations, have created the Spiritual Legacy of the Countryside Association, of which the well-known writer Ivan Vasilyev has become president. We would like to call upon the participants in our forum to render whatever assistance they can to the association, to support it materially, to create departments in the locales that could in conjunction with the kolkhozes, sovkhozes, and enterprises of the AKP develop vital activities for the spiritual rebirth of the village.

Much space was taken up in the report by issues of occupational safety. More than 5,000 people die annually in production, nearly 300,000 suffer traumas of varying gravity, and occupational disease is on the rise. As a result, every year 100,000-110,000 sovkhoz workers and kolkhoz farmers become invalids. One of the basic reasons for this situation is the inadequate supply to agriculture of machinery and equipment. According to data of the Federation of Trade Unions of the USSR APK, 70 percent of the complex agricultural equipment produced does not meet occupational safety and health requirements.

There are in the country over 530 kolkhoz and interfarm clinics, the construction of which cost a billion and a half rubles, primarily kolkhoz funds. Another 120 are still in various stages of construction, and another 70 major sanatorium complexes are in the planning stage.

The speaker criticized the USSR Cabinet of Ministers and the General Confederation of Trade Unions for violating existing procedures for forming a centralized social insurance fund for kolkhoz farmers. Noting the necessity for determining concrete measures for rendering assistance to labor veterans, V. A. Starodubtsev noted: "Our duty, our sacred obligation, is to surround them with attention, to create all the conditions for normal human life. The Veteran charitable fund established at the initiative of SELSKAYA ZHIZN and the Federation of APK Trade Unions can be of considerable assistance in this. We must lend it all possible support."

The social situation of the peasants, the speaker emphasized, remains extremely hard. The process of the village's degradation continues. The number of rural points of inhabitation is dwindling, the migration of the population in many regions has taken on ominous proportions. In the last three years, the number of people working in kolkhozes and sovkhozes has fallen 15 percent, or 3.1 million people. This most important branch, upon which our well-being, and even the existence of the state, depends, is becoming the branch of the aged and infirm. We must make a decisive move at last from appeals to concrete acts, seek out the necessary funds and resources, and direct them to the social transformation of the village.

Under the transition to market relations, the role of subsidiary industrial activity is growing significantly as a factor of economic stability in the kolkhozes and sovkhozes. The organs of the Peasant Union must facilitate in every way possible the development of subsidiary

production and obtain the maximum possible supplies for the industrial activity of the kolkhozes and sovkhozes, including equipment, spare parts, and raw and other materials.

It is hard to overestimate the role of the consumer cooperative society. But recently the stream of complaints and censures has increased. The number of procurement and trade points in the village has fallen sharply, the provision of inhabitants with everyday goods has worsened, the link between the rural soviets, kolkhozes, and sovkhozes in the resolution of these and other problems has weakened. Many subdivisions of the consumer cooperative society have, in essence, been transformed into ordinary trade organizations. The concentration of procurement and processing enterprises in major points of inhabitation only and unjustified specialization have created serious difficulties for the procurement of resources for agricultural production in remote points of inhabitation. Today the consumer cooperative society buys from the population only about half of the traded potatoes, vegetables, and fruits, and even fewer animal products. The consumer cooperative society must take up a more active position in the development of private plots and peasant farms, collective gardening and market gardening. It is important to organize everywhere the unimpeded procurement of surplus productive output and its processing, to arrange for the alternative sale of scarce goods, feed, small-scale equipment, fertilizers, tape, and other materials.

Right now more than one third of settlements and villages do not have stores, many kolkhozes and sovkhozes do not have public eating facilities, and the rural population is not being provided with bread and other food products in the necessary manner. Trade activity per rural resident is at only 47 percent of the urban level. Hence the constant trips made by rural laborers to town, wasting work time and funds. The peasant congress appeals to the Central Union and all organs of consumer cooperative societies of the republic to increase their attention to the needs of the village and to establish closer contacts with it. The transition to market relations demands the search for new forms of interaction among the kolkhozes, sovkhozes, and peasant farms and the organizations of consumer cooperative societies.

Life has posed agrarians with hard questions, the speaker stressed. What are we to do now, what path are we to follow? One thing is clear: we cannot live and work as before, we are lagging increasingly behind the world level. The choice of directing economic transformations in the village is a fundamental one. We must determine our precise position on such crucial issues as land reform, denationalization, and privatization. One thing is clear: the resolution of these problems must be approached from the standpoint of the priority of the individual, the rural laborer. He and he alone is to choose what form of management is most acceptable, where he can best manifest his creative capacities. Meanwhile, we must not fall into extremes and destroy what

has been built and is serving the people. I have in mind large and medium-sized production and the well-regulated farm. Although here too reform of productive-economic relations enabling each worker to become co-owner of collective property as well of output produced and income received is possible. Without this there can be neither a high degree of interest on the part of labor nor a market.

The pivot of agrarian policy is the issue of land. The Fundamentals of legislation of the USSR and union republics on land passed by the USSR Supreme Soviet, in the elaboration of which a great contribution was made by agrarian deputies, in our view, take into account the interests of the overwhelming majority of the country's peasants. This document is oriented toward the fair development of various forms of management; kolkhozes, sovkhozes, agro combines, agro firms, peasant farms and agricultural cooperative, citizens' private plots, and so on. According to data from USSR State Committee for Statistics (Goskomstat), there are about 50,000 peasant farms in the country right now. For their organization a land fund has been created with more than seven million hectares.

Our union supports legislative and other acts of republic organs and local soviets of people's deputies directed at abrogating unwarranted restrictions on the development of citizen's private plots, gardening and market gardening, and individual housing construction. While encouraging the development of multiple structures, we cannot agree with the fact that in the Russian Federation and several other republics laws have been passed providing for the introduction of the institution of private land ownership with the right of buying and selling.

As world practice shows, privatization of land is far from always a factor in raising the efficiency of the rural economy. The leading tendency in the developed countries is the creation of the priority of the producer over the owner. Here chief emphasis is made on the rational utilization of land. The legislative stress is shifted to the development of leasing. Its application facilitates the attraction of to the agrarian sector of fresh forces at the expense of the active and professionally trained portion of the population.

Our own experience too attests convincingly to this. Where leasing is paid due attention, decent results are being achieved. But, unfortunately, even here we are being undermined by the tendency of many years' standing toward massive scope and weak study of all the fine points of new productive relations. Multiple structures means our agro combines, associations, and agro firms as well. They are open for integration with the processing industry and for broad introduction of all forms of property and labor organization.

Important is the question of the principles of formation of multiple structures in the village. We are in favor of the investment with land proceeding on a competitive basis, under broad glasnost. Land should be given to

those who know agricultural production perfectly, who have mastered advanced methods and devices of conducting a farm. I think that this kind of a procedure should be applied not only to peasant and lease farms but also to kolkhozes, sovkhozes, cooperatives, and so on. These requirements must be taken into account as well in the transfer of land to bequeathable ownership. Responsibility for the effective utilization of land must be equal for everyone.

A new viewpoint is needed, stressed the speaker, on the agricultural worker who will have to conduct his business on the basis of the newest equipment, utilizing new technologies under new economic management conditions. Many of our troubles, as we know, are the result of leaders' incompetence and the poor qualifications of those working directly on the land. The state must not stint on education.

The agrarian crisis in our country bears a specific nature and did not just pop up yesterday. In order to overcome it and properly reform productive relations in the countryside, we need a powerful and consistently realistic program of state protectionism for the rural economy, a policy of state assistance not only for peasant farms but for the entire APK for its profound structural perestroika.

Further the speaker talked about the fact that there exists a draft agreement between the USSR Cabinet of Ministers and the USSR Peasant Union that precisely defines concrete conditions capable of increasing the production of agricultural output and raising its quality. It also establishes responsibility of the parties for the all-out development of all branches of the APK, increased stability in the work of the enterprises and organizations of agriculture and the processing and other branches of the APK, and creation of a system of social guarantees and income protections for APK laborers under the transition to market relations.

For the general provision of food and raw materials, according to the speaker, we need a coordinating center. The country's government should become this. Having raw material and financial reserves, it could direct them toward eliminating disproportions in the development of the regions and branches.

With respect to organizational issues, V. A. Starodubtsev noted that since the first phase of our congress, the union has gone through an active process of self-realization, creating republic and local organs, working out approaches and methods of work for fulfilling the functions set by the charter.

Much has been done in this regard in the UkSSR. Already in September of last year a constituent congress was held here and a Peasant Union created. By May of the current year its ranks included almost a million and a half members. In the time of its existence the union has introduced for consideration by the UkSSR Supreme Soviet, the government of Ukraine, and other republic

organs more than 15 proposals directed at the defense of the economic and social rights of the peasants.

A good example is the Peasant Union of Nikolayevskaya Oblast. It is carrying on persistent work to revive the village and to attract to it industrial enterprises, institutions, and individual citizens. Out of the rural revival fund they created they have assisted in building up the villages and peasant farms. This experience merits approval and widespread application. Constituent congresses have been held and peasant unions created in BSSR, KSSR, Uzbekistan, and Kyrgyzstan.

Accepted as members of the USSR Peasant Union in this period have been Soyuzselkhozkhimiya, Soyuzagrostroy-industriya, Sovsherst, Agroprommassotsiatsiya SSSR, Soyuzkolkhozzdravnitsa, and Rybkolkhozsoyuz. However the organizational period of self-realization has dragged on unjustifiably long. The reasons here are various. Chief among them is the underestimation of the role of permanently functioning organs of the union at all levels, especially in the rayons.

In its practical work the Central Council of the Peasant Union and the Union Council of Kolkhozes is defending the right of peasants and all APK workers to the free choice of forms and methods of management. We support the resolution of the USSR Congress of People's Deputies on conducting a referendum in the country on private ownership of land. But it must be held among those who work the land. Let the peasants themselves determine whether or not there should be private ownership of land.

The Presidium of the Central Council of the Peasant Union and the Union Council of Kolkhozes are paying special attention to the implementation of resolutions passed by the constituent congress. In particular, we have succeeded in finding solutions to the following questions: more than 75 billion rubles in indebtedness for bank loans have been written off for enterprises; the tax on equipment used above the norm has been repealed, as have cartage surtaxes on goods sold in the village; uniform benefits have been established throughout the country for mothers with many children; and the procedures for selling grain and oil-yielding seeds for hard currency as well as several other important issues have been extended.

Speaking about the further work of the Peasant Union, the speaker called for expressing special concern about increasing his role and authority in the resolution of all issues of peasant life. As we know, to our suggestion, the USSR government passed a resolution, "Issues of the USSR Peasant Union," in accordance with which it is proposed that the state organs consider all issues effecting APK activity with the participation of the Peasant Union. The republic councils of ministers and the ispolkoms of local congresses of people's deputies are encouraged to render every possible assistance to our union in carrying out its statutory activity. Unfortunately, in the center and in the locales, the practice of

underestimating the peasant unions and councils of kolkhozes continues. Frequently governmental, commercial, and economic organizations pass all sorts of decisions and resolutions without our agreement that harm the economic and social rights of APK workers.

Thus, without considering the opinion of the Peasant Union and Council of Kolkhozes, the Cabinet of Ministers passed a resolution on issues of restructuring indebtedness to the bank for loans taken out before November 1990, the sale by farms of grain for hard currency, the payment by them of funds for each specialist, and other issues. And although some of these resolutions have been rescinded, they did manage to inflict noticeable economic damage. In the government's last resolution on compensation for additional expenses to the village, our comments were not taken into account. We are building a rule-of-law state in which this type of practice is inadmissible.

Regarding the issue of illuminating the activity of the Peasant Union through the mass media, the speaker announced that in his opinion this is being done objectively by PRAVDA, SELSKAYA ZHIZN, SOVETSKAYA ROSSIYA, TRUD, RABOCHAYA TRIBUNA, ZEMLYA I LYUDI, and the agricultural editorial board of Central Television. Life shows that the Peasant Union needs its own organ of the press. The Peasant Union, as we know, along with the CPSU Central Committee, is a cofounder of the weekly ZEMLYA I LYUDI. And today that edition regularly sheds light on the union's activity and speaks out on topical problems in the defense of the peasant's interests.

However, ZEMLYA I LYUDI has yet to become a true tribune for our union. This function does not correspond to either its size or its balance of publicistic materials and articles of an applied nature. Changing this balance and expanding the number of publicistic materials requires as a minimum doubling the size of the issue or having another newspaper.

Recently in the country processes have been activated in the creation of new political parties and public organizations. The Peasant Union will be actively cooperating with those who share the interests of the peasantry and understand its problems and needs.

Business relations are being established with the country's Scientific-Industrial Union.

The Peasant Union is prepared to collaborate more closely with the USSR Union of Leasers and Entrepreneurs. Our goals and tasks are the same: revive the countryside materially and spiritually in the shortest time possible.

Right now rural workers are in a particularly crucial period. The spring sowing is over. Most important right now is preparing well for harvesting the crop and fully mobilizing domestic reserves in order to gather it without losses.

## REGIONAL DEVELOPMENT

### RSFSR Agrarian Leaders Discuss Peasants' Interests

#### Bashmachnikov on AKKOR Role

914B0199A Moscow SELSKAYA ZHIZN in Russian  
12 Jun 91 p 3

[Article by Association of Peasant Farms and Agricultural Cooperatives of Russia President V. Bashmachnikov: "The Farmer's Difficult Birth"]

[Text] Russia's farmers are arriving at the Peasant Union congress with conflicting feelings. On one hand, they do have something to be happy about. In the current half-year it was planned to take irrationally utilized land away from kolkhozes and sovkhozes and create a fund for the redistribution of three million hectares. In fact, as of today this fund already has more than seven million hectares throughout the republic. It was planned for the first half-year to create 10,000 peasant farms. In fact, by the start of spring sowing more than 22,000 had already been officially registered. It was assumed that few would want to lead the hard life of a farmer. In fact, the stream of applications to acquire land is not drying up. Land-regulating organs and local soviets in many regions are unable to keep up with them. It has already been said that by the end of the year the number of independent family farms in Russia will increase to 30,000 or more, and next year the rate of growth in the number of farmers will hold steady.

On the other hand, though, one cannot fail to see that land reform is as yet limited. The state has merely managed to provide land for peasant farms.

True, in this matter too there are many serious deficiencies. The business of providing the peasants with land is proceeding unevenly. In many oblasts, there are entire battles over each peasant plot. Russia's farmer has too many opponents, people who are opposing his coming into being however they can. In many regions, especially in the south, farmers are receiving very small plots, on which it is impossible to utilize modern technical means effectively. So that even here matters are far from all right.

Still, the giving of land is a relatively happier problem among all those facing farmers. More painful is another: the lack of financial means for getting set up and acquiring equipment, building materials, and so on. Rural residents have read or heard about the billion rubles Russia's government has allocated for creating the farming structure. This sum might seem fantastically large to someone. But let's calculate: each farm gets less than 50,000 rubles [R]. And if you take into account the need to create a farming infrastructure—that much less.

In order somehow to get out of the situation and utilize this billion to maximum benefit, farmers decided at their congress to put part of the money in banks, in order to

attract additional credit resources. A mechanism was worked out in conjunction with the Central Bank of Russia for giving privileged credit to farmers. However, it did not withstand the mounting load—the quick growth in the number of kopek-less peasant farms. In many oblasts commercial banks are making loans to farmers only with guarantees from well-off property owners. As before, however, the kolkhozes and sovkhozes are most often denying such guarantees. Industrial enterprises seem to be ready to come to farmers' aid and give the banks guarantees, but most often under crushing terms, appropriating the farmer's output for themselves at reduced prices.

Widely applied in world banking practice is the method of giving credit using the equipment, building materials, and other resources being purchased as security. Our native commercial agrobanks, however, are not prepared to do this.

In short, the finance problem remains acute. We need to find means to resolve it quickly. Workers in the RSFSR Ministry of Agriculture and Food see a solution in the creation of a single state-commercial agricultural bank of the RSFSR. They are suggesting to AKKOR [Association of Peasant Farms and Cooperative Associations of Russia] and oblast associations of peasant farms that they invest the principal part of the billion in this bank with the rights of cofounder. The farmers appreciate this suggestion, and they feel that it would be worthwhile to participate in the founding of such a bank. The conditions named are unacceptable. But the more perspicacious farmers are alarmed by the prospect of being clients of a single monster bank working basically with kolkhozes and sovkhozes. It's not hard to foresee a situation when in a tight market many kolkhozes might not have their own money and might exhaust the limited credit resources and the line might not go as far as the farmers.

In connection with this many farmer associations are coming out in favor of creating, in addition and parallel to the common agrobank, their own peasant land bank, the chief mission of which would be to make loans to small rural goods producers using the land in their possession as security. Today many commercial organizations are bursting to get land. They often do not hide their intentions not only to facilitate the redistribution of land from incompetent to real bosses but also to accumulate land in order to lease it—naturally, not on favorable terms. Therefore it is very important that at the first stage the farmers associations become the basic cofounders of the land bank, so that through organs of their own administration they can prevent the birth of new land rentiers replacing today's leasers, the kolkhozes and sovkhozes. The land bank must become the farmers' helper and strict supporter, not their exploiter.

Another problem for farmers today is their material-technical provision. This lags sharply behind both the providing of land to peasants and the obtaining of credits. Under conditions when there is still not a free



market of resources and when they are being distributed among various funds, Russia's government passed a resolution allocating special centralized funds for farming. It was planned to entrust the function of distributing resources among farmers not to the apparatus of the ministry and agro-industrial unions but to farmers associations. But this idea was only half realized.

At the republic level, AKKOR distributed equipment among the oblasts according to just principles. But it became necessary to turn for help to the Agrosnab (Committee for Agrarian Supply) system and contract with it to get the association's resources to farmers through their goods transport network. In several oblasts Agrosnab workers honestly fulfilled their contractual obligations. In many regions, however, the agro-industrial union leadership forced the Agrosnab workers dependent on them to sell the equipment that had gone to AKKOR funds not according to the instructions of the local farmers associations but according to their own orders. This is what happened in Lipetsk, Samara, Tambov, Bashkiriya, and Kursk. As a consequence, half the farmer funds went to kolkhozes and sovkhozes. As a result of this cunning trick, the Russian laws on agrarian form, according to which farming was supposed to have been presented with equal conditions and opportunities for development alongside kolkhozes and sovkhozes, have not been implemented. The authorities will have to obtain compliance with the requirements of the law. In particular, they will have to allocate a separate line to farmers for 1992 through a system of farmer self-administration of equipment and other material resources.

Naturally, neither farmers, kolkhoz farmers, nor sovkhoz workers have enough modern equipment and building materials today. Therefore it is imperative to be concerned about augmenting resource production. AKKOR is prepared to set an example with its as yet weak forces by creating assembly enterprises in joint ownership with foreign firms and former military plants and later on enterprises producing modern technical means. Some people think that this question is worth considering at the upcoming congress. It is time for agrarians at their ceremonial congresses to stop making critical statements addressed to machine builders and start creating a situation in which various enterprises can compete in producing equipment for the countryside. Foreign capital is maturing toward decisions on investments in our country. It would be a sin not to take advantage of this.

Along with the acute shortage of means of production, farmers are experiencing the manifest weakness of the system of production-technological service, or "agroservice," which is poorly developed in the public sector as well. But in the latter there still is somewhere to repair a tractor, someone to have build an annex or do capital repairs on a calf-house, someone and somewhere to transport output to, as well as something to transport it in. The system of service and ancillary production has no desire to deal with farmers. Many zealous kolkhoz and

sovkhoz leaders are simply forbidding workers in such services to help the privates. Today, if you like, only the agro-chemical service is inclined toward cooperation.

At the congress, AKKOR representatives will more than likely raise the issue of the Agrarian Union of Russia (AUR) not becoming an ally of the farmers in their common cause. At first the chairmen of the kolkhozes and directors of the sovkhozes—the basic members of the Peasant Union—recognized verbally the independence of AKKOR within the framework of the common union. However, time has passed, and the attitude of activists in the AUR toward farmers associations both in the center and in the locales has hardened. At recent sessions of the presidium of the Agrarian Union, speeches have been made that would have to be described as directed against land reform. The principle of pluralism of opinion has been tossed out. The opinion of AKKOR representatives has not even been heard. They simply weren't given the floor. It can be said that cooperation among the representatives of the various structures has yet to be effected. They have not managed to avoid confrontation.

But AKKOR is not despairing on this account. We are optimistic and hope that the nature of the AUR will gradually change in conjunction with the growth in the number of new formations coming about on the kolkhoz-sovkhoz base—unions and associations of property owners. If the conservative portion of the members of the Peasant Union are going to tear away the new formations, the farmers associations will take them into their family, thereby strengthening their own forces.

### Mikhailov Interviewed on Agrarian Union

914B0199B Moscow ZEMLYA I LYUDI in Russian  
No 25, 21 Jun 91 p 7

[Interview with Senior Secretary A. D. Mikhailov of the Agrarian Union of Russia by ZEMLYA I LYUDI correspondent N. Smirnov: "We Can Be Relied Upon"]

[Text] We are now in our seventh year of waiting for the improvement in life and resolution of many problems, especially food, promised from the highest tribunes. But can the situation change radically if the interests of the village continue to be disregarded? The government of the country and the RSFSR have declared many times its priority development, but little has changed in urban-rural relations. On the contrary, unbalanced exchange between them has increased. Sharply increased prices for equipment, material resources, and building materials are making the production of many types of agricultural output unprofitable, and kolkhozes, sovkhozes, and farms are incurring great losses. It is impossible to put an end to the sinful practice of harming the interests and needs of the village without the organized defense of the peasantry. The Agrarian Union of Russia (AUR) was formed for this purpose.



A little more than a year has passed since the day the 1st All-Russian Congress of Agrarians passed the new organization's charter and program. By human measures this is a fair amount of time: in that time a child starts to get his feet under him. But has the "newborn" organization managed to do that? What has been accomplished in a year? What issues have yet to be resolved? We are interviewing AUR Senior Secretary A. D. Mikhaylov.

[ZEMLYA I LYUDI] Aleksandr Dmitriyevich, tell us about the AUR. What goals has it set for itself?

[Mikhaylov] The AUR is a public-political organization uniting kolkhoz farmers, sovkhoz workers, interfarm and processing enterprises, farmers, leasers, and members of agricultural cooperatives on a voluntary basis. It is open to everyone working in the agro-industrial complex (APK) regardless of form of management, as well as the scholars and intelligentsia who wish to and can defend peasants' interests. As a result, the union is made up of collective members; in a year more than 24,000 have been accepted. Altogether the AUR has united 30 million workers in Russia's APK.

After 74 years of unequal economic relations, people living and working on the land have found themselves alienated from it, from the results of their labor. To resurrect the true peasant, to help him take heart and become the country's true bulwark, is the calling of our union. Its purposes are the priority development of the agrarian sector of the economy, creation of social equality between city and country, and elevation of peasant labor prestige.

[ZEMLYA I LYUDI] How widespread is the influence of the AUR?

[Mikhaylov] Work creating the AUR locally is not yet complete. Departments have been created in 39 oblasts, krays, and autonomous republics. In 16 regions the functions of the AUR are being filled by existing kolkhoz councils. They are our full-fledged members and are carrying out the policy of the AUR locally. In this manner, one might say that in each region we have representatives successfully carrying out collective actions in the defense of peasants' rights.

The creation of rayon formations of the AUR is proceeding with more complications, basically due to financial difficulties. The peasantry has always been thrifty, especially now that the countryside has been placed on the brink of impoverishment, but with good will many are capable of supporting us materially. Agitating more convincingly than any words for the strengthening of the AUR are its concrete deeds. On their example the peasantry is being convinced that our organization is a reliable friend and defender.

[ZEMLYA I LYUDI] How are relations shaping up between the union and government organizations?

[Mikhaylov] They are not simple, to put it kindly. You judge: for the first time in all these years the peasants

have an organization called upon to protect their interest and to oppose monopolism and the dictate of the ministries and departments. Working in the RSFSR Ministry of Agriculture and Food are professionals who understand the problems of the APK and do not avoid them. You can always discuss matters with them in a business-like way and resolve any problems that arise. But I can't report so flatteringly about other government institutions.

So much has already been said and repeated at the most various levels about prices for output vital to the countryside that have been driven up to the ceiling, high above the clouds. But they continue to rise. It is essential to introduce indexation immediately in relations between the agrarian sector and the other branches of the economy, and do it not annually but quarterly. If this suggestion of ours is not implemented in the near future, the countryside will be utterly destroyed. And 15 percent of targeted allocations from the national income or the billion rubles earmarked for the development of peasant farms is not going to save us. Figure: prices for construction and installation work have risen by a factor of 3-4, and in some places 5-6. For erecting housing and a small productive farm, a peasant today must spend as much as 800,000 rubles [R]. Divide the notorious billion by this sum and what do you get?

The system of taxation evokes astonishment. The government's desire to cover the budget deficit is understandable, but this cannot be done yet again at the expense of the rural economy. The decision about the annual tax of R600 per specialist has dumped an additional burden on the farm budget that will inevitably lead to the indiscriminate cutback in qualified personnel and place an insurmountable barrier on the path to scientific-technical progress in the rural economy. Our union has managed to prove the harm of the decision passed, and as of June that tax has been repealed. How much strength and energy was spent, how many letters and appeals sent, how many private meetings held before the government finally agreed with our conclusions? The introduction of leasing and self-financing relations in and of itself poses the question of cutting back on specialists. But this is happening systematically, and qualified personnel are not being lost to the rural economy: specialists are going over to production and taking land and equipment for the organization of peasant and private farms. This is a natural process and will bring only good, not the harm entailed in the decision to tax labor resources.

This is far from the sole example of our work. The AUR participates daily in working out decisions at various levels. At its suggestion the government decided to increase procurement prices for grain, oil-yielding crops, sugar beets, and several types of animal production. Although even those prices do not satisfy us, for they are still depressed.

After our insistent demands, kolkhoz-cooperative and collective-proportional land ownership was included in

the RSFSR Land Code, which legislated the land rights of kolkhozes, sovkhozes, and other agricultural enterprises.

The union's suggestion was taken to lower percentage rates for credits received by farms before 1 November 1990. In its resolution, the USSR Supreme Soviet obligated Gosbank to repeal its instruction about applying elevated percentage rates for credits and to recalculate and return to the farms the money acquired at elevated rates.

Among other AUR suggestions honored I shall point out the decision to pay for output produced by farms above and beyond the state procurement order at no lower than the level of procurement prices. Repealed as well were the so-called cartage surcharges on retail prices for goods sold to rural residents by consumer cooperative societies in remote rayons. Restrictions were lifted on the earnings of farm workers.

Several demands and suggestions of the AUR are still being considered by the government and other directive organs and have not as yet been implemented.

[ZEMLYA I LYUDI] Let's run them down at least briefly.

[Mikhaylov] Yet to receive support are suggestions about increasing procurement prices for agricultural output, about repealing all types of taxes other than the tax on land and on kolkhozes, sovkhozes, and other APK enterprises, about transferring with compensation to farms the balance value of electrical power lines, communications lines, gas and water supply lines, farm roads, and social-cultural sites to the specialized organizations of the respective ministries and departments.

As yet unrealized are the union's suggestions to allocate funds from the social insurance fund of the laborers of the RSFSR for the completion of construction on sites of sociocultural life on economically weak farms, on returning to the kolkhozes interkolkhoz building organizations and their enterprises for the production of building materials, on allocating means from the budget to carry out necessary measures for improving the situation of women and protecting motherhood and childhood in the countryside.

[ZEMLYA I LYUDI] Indeed, these are practical suggestions, the realization of which would permit an improvement in the situation in the countryside. Does the AUR have sufficient experience to put its decisions into practice? How do analogous organizations abroad act, on the example of which the effectiveness of your activity might be increased?

[Mikhaylov] Recently I had the opportunity to be in the FRG at the invitation of the Bavarian Peasant Union as part of a delegation. The Bavarian Peasant Union was created in 1810, which attests to how long the problems of defending the rights and interests of the rural laborer have been around. This is a public-legal corporation

uniting the entire agricultural population on the territory of Bavaria on voluntary principles. The Peasant Union represents the common interests of the Bavarian agricultural and timber economy.

The union consults with the government of Bavaria, helps it resolve problems in the rural economy, and participates in land legislation with the right of a consultative vote. This kind of close cooperation with the government makes it possible to eliminate blunders in agrarian policy; and the joint elaboration of programs and the passage of decisions taking into account the interests of farmers facilitates the increased efficiency of agricultural production.

Moreover, the Bavarian Peasant Union renders assistance to organizations in the production, sale, and utilization of agricultural output, coordinates their work, and performs the cultural, professional, economic, and social servicing of the peasantry.

For the purposes of effective and all-around support for the 200,000 of its farmer members, the Bavarian Peasant Union has 62 branch offices, as well as branch enterprises such as the Bookkeeping Service, the Consultation Service on Tax Questions, and the Computer Service.

The Bavarian Peasant Union has for many years supported friendly ties with the agro-industrial departments of Russia. All these concern productive relations. We were most interested in the state of affairs from the standpoint of the legal defense of peasants. We learned much of interest during our trip and will try to utilize the very best of it in our own activity. I hope that we too, as we acquire experience, will see come about a precise system for the defense of the farmer and that forms and methods for elaborating governmental decisions on agrarian issues will appear.

[ZEMLYA I LYUDI] How do you see the future of the AUR?

[Mikhaylov] Through our representatives in the congresses of people's deputies, the AUR is determined in the future to participate in the administration of state affairs, achieving priority for the resolution of agrarian sector issues, to shape public opinion on problems of the countryside and the APK, to oppose decisively any illegal interference in determining forms of management and organizing production and administration, giving peasants themselves the right to choose the most acceptable paths of development.

According to its goals and tasks, the AUR has become an organization capable given the need to transform itself into a party. The peasantry is one of the leading forces in society, and if in the near future discrimination against the countryside does not cease, it will have to resort to political struggle for its rights and interests.

To urgent problems we can also add the fact that the AUR has yet to acquire a legal basis. A few months ago a law was passed on the registration of public and

political organizations. Registration was entrusted to the RSFSR Ministry of Justice, and there, in the "best" traditions of bureaucracy, they have dreamed up so many supplements and corrections that the registration of our charter is being held up. We are not sitting with our arms folded, however, but are continuing to work. We do this for the good of our long-suffering countryside.

**Nikonov Attends Saratov Agrarian Congress**

*914B0206B Moscow ROSSIYSKAYA GAZETA  
in Russian 26 Jun 91 p 1*

[Article by Ye. Tokareva, Ye. Pishchikova, and O. Zlobin, ROSSIYSKAYA GAZETA special correspondents: "So That the Private Farmer May Breathe"]

[Text] The first congress of the Association of Agricultural Scholars opened yesterday in Saratov. Over the course of three days about 200 participants will discuss the problems of agricultural reform in the USSR. Academician A.N. Nikonov gave a report on the basic tasks of the association under conditions of the perestroika of economic relations in the countryside.

The scholars devoted special attention to a qualitatively new economic and social phenomena—the revival of family peasant (private) farms. There are about 70,000 of them in the country today, the majority of which are in Russia.

Why is the private farming sector of agriculture nonetheless developing so slowly? The scholars assert that the development of new forms of property ownership and management should be accompanied by the creation of a new economic environment for their vital activities. At the same time that agricultural equipment, construction materials, and fuel are going to the kolkhozes and sovkhozes in a "targeted" fashion, the private farmer is ignored and can obtain none of this. He turns out to be helpless before the almighty state monopoly. This is why the majority of the peasants, although they welcome the transfer of land to private ownership, are themselves skeptical about taking any of it. Only 15 percent of rural residents, according to what was heard at the congress, express the desire to become private farmers today.

The conclusion is obvious: The state monopoly must be ended. The preservation of a state monopoly on the procurement and supply system in the agro-industrial complex is one of the main obstacles on the path to the formation of a multistructural agricultural economy.

Within the framework of the congress, an international conference is underway with the participation of famous scholars working in the field of the agricultural economy. Among these scholars is T. Shanin (United Kingdom), D. Van Attsa (United States), and K. Veydekin (Germany) [names as transliterated].

## POLICY, ORGANIZATION

### Goskomsen Chief Answers Consumers' Price Questions

914D0219A Moscow *EKONOMIKA I ZHIZN*  
in Russian No 16, Apr 91 p 12

[Responses to *EKONOMIKA I ZHIZN* readers' questions by V. Senchagov, chairman of the Goskomsen [State Committee on Prices]: "What the Customer Can Expect"]

[Text]

[Reader] In a number of cases, the new retail prices have turned out to be even lower than those that Muscovites paid for food and commodities before 2 April. Everyone wants to know: won't the percentages of price increases be extended to the so-called contract prices and prices in cooperative trade?

[Senchagov] The state retail prices have been set as the maximum. This means that prices cannot be higher than those that have been set for the goods from state resources. If the same republic or another republic finds the financial resources to increase the amounts of the subsidies, it can set the prices below the level that was fixed.

Contract prices may be fixed only for additional foodstuffs that are brought in, which is being violated everywhere today, unfortunately. In this case, the old name should be used for this form of supply—commission trade prices, which reflects this occurrence more accurately, and the prices for delicacy foods, which are also called contract prices today as the result of the removal of administrative control over their level, are more accurately called free or market prices.

The reader is not interested in the terminology, of course, but the possible change in their level. As far as animal products, for which subsidies are maintained for the volume of state purchases, are concerned, the shift to unsubsidized commission prices can lead to an additional increase in their level in certain regions by 1.5 to 1.6 times as much—up to 10 to 12 rubles for one kilogram of beef, for example. There are no objective reasons for a greater increase in these prices if the drop in production is stopped as the result of measures to stabilize the economy. For this reason, there will be less of an increase in them or none at all in those areas where they have already neared this level today.

For cereals and other grocery items, the commission trade price level should not be substantially different from prices in state trade when the quality of the goods is the same.

More complex processes will have an effect on the level of free prices. According to our estimates, the prices that have taken shape today are the result of "the flight from the ruble" and the breakup of the consumer market.

Normalization of monetary turnover and elimination of the incentives for speculative demand as the result of retail price reform will be accompanied by a decline in the level of free prices to a normal correlation with state prices for the popular types of foods on the basis of real food value.

[Reader] Can you provide a little more detail on prices in the consumer cooperative system, whose services are being enjoyed by a substantial segment of the population?

[Senchagov] Indeed, about 26 percent of all goods and services are being sold to the public through the consumer cooperative system, 23 percent of them at state prices and about three percent at commission trade prices. This ratio varies for individual commodities. Nearly all nonfood products are being sold through consumer cooperatives at state prices. Naturally, the proportion of sales at commission prices is higher for food items. Last year, for example, 1.3 million tons, or 10 percent of the meat purchased by the public, which amounted to 20 percent in the commodity turnover pattern for this product, were sold at prices that were agreed upon. This is also understandable, since the average commission trade prices have been twice as high as state retail prices.

As a result of the retail price reform, changes are not contemplated in the procedure for selling goods through consumer cooperative enterprises. That is, those commodities which were being sold at state prices will continue to be sold at state prices, but at their new level, naturally. As far as commission trade prices are concerned, we looked into the likelihood of a change in their level previously.

[Reader] The picture of price changes for foods will not be complete unless we consider the prices for public dining. What can you say in this connection?

[Senchagov] The prices for a meal and other items sold at public dining enterprises will be increased at the same time as the retail prices for food. Unfortunately, the price increases for them will be somewhat higher than at retail trade enterprises. This is because of the need to abolish the subsidies for public dining that were granted previously (for example, through higher trade discounts, and so forth).

Compensation to the public for the price increases includes the increased prices for public dining.

For the people's social protection, public and local organs may provide for additional benefits aimed at reducing the cost of feeding workers, employees, students, and so forth. In particular, the decree provides the opportunity to utilize part of the scholarships for students for meals in student dining rooms, and part of enterprises' funds should be utilized for the special purpose of compensation for the increased cost of providing nourishment.

[Reader] Why have the retail prices for children's commodities—clothing and footwear—been increased more than for adult commodities of the same type?

[Senchagov] That is really true. It is common knowledge that until now, the state has supported the relatively low prices for children's goods through budget subsidies. With the rise in purchase and wholesale prices, the amount of the subsidies became twice as high as the cost of these commodities in actual retail prices.

Maintaining the low so-called "preferential" prices for children's goods was one of the main forms of providing assistance to families with children.

However, there are serious drawbacks in such a price system, which was attractive for the public. First of all, there is the fact that enterprises have not had the economic incentive to expand the production of such goods. The more commodities for children that are turned out, the more subsidies and the less profit in comparison with commodities for adults.

In addition, the low prices for these commodities led in a number of cases to their purchase for adults of small build, rather than the purpose for which they were intended. The practice of sewing fur coats for adults out of several children's coats and the like has been widespread.

Maintaining low retail prices for such commodities has required substantial funds from the state, though the principle of social justice for all families with children could not be observed at the same time. Families with children who have grown rapidly have not been receiving such support from the state, since they have been compelled to buy clothing and shoes for adults at unsubsidized prices.

Taking into account all these circumstances, it was decided to set retail prices for children's commodities in accordance with the costs to produce them and to provide compensation to families for each child in the amount of these increases. These prices should contribute to normalization of the consumer market for these goods.

Because the previous prices for children's commodities covered no more than 50 percent of the costs of producing them, it is natural that the price increase for them is significantly higher than the increase for adult commodities.

It should be noted that practically all countries (Czechoslovakia, Hungary, Germany, and others) which had a preferential policy of retail prices for children's goods have gradually abandoned it as unjustified from the standpoint of economic and social results.

[Reader] So for commodities from light industry and for household, cultural and general purposes, we can expect to become familiar firsthand with the market element. The range of products over which price control is being abolished is growing larger. This is creating acute anxiety

among the public, since many persons already have burned their fingers on prices in the cooperative sector, which continue to rise. The number of commercial stores and shops are multiplying like mushrooms after a rain, staggering us with prices that even defy definition.

[Senchagov] Indeed, we are actively utilizing the mechanism of market regulation of supply and demand for the nonfood goods with an extensive product list and a very broad range of quality. The prototypes of the market in this field took shape here long ago, and until recently they fulfilled their function of expanding the production of high-quality and popular commodities. Today the situation in the consumer market is such that completely abandoning state price control may lead to very severe consequences for the public. Taking into account that the proportion of free prices for nonfood commodities does not exceed 30 to 35 percent of the total volume sold, including those goods for which enterprises previously could set prices in accordance with a trade arrangement. At the same time, fixed state prices will apply to 40 percent of the volume of nonfood commodities sold, including all socially important goods. Adjustable prices will apply for the remaining volume. In this case, enterprises will not be able to raise them above the limits being set.

[Reader] Quite recently it was being said that the level of retail prices as a whole covers the expenses to produce all commodities, but the problem is that when prices for meat are lowered, the subsidies are covered by a tax on the turnover of nonfood commodities. In this case we thought about women's boots at a price of 120 to 150 rubles and passenger cars. Many people had the impression that the entire retail price reform comes down to higher prices for food and a reduction in prices by roughly the same amount for profitable items. But how do we interpret the fact that the increase in prices covers this group of commodities as well?

[Senchagov] Quantitatively, the total of subsidies and losses last year practically coincided with the amount of the tax on turnover. At the same time, however, more than half this tax was concentrated on alcoholic beverages and petroleum products consumed by state enterprises and organizations. For most of the other commodities, the turnover tax is of practical significance only as a consequence of incomplete accounting for expenses in various stages of production and sales and underestimation of the cost of manpower and natural resources. And as soon as we brought wholesale and purchase prices for raw material, materials and complete sets of items (including those imported) into conformity with the actual conditions and we increased the deductions for social insurance in the amount necessary to put the new Law on Pensions into force, the turnover tax on most commodities, including the women's boots and passenger cars you mentioned earlier, disappeared completely. On the contrary, most footwear items and the "Tavriya" car have become profitable.

In addition, the fact that labor productivity is repeatedly outstripped by wage increases accounts for results such as these. Over the past five-year plan as a whole, the average wage of workers and employees in the national economy increased by 41 percent, but national labor productivity rose only by 7.4 percent. If we allow this situation to continue, many commodities will be unprofitable in several years with the new prices, which will result in the need to raise them further.

[Reader] Can you be more specific in your answer regarding the example of passenger cars?

[Senchagov] The increase in retail prices is related primarily to the need to compensate for the expenses to manufacture them, which have increased both because of the rise in wholesale prices for raw material and the materials of domestic production and the use of relatively expensive imported materials and complete sets of items. They were calculated previously in accordance with wholesale prices, and the additional import cost above the wholesale prices was compensated through the state budget.

When market relationships are developed, when demand and the possibilities of meeting it in retail prices always must be taken into account to a greater extent, maintaining low retail prices for automobiles creates the conditions for speculation and all kinds of abuses, making the ordinary working man suffer and enriching all sorts of business operators.

The demand for automobiles at present is three to four times higher than the capacity of domestic industry to manufacture them, and there will be no opportunity to increase production on the scale desired in the near future.

In order to purchase one million imported passenger cars, we would need 3 to 4.5 billion dollars and no less additional expenditures to set up a service system to maintain and repair them.

It is obvious to everyone that it is more expedient to invest such funds in the development of domestic automobile manufacturing, as one of the advanced sectors which contributes to an increase in the overall level of production.

In this connection, the change in retail prices remains a difficult but essential means of normalizing the automobile trade.

I want to draw your attention to this factor: prices for automobiles are being set at the maximum. There were problems quite recently in the market for certain makes of automobiles. The plants which have been turning out the "Tavriya" and the new "Moskvich" played an important role in resolving this problem. However, everyone realizes that it was not these circumstances which led to the sharp increase in demand and the takeoff of prices at auctions and in the "black market." According to our calculations, normalization of the

consumer market as a whole will beat down the wave of speculative demand, and the automotive plants will have to devote serious attention to improvement in the quality of automobiles and their servicing in order not to resort to the right they have been granted to reduce prices. Moreover, the market's limited capacity will force them finally to put a reliable and inexpensive automobile into production. As consumers, I do not think that we will object to such a course of events.

### Prices in Military Cafeterias Protected

914D0233A Moscow KRASNAYA ZVEZDA in Russian  
6 Jun 91 First Edition p 4

[Interview with N.G. Sadovnikov, head of the USSR Ministry of Defense Main Trade Administration, by P. Altunin: "Lunches Will Become Cheaper"]

[Text] Two months have passed since the prices of food and, correspondingly, cafeteria meals were raised; by now all of us know in full what a mighty blow that has dealt to our pocketbooks. Everybody is searching for some solution now in order to relieve the burden of food expenses on our people.

What is being done in this respect for the people who use the services of military cafeterias?

This question opened our correspondent's conversation with N. Sadovnikov, head of the USSR Ministry of Defense Main trade administration.

[Sadovnikov] The USSR minister of defense issued a directive on 15 May 1991 which suggests that measures be taken to lower the prices of meals in cafeterias, snack bars, soldiers' and sailors' tea rooms, and also in the mess halls of military units. In accordance with this directive the deputy minister of defense for rear services ordered lower food surcharges effective 1 June.

The maximum surcharges at Voyentorg [Directorate of Trade Establishments for Military Personnel] cafeterias of restricted military posts should not exceed 30 percent, for instance, instead of the current 40 percent. Incidentally, if the managers are able to find additional reserves the surcharges can be even smaller. Cafeterias located on open territory will have a 40-percent surcharge, while comparable state trade establishments set it at 60 percent.

Furthermore, the surcharge in school cafeterias will be brought down to 20 percent—that is, halved. In soldiers', sailors', and cadets' tea rooms all expenses are covered by wholesale rebates allowing the establishments to be profitable; for that reason their surcharge has only been 10 percent, and this will be removed now. Restaurants, bars, and officers' snack bars working from cafeterias provide extended service and sell alcohol; their surcharges will be set at the rates prescribed now by the gorispolkoms [city soviet executive committees].

I have to add another thing: there will be no surcharge on bread and bakery items, salt, spices, tobacco, and matches in any public catering establishments.

[Altunin] What other reserves do you plan to use to lower the cost of meals?

[Sadovnikov] The directive stipulates that production costs should be reduced, military trade administration and management expenses cut down, subsidiary farms developed, and cost of produce lowered. Municipal services should be provided to Voyentorg establishments free of charge. I want to reiterate that Voyentorg cafeterias, snack bars, and mess halls should be given free accommodation with lighting and heating, hot and cold running water, fuel, electric power, furniture, transportation, and trade, technological, and refrigeration equipment, etc. For instance, we will deploy military planes and helicopters to transport early vegetables, fruit, and other perishable produce. That will not be done at the expense of combat readiness, of course. We will do all this without charging the Voyentorg any payment either.

[Altunin] Nikolay Grigoryevich, it happens sometimes in locations with no Voyentorg cafeterias or during field exercise or on other occasions that officers, workers, and employees have to eat at unit mess halls. They are also paying now for the cooking and for the service.

[Sadovnikov] Yes, they are paying about 20 percent. The same surcharge was paid by the military builders. The surcharge will be eliminated now.

[Altunin] What opportunities are provided for financially autonomous Ministry of Defense organizations, establishments, and enterprises?

[Sadovnikov] A decree of the USSR Cabinet of Ministers allows them to use part of their revenue for the purpose of lowering the price of meals in their own cafeterias as well as in the cafeterias of medical and children's establishments that are on their balance sheets.

[Altunin] What practical measures need to be taken to implement the directive?

[Sadovnikov] Military units, and Ministry of Defense establishments, enterprises, and organizations on the one hand and Voyentorg establishments on the other need to sign contracts on terms and procedures allowing the provision of free services, in other words on the reimbursement of Voyentorg establishment expenses.

[Altunin] Here is my final question. What, in your opinion, can the result of all these measures be?

[Sadovnikov] I think that meals in our cafeterias should, on the average, become about 50 kopeks cheaper. This is not a big sum, of course, but we will get some relief.

**Editor's Note:** While the interview was being prepared for print our office received telephone calls from various locations, including the Moscow garrison: cafeteria prices remained unchanged after 1 June. We questioned the main trade administration leaders again as well as the top officials of the Central Financial Administration. We were told that this was a violation of the directive requirements. We discovered that in concrete terms this meant that Voyentorgs and financial bodies of units and establishments failed to sign contracts on the reimbursement of Voyentorg expenses. This should be amended immediately.

## GOODS PRODUCTION, DISTRIBUTION

### Statistics on Light Industry Goods Supplied

914D0221A Moscow *EKONOMIKA I ZHIZN*  
in Russian No 17, Apr 91 p 7

[Article by Candidate of Economic Sciences A. Bokov under the rubric "Survey of Market Conditions": "The Market for the Goods of Light Industry"]

[Text] The items of light industry occupy a special place in satisfying the consumer demand of the population. A quarter of all of the items of consumption produced in the country, and 40 percent of the non-food goods, fall to their share. Domestic production and imports of finished products from light industry are, at the same time, still only providing for 40-70 percent of the requirements of the population for many of them.

The buyers moreover do not always like the quality of the items. Check-ups conducted at state enterprises have uncovered up to 10 percent waste for cotton fabrics and 6-8 percent for woolen and silk fabrics, sewing products and footwear. Poor workmanship is noted in two out of three goods purchased that are manufactured by cooperatives or individuals. Domestic items are virtually not supplied for export due to the lack of conformity to international standards and poor quality.

The scale of the dissatisfaction of demand is increasing due to cutbacks in production volumes. The growth rate of goods from light industry was lower for most items in the last five-year plan than in the one preceding it. Somewhat of an increase in the volumes of goods produced in physical terms, however, was noted until 1989, reaching its maximum values in 1988 at three to eight percent.

Production of Individual Goods of Light Industry				
	1986-89 (average for year)		1990	1990 compared to 1989
	volume	percentage growth	volume	percentage growth
Fabric, total, billions of m <sup>2</sup>	12.8	102.2	12.7	97
including:				
—cotton fabric	8.0	101.3	7.8	97
—silk	2.1	102.7	2.1	96
—woolen	0.7	108.3	0.7	98
Knitwear, billions of pieces	1.9	103.8	1.9	99.1
including:				
—for children			1.1	98
Hosiery, billions of pairs	2.1	102.5	2.1	102
Output of woolen industry (according to standard processing costs), billions of rubles			4.6	105
Shoes, millions of pairs	814	101.2	820	99.2

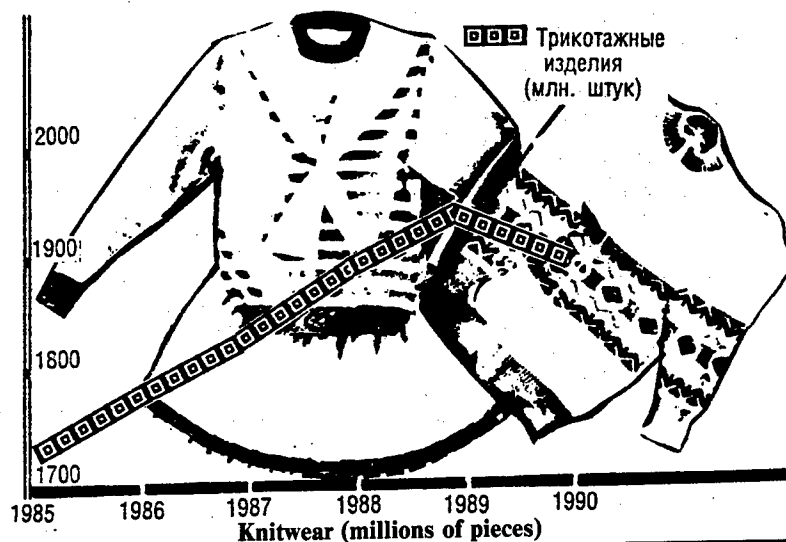
A drop in the development of production then began, as expressed in a slowdown in the growth rate of the output of goods in physical terms—including clothing, overcoats and short coats, shirts and suits—and even a decline for many of them: fabric, footwear, knitwear, trousers, jackets, rugs and rug items and terrycloth towels. The adoption of a stricter system of taxation and a worsening of the sufficiency of resources caused a trend toward decline in the activity of cooperatives in the sewing of clothing and footwear.

The two-percent increase in the overall volume of goods of light industry in cost terms recorded by statistical bodies in 1990 was caused by pricing factors, and occurred through output sold to the population with surcharges over the retail prices.

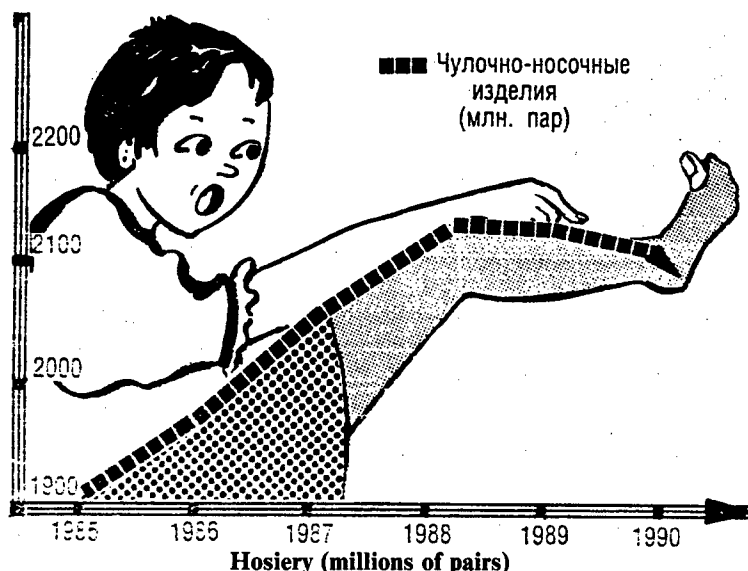
The worsening of the operations of enterprises in light industry was conditioned chiefly by the narrowing of the

domestic raw-materials base and the cutbacks in the procurements of raw materials through imports. The production of cotton fiber declined from 2.66 million tons in 1989 to 2.56 million tons in 1990, and flax from 345,000 tons in 1989 to 245,000 tons in 1990.

The situation is difficult in the woolen industry, which is 30-percent supplied with raw materials from imports. Procurements through imports have comprised 120,000-130,000 tons annually. The share of imports of scoured wool compared to its consumption in the country this year have dropped from 27.4 percent to 19 percent. The production of wool inside the country has decreased from 258,100 tons to 252,600 tons. The insufficient production rates of synthetic fibers and threads—80,000 tons below the level of the prior year—have not made it possible to make up the shortfall of natural fibers.





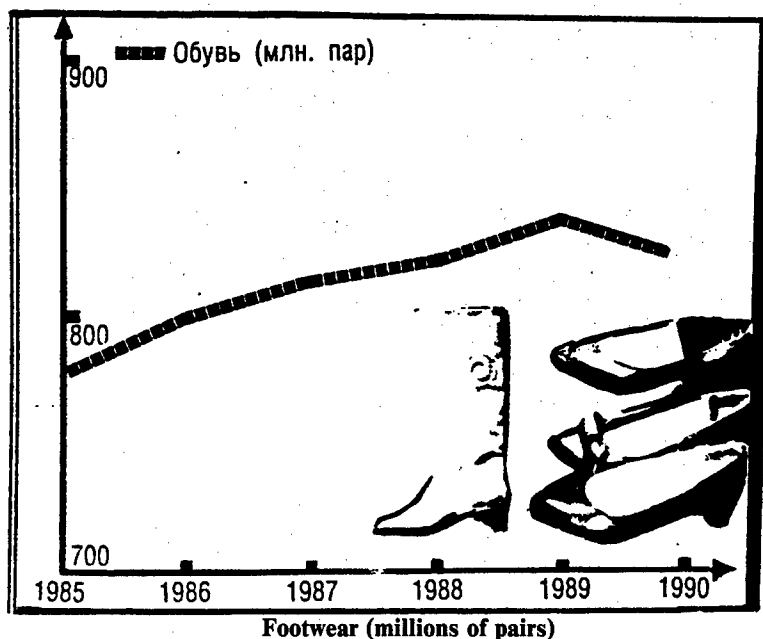


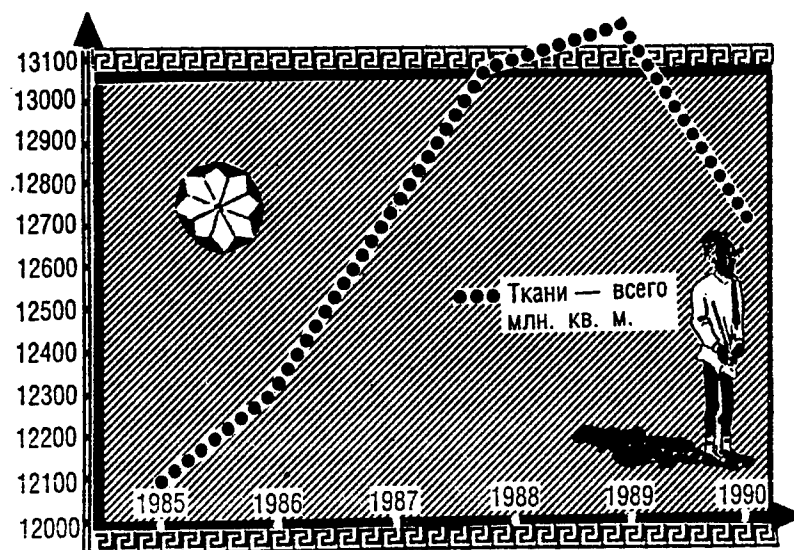
The break-up of the existing economic ties and worsening of delivery discipline have had an extremely negative effect on the enterprises of light industry. One out of three enterprises in light industry violated contract obligations in 1990. Contract obligations were 97-percent fulfilled for the sector overall. Enterprises had formulated contracts for just 70 percent of the output volume envisaged for delivery in 1991, or 42.9 billion rubles, by the start of 1991 (that amount had been 83.2 billion rubles at the beginning of 1990). Enterprises operations have been made more difficult by the

shortage of worker personnel, which was partially covered by bringing in Vietnamese citizens.

Stoppages of enterprises in light industry began in January and February of 1991 due to under-deliveries of raw materials and disruptions of existing ties. The production of fabrics of all types, knitwear, hosiery and footwear all declined.

A high effective demand for the goods of light industry has been preserved in recent years, and has taken on a premium nature under conditions of the drop in the





Fabric—total (millions of square meters)

purchasing power of the ruble and relatively stable state prices. The sale of light-industry goods to the population increased substantially in 1990 (aside from woolen fabrics and dresses): up by 10 percent for cotton fabric, 14 for silk, 22 for clothing and underclothing, 17 for knitwear, 32 for hosiery and 24 percent for leather shoes. The cutbacks in production volume were compensated

for to a certain extent by increases in procurements through imports. The share of imports compared to consumption in the country increased for woolen items, for example, from 21.6 to 22.7 percent, and from 8.3 to 12.2 percent for footwear. The high and overheated demand caused reductions in trade inventories, the volumes of which decreased by almost nine billion rubles over the year and were 16 billion rubles below standards.

Inventories of Goods of Light Industry in Trade Organizations (millions of rubles)

	at 1 Jan 90	at 1 Jan 91	1991 as percentage of 1990
Cotton fabric	1097.3	274.8	25.0
Woolen fabric and scarves	485.8	153.1	31.5
Silk fabric	1489.9	582.7	39.1
Clothing and underclothing	9813.4	5857.9	59.7
Knitwear	3710.8	2086.1	56.2
Hosiery	758.2	679.4	89.6
Leather shoes	3022.0	1904.8	63.0

The growing market scarcity of the goods of light industry has fostered more active speculation. The income of speculators from the resale of clothing was about 350 million rubles in 1989, along with 250 million rubles for footwear and 100 million for knitwear. The prices on the "black" market were well above those of the state trade system—three times as much for men's and women's overcoats, 2.5 times for a man's suit, 4-4.5 times for shoes and four times for socks. Cooperatives and individuals are selling woolen items and shoes to the population at prices that are 1.7 times higher than state prices, and knitwear for 1.9 times more.

The situation in the market for the goods of light industry continued to worsen in January and February of 1991—the sales volumes dropped for the majority of

items, inventories were reduced and virtually all items were in short supply. The stabilization of production of the goods and a halt to further declines depend first and foremost on the normalization of business ties and the resolution of issues of procurements of raw-material resources through imports. These very circumstances are making more difficult the forecast of the effects of the April retail-price reform in the consumer-goods market. Even the significantly increased fixed, limit and unrestricted retail prices for the items of light industry have not balanced supply and demand. The shortage of many items will meanwhile cause a rise in the unrestricted prices, which are limited only by tax controls. The solution is to augment production and reinforce the raw-materials and production base along with its renewal.

## HOUSING, PERSONAL SERVICES

### Housing Availability in Dushanbe, Vilnius, Yerevan

914D0226A Moscow TRUD in Russian 15 Jun 91 p 2

[Articles by V. Ashurov and G. Konchyus: "Buying an Apartment"]

[Text] The government feels that housing management must be converted to self-financing, and that the owners of dwellings should take part in their maintenance.

The All-Union Communist Party insists that an honest laborer who had stood in line for an apartment for 10-15 years should receive free housing.

#### What we have:

- 6.5 million Soviet people are living in communal apartments.
- More than 14.5 million families are on waiting lists for housing.
- The average availability in the USSR is 10.6 square meters of living space or around 15.6 square meters of total space per person. This is two to three times less than in Eastern European and developed capitalist countries.
- Last year only 37,000 apartments were sold to citizens as private property (this year specialists expect significant acceleration of the rate of privatization of housing).
- In the last few years the rate of introduction of new housing has decreased steadily. Last year the plans were completed to approximately 50 percent.

#### Dushanbe: The Bondage of Housing, by V. Ashurov

"Luck" came to Ya. Utyagulov in the form of an official paper from the housing administration. It reported that he, an invalid of the Great Patriotic War, could receive, free of charge and as private property, the apartment in which he resided. But the joy was not to last very long. That's what this veteran discovered literally just a few days later: a faucet broke, and Yakov Valkakhmedovich was forced to pay for the repairs out of his own pocket. This didn't go down well with someone who was barely making ends meet as it was.

"I refuse ownership of the property," the veteran categorically declared to dispirited workers of the housing administration.

Many of the more than 6,000 invalids and participants of the Great Patriotic War who were given ownership of their housing submitted similar statements to the Dushanbe City Executive Committee. In this way, one of the first privatization measures became a lump in the city executive committee's throat. To the credit of its workers, however, they did manage to find a way out of the dead end. In the next meeting of the city soviet a decision was made to provide communal services to the apartment owners in question, free of charge.

"This incident forced us to look at the issue of denationalizing housing, which appears so simple at first glance, in a new way," said A. Anvarov, senior presidential advisor on administrative affairs. "Beneath the first layer of problems we found a second, and then a third. But what is especially important is this: it was found impossible to carry out privatization of apartments without accounting for the present housing situation, for the social conditions of different categories of the population, and for the demographic situation."

Concentration of state housing among urban dwellers is observed in the republic. For example 58.9 percent of urban residents and only 4.5 percent of rural residents reside in private apartments in Tajikistan. At the same time while 28.7 percent of urban residents live in private houses, in the rural areas this indicator is 36.6 percent [figure illegible; 86.6?]. But what sort of houses are these? Mostly mud-daubed shanties, with earth instead of wooden floors, and drinking water supplied from an irrigation canal. Three to four families often live beneath the same roof here.

On the other hand state housing has become an effective form of bondage, chaining the individual to his place of work. Some directors bestow apartments as if they were pulling them out of their own pockets. It is entirely natural that this form of housing organization is an important component of the authoritarian administrative system. It would hardly survive under market conditions. And this is well understood in the republic. The conception of privatizing housing is presently being worked on at the government level. In the meantime denationalization of housing with the government's blessing has already begun. Just in Dushanbe alone, around 9,000 apartments have been prepared for sale. The population has already purchased 5,906 of them.

"The basic concept we are working with here is that housing is a form of goods, and we are setting a low social norm of guaranteed housing availability on the part of the state," offered Dushanbe City Executive Committee Deputy Chairman I. Salimov.

Beyond this norm, each person leases or purchases an apartment to the extent that he is able. And the price here is different as well. But what is the value basis of housing sales? Market, balance or residual? The last variant was selected in the republic. It is determined from the residual value, in current estimated prices, at the moment of sale of the apartment, and its total useful space. Besides this, the executive committees of rayon and city soviets of people's deputies have the right to add a surcharge of up to 15 percent to the cost of apartments and residential buildings sold to citizens as private property, with regard for the number of stories, the quality of interior work, the apartment furnishings, and the location of the housing.

Many apartment tenants feel that they have already paid the value of their apartments. This is doubtlessly so in regard to the elderly. But what about those who began a

working career relatively recently? In this case it would seem proper for such people to acquire housing on the basis of standard rates. And then benefits could be introduced later on. Incidentally, the Dushanbe City Executive Committee has enacted a statute in behalf of mothers with large families. They pay 30 percent of the cost of an apartment as their down payment. Then the balance is paid off in 15 years. Other categories of people pay 50 percent down.

These are only the first steps on the path to privatization of housing. In the future, each person must be able to own his own private residence, so that he could be independent of any possible tyranny on the part of the administration or the executive committee.

#### **Vilnius: The Market Will Be the Judge, by G. Konchyus**

The discussion on the bill to privatize state-owned apartments went on for several months in the Lithuanian Supreme Soviet. Ultimately, how much will it cost to purchase an apartment?

A square meter of total space will cost around 220 rubles. But depreciation would have to be deducted from this. And local self-governing organs may increase or decrease the price by 20 percent depending on the quality of the apartment and its location. However, only a fifth of the total value of the apartment would have to be paid in cash. The rest will be covered by state investments, foreseen for every Lithuanian citizen by another law—on privatizing state property. Payments from 1,000 to 5,000 rubles are foreseen depending on the person's age. In a word, the buyer will have to pay 50 rubles cash out of his pocket for every square meter, but rather than paying all of it at once, he will be able to make payments over the course of 2 years.

Other benefits are also foreseen for invalids, pensioners and people living in kolkhoz housing. Some of them will be able to acquire apartments with just investment payments, without paying a single ruble of cash, while others will be able to do so with a significant discount.

The deputies engaged in heated debate over the problem of extra space. What is to be the definition of extra space? How much is to be paid for it? It is interesting that both proponents and opponents of low-cost sale of extra space revealed themselves in both the left and right wings of the parliament. Some argued that if the price of extra space is high, this would infringe upon the interests of the elderly, who have helped their children to begin their own lives, and are now left with large apartments. Others argued that only former nomenklatura workers have large apartments, and if they want to keep on living in their mansions, let them pay the fair amount. The proponents of selling extra housing space at low cost won.

It was decided that extra space would be defined as area exceeding 20 square meters per person, and another 15 square meters for the entire family of the apartment

tenant. Or if the total area of an apartment rented by one person exceeds 50 square meters, and 60 square meters if two people live in it. Extra space will cost twice the going rate.

Is it worth purchasing a state apartment at all? This question will have to be answered by the housing law, which establishes new apartment rent. It is expected that it will increase significantly.

The apartment privatization law will become effective as of 30 June. Currently set prices will remain effective until the end of the year. And after that, the cost of housing will be dictated by the market.

#### **Yerevan: A House for Moneybags**

On the weekends, the number of people that gather on the stands of Yerevan's Razdan Stadium is about the same as the number of spectators that come to see a match—this is where the apartment black market thrives. A one-room apartment goes for R75,000-80,000, and that's not in the city center. A two-room apartment on the outskirts goes for R100,000-150,000, a three-room apartment far away from the city center goes for R120,000-150,000, a four-room apartment in Norkskiy Housing Complex No 5 or on the main street of Mash-tots goes for R200,000-700,000, and a five-room apartment 20 minutes' drive from the center or on exclusive Kieviana Street goes for R300,000-800,000. A two-story private home across from Razdan Stadium goes for R500,000.

For comparison, the prices at the black market in neighboring Tbilisi are twice lower, which can be explained by presence of thousands upon thousands of refugees from Azerbaijan in Yerevan, who are living in dormitories, sanatoriums and vacation homes. Around a year ago a decision was made in Armenia to sell state apartments to private owners. However, the Yerevan City Soviet vetoed such operations in recent months.

TRUD social correspondent L. Avakants asked A. Akopyan, chief of the main production administration of municipal management, to comment on the situation:

"The government of Armenia recently decided to transfer apartments to the ownership of veterans of the Great Patriotic War free of charge. The Yerevan City Soviet prepared the decision on this matter in literally just a week. Concurrently the Council of Ministers is discussing the possibility of implementing such an act at republic scale. In other words it may happen that some urban residents will receive apartments as private property not for money, but free of charge. Consequently purchase of apartments has been temporarily suspended in connection with discussion of this matter."

The hope is that privatization of the city's housing will make it possible to lower the incredible prices on the apartment black market.

**From the Department of Social Problems**

As we can see from the communications of our correspondents, privatization of housing is gathering momentum, though at some cost. The corresponding laws have already been adopted in some republics, while in others, such as the RSFSR for example, they are on the verge of being adopted.

In the meantime the question that arises is this: Why should a person who has worked honestly at a state enterprise for many years, and who had lingered for as many years on a waiting list, not have the right to free housing? After all, all these years he received only a third of his earnings in the best case, since the rest was supposed to be returned to him through social consumption funds, including in the form of an apartment. Not without grounds, the trade unions are insisting upon free

provision of housing to this category of citizens (as well as some others). But there is a way to solve this problem, or so it seems. For example compensation could be paid to such persons on housing waiting lists for a large part of the expenses of acquiring an apartment, thus providing them with the amount of space established by public health norms, free of charge.

There are other problems closely associated with the housing market as well. One of them is redistribution of manpower. In our country, an individual is still not free to select his place of residence. A person who finds himself unemployed in an area with a labor surplus would be reluctant to risk moving to an area where he is needed: He is tied down by his apartment and by registration system. Privatization is called upon to solve these problems as well.

## FUELS

**Oil, Gas Construction Ministry Change to Market Economy Examined**

914E0109A Moscow STROITELSTVO

TRUBOPROVODOV in Russian No 1, Jan 91 pp 1-10

[Article by V.G. Chirskov, USSR minister of the Construction of Petroleum and Gas Industry Enterprises: "The Sector's Transition to a Market Economy"; UDC 658.012.12]

[Text] We are living and working in a complex and critical period. It would be no exaggeration to say that right now the country is going through one of the tensest stages in its history.

At present, no one disputes the main path toward normalizing the situation, ensuring the stable functioning of the economy and, on this basis, solving the social problems.

There is no doubt that the economic system needs perestroika.

Economic relations will be formulated primarily under the conditions of a regulated market. This does not mean, however, that the State will stand aside from the organizational functions in economic life. The need for its participation in this stems from the problems of protecting the social rights of the citizens and realizing the long-term goals of development, on the basis of scientific-technical progress and ensuring the country's defense capacity. Only by accelerating the introduction of civilized market relations, creating their State regulators and forming a true all-union market can we emerge from the sloping plane on which the economy finds itself today and begin a new ascent.

A regulated market economy will broaden the potentials of the principle, from each—according to his ability, to each—according to the results of his labor, will intensify the motivation toward highly productive labor, make it possible to create an efficient mechanism of mutually profitable relations between producers and consumers, put an end to the chronic deficit and undermine the basis for speculation and other manifestations of shadow economics.

In the conditions that have been created, we must go forward quickly so that, not only in the shortest period, but also with minimal losses, we can surmount the dead zone, where the old management system is, with the new one not yet functioning.

It can be said that today there are no longer any opponents of the transition to a market economy—everyone is for it.

The debates surrounding the mechanism and periods for the transition have become heated.

On 15 October 1990, M.S. Gorbachev, president of the country, presented to the USSR Supreme Soviet the "Basic Directions for Stabilizing the National Economy and Making the Transition to a Market Economy." The USSR Supreme Soviet approved these directions. They specify adopting and putting into effect a parcel of normative acts for denationalization of the economy and development of business activity, price formation, a finance-credit policy, organizational management structures, social protection of the population and the arrangement of new economic relations between the Union and the union republics.

The main point in this is the fact that particular attention has been paid to the mechanism for implementing the legislative acts.

Specific methods and widescale changes in relations in the sphere of State property have been defined, and it is proposed to ensure State support of entrepreneurship, prepare anti-monopolistic legislation and lay the legal bases for formation of a market infrastructure.

The transition to a market economy has general tendencies which must be taken into consideration in each sector of the country's national economy. Work should be carried out in the following directions: denationalization of the economy, privatization, development of entrepreneurship; formation of a market and a market infrastructure; demonopolization of the economy and elimination of the structures that have formed; removing State price control, a transition to unrestricted price formation; a rigid monetary-credit and financial policy; creation of systems of social support and guarantees for the population; implementation of a positive structural investment policy. Each direction requires advance creation of a legal basis and tremendous organizational work at all levels of State authority and management.

**Capital construction and the market.** Activation of the market is called upon to break the crisis situation in capital construction and intensify its role in the structural perestroika of the national economy.

The formation of market relations in the investment complex will proceed in four main directions.

First—decentralization of the sources for financing capital construction. The role of local budgets and funds of the population in financial investments will increase. The change in ratio between various sources of financing capital investments and the structural shift in favor of constructing objects for nonproduction purposes call for an improvement in the structure of contracting work.

Second—breaking away from the administrative, vertical attachment of buyers and contractors and developing a market for contracting work, and making a transition to a system of "contract bidding." Public competitive bidding is essentially equivalent to an exchange, at which the demand of the buyers and the supplies of the contractors are counterbalanced. The

State order for construction of facilities is used only in the transitional period and is supported by tax benefits or budget subsidies.

Third—decentralization of management, creation of varied forms of property and demonopolization of economic activity in construction. Management structures with vertical ties can be restructured to those with horizontal ties, regardless of the forms of property. In this case the priority will remain for major stock-holding or State firms and companies with a regional or sectorial infrastructure.

In construction, the process of amalgamation into corporations, concerns and associations will be developed. Within their framework, contract bidding may be organized. At the same time, a "communion" of the structures is outlined: the formation of small enterprises is a realistic situation.

Fourth—the development, at outstripping rates, of a labor market infrastructure in construction. With the reduction in the demand of the construction complex for personnel, they can be retrained for nonproduction projects, and some of the workers released will be accepted by cooperatives. In demonopolizing the construction complex, it is necessary to retain the technical and personnel potential which, in 1.5 to 2 years, will make it possible to begin a gradual increase in investments.

The results of the 12th Five-Year Plan attest to the fact that our sector successfully coped with the planned assignments. The total volume of contracting work fulfilled amounted to 36 billion rubles [R] (in the 11th Five-Year Plan—R29.6 billion).

The past five-year period was characterized by the stepped-up nature of the plans for housing and municipal construction. The volume of introducing objects of the social sphere considerably exceeded the turnover of these objects for operation during the 11th Five-Year Plan. In the construction of projects for nonproduction purposes, R6.7 billion worth of contracting work was fulfilled, which is 1.6-fold more than in the 11th Five-Year Plan. Some 5.2 million m<sup>2</sup> of housing were put into operation for workers in the sector (in the 11th Five-Year Plan, 3.5 million m<sup>2</sup>). A major program is being carried out to create health institutions—sanatoriums, boarding houses, rest bases and pioneer camps.

In the preceding five-year plan, the capacities of the sector's production base grew considerably. To create a base for the construction industry, retool the production organizations with equipment and machinery, as well as for the purpose of social development of the collectives, a total of R7.1 billion was invested, including R3.4 billion for construction-installation work, which is respectively 1.4-fold and 2-fold more than in the last five-year plan. We succeeded in increasing consumer goods production 20-fold in the five years. Subsidiary

agriculture was further developed. The sector's scientific-technical potential was considerably updated and reinforced.

In the 12th Five-Year Plan, the foundations were laid for intensification of the economic reform in oil and gas construction and a transition to economic methods of management, and restructuring was implemented in accordance with the master plan for management. All the sector's organizations made the transition to full cost-accounting and self-financing and improved the quality of the technical-economic indicators and financial situation of the organizations and enterprises. The profit in the sector rose by a factor of 2.7 as compared with the preceding five-year plan, and the profitability in construction increased from 13.2% in 1985 to 18.1% in 1990. Some R900 million worth of above-plan profit was obtained. It can be said that on the whole there is a fair base for the transition to a market economy.

**The state of the sector's economy and finances.** The crisis in the country's economy did not leave the enterprises and organizations of Minneftegazstroy [Ministry of Construction of Petroleum and Gas Industry Enterprises] unscathed. The main reasons for the sharp drop in the sector's production were the decrease in investments in the fuel-energy complex and the shortage of material resources. Changes in the structure and lessening of responsibility and controllability also had an adverse effect.

The sectorial budget also changed unfavorably. The catastrophic drop in revenues stemmed not only from the cutback in work volumes, but also from the rise in prices, directive and informal, for the products needed, and also from the freeze in the organizational structure. The drop in revenues led to a reduction in payments to the budget and, as a result, to an even greater extent—to a reduction in appropriations from the budget. The negative trends in the structure of the sectorial budget are clearly not conducive to a transition to market conditions of economic activity.

Inflationary processes have a destructive effect on the sector's economy. Since the end of 1989, all types of property have become more expensive. The tendency toward a rise in prices intensified in 1990. The deficit opened the "sluice-gate" for various types of additional payments. Barter exchange inflated prices. In addition, the deficit and commodity-monetary imbalance forced the investment of money in property, which the sector does not need, but which could later be exchanged. Therefore, it is not by chance that the reduction in production reserves is very slow compared with the reduction in production volumes. This situation is dangerous for the sector's economy.

The sector's activity is placed under rigid conditions, and the profit drops: in the last two years it was virtually cut in half. This reason is second, after inflation, for the disorder in the sector's finances. The drop in profit cannot be made up for by the credit and monetary

resources, since they have also been reduced and have become less accessible and more expensive in the country and for our sector. Profit is not only the gain, which determines the activation under the conditions of a market economy, but above all—the source of existence for the enterprise, organization and sector as a whole. In the sector, however, a tendency has appeared toward an increase in the number of construction organizations, trusts and industrial enterprises showing low profits and operating at a loss. The sharp reduction in work volumes has led to the sector's profitability dropping to the 1987 level. Considering the fact that with a transition to market relations all the organizations operating at a loss will immediately go bankrupt, and the low-profit enterprises and organizations will operate at a loss, they must either be abolished or transformed into leasing or other enterprises, based on collective property. With a reduction in profitability, the increase in the number of institutions in our infrastructure and the growth of expenditures to maintain housing, kindergartens, pioneer camps, etc. puts the sector in a difficult situation.

Considerable difficulties arise because of the increased failure of the buyers to pay the contracting organizations for the work performed. The existing system of extending credit for uncompleted production is not in the nature of the market. It is impossible to bring elementary order, if neither the buyers nor the banks will bear the responsibility for granting credit. The sector's nonpayments are the largest they have ever been. This is the result of the drop in production, the crisis in the economy and the disorder in the finances.

Under market conditions, however, the main criterion in partnership relations will be the ability to make payments promptly. The ability to pay reflects the skill to carry on economic activity. On the basis of the acknowledgement of an organization's inability to pay, the decision will be made to declare it bankrupt.

With the transition to the market, price-formation in construction should be restructured. The factors related to the market conditions when contracting agreements are concluded between the construction participants should be taken into consideration in the prices for construction work. It is assumed that two basic models of contractual prices will be used in capital construction—the regulated contractual price and the unrestricted contractual price. The first is formulated on the basis of the existing system of estimated norms, with additional consideration of the specific conditions of the contract. The second appears with the organization of competitive bidding for contracting and will be established through the buyer's estimate of the cost of the construction, determined in the estimates and proposals of the contractor at the competitive biddings.

**Perestroyka of the management structure.** There are 227 enterprises and organizations in the ministry's structure, operating on full cost accounting, which have the legal status of a State enterprise. The future of these structures

is clear in general, and needs only to be determined in relation to property. At the same time, there are about 2,000 different construction, industrial, transport, supply and other enterprises with subdivisions of the social sphere operating in the ministry system. All of them are, to all intents and purposes, excluded from the economic relations inherent in full cost accounting and self-financing. Qualitatively new economic levers are needed to draw this mass of work collectives into the market system. The task of the appropriate trusts and enterprises is to further improve the organizational structures of these subdivisions. At the same time, the technical-technological and socioeconomic factors must be thoroughly taken into consideration and the possibility of their independent functioning under the conditions of the market and competition and the rigid requirements for product, work and service quality be soberly evaluated.

With the transition to a market economy and the presence of various forms of property, small enterprises will play a considerable role in saturating the market with construction and industrial products, consumer goods and services for the population. Setting up such enterprises is the basis for overcoming monopoly, and for the development of enterprise and competition in all spheres of activity. The sector's pioneer in this matter is the Remonttruboprovodtekhnika SSO [student construction detachment]. The list of priority areas of activity for the small enterprises of the association includes manufacturing spare parts, reconditioning units and assemblies of building machines and mechanisms, motor vehicle transport and electrical equipment, and also the output of products in high demand.

**The formation of the economic mechanism of sectorial management.** The transition to market relations predetermined the need and directions for conversion of the ministry's organizational-economic mechanism. A great deal of preparatory work was done in the sector to develop management restructuring instead of a ministry for the concern.

The ministry system proved itself in rigid centralization of planning and execution, but it cannot work efficiently under the conditions of a construction market.

The new organizational form—a concern—specifies:

- amalgamation of the sector's organizations on a voluntary, economically advantageous basis with respect to the financial-functional qualities;
- legal and economic independence of the economic organizations entering the concern;
- a variety of forms of property and forms of economic activity;
- centralization, on a contractual and paid basis, of a number of very important general economic functions



(scientific-technical development, strategic planning, investment, financial, environmental protection, marketing, etc.);

- economic responsibility of the concern and the enterprises for the amount of direct loss and missed gain;
- selection of the directing bodies of the concern and hiring workers for the executive departments on a contractual basis.

The concern's organizational-economic mechanism should ensure the transition from passive executive orientation toward fulfillment of directives from above to active entrepreneurship and a search for highly effective spheres in which to apply activity and capital.

The rigidly organized system with a fixed organizational and functional structure should be converted to an organization adaptable to a changing economic environment. This can be achieved through a dynamic organizational structure, management that is mainly purposeful in nature and a variety of forms of economic organizations, having economic independence and entrepreneurial freedom and the possibility of maneuvering resources and carrying out a policy of diversification.

The economic mechanism of the concern should ensure the transition from immobility and departmental responsibility for the financial flows to making them mobile through creating centralized insurance and reserve funds, joint-stock holding and domestic and foreign loans, which will make it possible to react quickly to the dynamics of the changes in the external environment and overcome the shortcomings of a centralized system of redistributing financial resources.

Orientation of economic interest "toward the plan" should be replaced by the aim of satisfying specific market demands and selecting efficient and promising projects, contracts, proposals, developments, etc.

Privatization of property, joint-stock holding, leasing, profit-sharing, a contractual system of organizing and paying for labor and other measures make it possible to arouse the economic interest of each worker, and to direct him toward high-quality, creative and innovative activity, and not toward playing the role of a passive performer in the production process.

Putting into effect an active entrepreneurial strategy presupposes the concern's use of the advantages included in the world economic system, orientation not only toward the domestic, but also toward the foreign market, cooperation with foreign firms, implementation of joint ventures, fulfillment of foreign contracts and the study and adoption of foreign experience.

**The organization of legal and claim work.** With the transition to a regulated economy, in which the basis of economic activity is cost accounting and a contractual

system of relations, there must be reliable legal protection of the property interests of organizations and enterprises and active use of legal means for this purpose.

Analysis shows, however, that many organizations suffer major losses because of the low level of legal and contract-claim work. The legal experts of a number of associations and trusts are still working in the old way, formally, are not analyzing the reasons for mismanagement and loss at a production facility and for violations of contractual obligations and are not employing the proper legal defense for execution of the contracts concluded. For example, in 1990, the number of cases of penalizing the violation of contractual obligations with economic sanctions was considerably reduced. There are essential shortcomings in formalizing claim materials.

To increase the efficiency of the work of the legal service, legal offices (firms) should be set up, acting on a contractual basis, on cost-accounting terms. These offices or firms should serve the organizations of the system with respect to contracts on all questions of legal safeguarding of economic activity.

**A reliable base for the sector—a guarantee of an efficient economy.** Given the quite good results of the 12th Five-Year Plan as a whole, the drop in capital construction itself at the concluding stage was inexcusable.

Investment of capital in uncompleted construction is an unavoidable process. Freezing capital as the result of dragging out the construction deadlines for the economy under the conditions of market relations, however, is intolerable.

There are 609 construction projects for production purposes, amounting to R900 million, that remain uncompleted.

There are 112 projects with R106 million worth of construction uncompleted (the remainder of an estimated value of R460 million) and proposed for mothballing. Some 16 moth-balled construction projects with R12 million worth of uncompleted construction have been put up for sale.

Many frozen long-term construction projects can be respecialized on the basis of modern technological approaches and should be completely finished on the basis of market demands. If they are not needed, they should be sold at auctions. It is inexpedient to begin new construction projects. It is more important to concentrate funds on completing the construction of general-sectorial projects for the construction industry.

Measures must be taken toward more efficient use of the capacities of the sector's production base. Inventories showed that the existing capacities have the potential for increased production through retooling and renovation. A number of enterprises should be turned over for leasing, or transferred to cooperatives or local Soviets.

The problem lies in drawing in the maximum amount of funds from buyers at the sites and setting up a centralized investment fund to finance general sectorial projects through the sector's enterprises and organizations. The construction of housing and children's preschool institutions should be financed through the funds of the sector's enterprises and organizations. The money of the workers in the sector should also be drawn in.

**Personnel, wages and labor relations.** People are our main capital, which has accumulated and multiplied throughout the sector's existence.

The specificity of the sector is its high degree of technical equipment and the complex work conditions of a first-comer, fraught with increased demands for work quality and mobility, have brought about special requirements, differing from those of other sectors, for the selection of workers and engineering-technical personnel. These are—a high degree of professionalism and the ability to adapt quickly to new conditions and a shift in labor projects. At the beginning of the 12th Five-Year Plan, the average rank of a worker in the sector, at 0.2-0.4 points, exceeded the average work rank. About 80% of our engineering-technical personnel have completed higher educational institutions.

Considering the fact that the labor market throughout the world is oriented toward highly skilled labor, our task is to use our personnel potential efficiently, not to lose it little by little.

Because of the reduction in construction volumes, however, the total number of workers in the sector dropped by 20%, and by half in line construction.

Negative phenomena have also appeared in the sphere of personnel training. The number of workers who were trained and improved their skills every year has decreased. Today almost 40% of the places in sectorial educational centers are given over to train workers in other sectors. At the same time, in most collectives there is no profound thinking or drawing up of specific programs to retrain workers and specialists for the changing work structure.

Some of the directors and work collectives today feel that personnel training is not the affair of the enterprise, and that with the appearance of a labor market all problems will be removed. Actually, it is completely the other way around. In United States firms, expenditures for personnel training constitute from 1 to 5% of the profit received. Personnel training for Western businessmen is the most profitable way to invest capital, a guarantee of high competitiveness. In the United States the worker reaches the peak of his professional skill and career by the age of 30, but in our country—only by the age of 40-45, when, in the opinion of Americans, efficient worker training is no longer profitable.

It must be understood that with the transition to market relations, a person's main social defense is the professional skill of the worker and his ability to master

technical innovations and additional specialties quickly. Under the conditions of a labor market, there must be radical restructuring of the entire mechanism of using personnel potential, forming it and spending resources directed toward this sphere. Today the organizational structure must be one which, in the interests of the enterprises, would ensure realization of the overall strategy in the labor market. An Association of Business Cooperation can take on these functions completely.

An important measure in bringing about the sector's successful transition to the market is a major wage reform within the framework of the new labor relations. A new motivational mechanism must be created, which would ensure the optimal combination of personal, collective and social interests.

In our sector, the labor department has prepared a package of proposals and documents on organizing wages and labor relations under the new conditions. These documents are interrelated and determine the procedure for wages and the nature and special features of the workers' labor relations; they contain methodological materials to evaluate the efficiency and cost of labor.

The main instrument for regulating labor relations should be collective contracts (agreements) between the administrations designated as the owner and the appropriate trade union committees. The contracts should reflect matters regulating the rights and obligations of workers and the trade union, special features of the system of hiring and firing, the procedure for norm-setting and amounts of the workers' wages and the use of various raises, additional payments and compensations. The labor conditions and work time should also be determined, and the conditions for social insurance, medical service, treatment and rest should also be stipulated; the procedure for concluding and monitoring the fulfillment of contracts and for resolving disputable matters should also be determined.

Each enterprise should consider the specific labor input for the goods produced, keep the balance sheet of labor resources and analyze labor efficiency. In our opinion, the value estimate of labor productivity should be given up and a transition made to indicators of the specific labor-intensiveness of a unit of output in natural measurements, as well as to evaluation of the profit mass accrued by one worker. Close attention must be paid to calculating and predicting the cost of labor, on the basis of the labor-intensiveness and price of the labor resources. Under the conditions of market relations, the cost of labor will tend to rise steadily, and a basis will appear for determining the cost of a job (goods, service) and will in many ways determine the contractual price.

A necessary condition for carrying out the principles of the new labor relations and wage reforms is the creation of a full-value normative labor base. This means regulation of labor processes (in the form of charts), consolidated norms of labor input and legislative and normative

labor acts. The formation of this base should be supported by the appropriate software, using PEVM [personal computers].

**The role and place of science.** The organization of "turn-key" and "market ready" work, which should receive priority importance in market relations, should be based on very high quality, since only when this is achieved is it possible to have good economic indicators. Applied science should make its contribution to the foundation ensuring a new level of efficiency.

Intensity of research, informational, licensing and entrepreneurial activity—this should be the primary distinguishing feature of science in market relations, for its ability to survive depends on this. Science should support the work of the organizations with respect to priority technology, high quality of the goods developed and competitive efficiency on the Soviet and world markets. The task of science is to equip the sector's subdivisions with business information, the correlation of world achievements, selected patents and "know-how".

It is above all necessary for science to "anticipate" the needs of trusts and specialized construction associations for simple analytical developments and research carried out by standard methodology. A construction organization that receives a project to execute should have a packet of norms which would regulate all of its technical actions, ensuring the efficient achievement of the goal and guaranteed quality. State subsidies should be provided to develop a subject of national economic importance (for example, hydraulic transport of coal), as well as to create State norms, and for important pioneering developments. In any case, a risk fund must be formed to produce bold pioneering research.

The scientific products developed by the sector can be sold to any firms (Soviet and foreign), except for organizations included in the concern, since they have already made their contribution and should enjoy these goods without any additional compensations.

In order for the sector's scientific potential to remain within efficient amounts, it should be determined by the direction of a number of our institutes. If we are guided by strict criteria, only some of our scientific research institutes can lay claim to being institutions engaged in scientific activity. The planning-design and technological institutes (PKTI) do not have any scientific specialization. Should they also engage in research? If they master automated organizational-technological planning, control the fulfillment of POS [construction organization planning], POR [work organization planning] and PPR [production work planning], take part in expert examination of plans and estimates, introduce partial mechanization and perform simple work and surveying of housing and facilities for social-everyday purposes, this will constitute important and fitting assistance to construction organizations.

As for scientific personnel, in order to select the persons most deserving on the plane of competency and morality, it is advisable to introduce into science an all-embracing competitive system and the principle of competitiveness, and to increase the responsibility of the scientists for what they propose to put into practice.

Applied science should therefore undergo a transformation, in order to perform theoretical and experimental research intensively to make it possible for the sector to exist under competitive conditions. The order for science and acceptance of the results of research are made in centralized fashion by the concern, with guaranteed support of the interests of all its organizations. Science should be financed on the basis of the withholdings from construction and production organizations, State subsidy and the sale of scientific products.

Concentrating the subject matter of research on the main directions—competitive offering of its own services and those of foreign organizations to work out problems and eliminate trivial subjects, and clear-cut delineation between research and planning-design matters—all of this will make it possible to reduce the volume of scientific studies and the scale of the institutes. In the institutes it is expedient to give up rigid structures—departments and laboratories; scientific associates should be invited and unified into creative groups to solve important problems, which will ensure the comprehensive nature of the studies. The scientific staff of institutes must be revised by using serious competitions, and talented young people must be drawn in.

The concern, in taking on the general direction of science, should also create a highly qualified staff to manage it, drawing in scientists and specialists who have the ability to think in broad categories.

**Approaches to organizing foreign economic ties.** The sector has accumulated a certain amount of foreign economic potential, and four basic directions for foreign ties have been formed—foreign construction, scientific-technical cooperation, integrated construction and foreign trade. At the same time, no noticeable changes are taking place in either the scale or the efficiency of the sectorial foreign economic complex.

The initial level of the sector's foreign economic ties and evaluation of the situation in the country's foreign economic complex and on the world market today predetermine the expedience of orientation toward the formation of a modern economic, personnel and information infrastructure of foreign economic activity, and toward integration in world economic relations. The goals set can be achieved on the path of a progressive market strategy, specifying a transition from traditional forms of cooperation formed in the sector on the basis of various types of cooperation and specialization, to the use of new organizational forms, including multi-party transactions, joint entrepreneurship, the creation of consortiums and associations and the development of direct ties.

The problem of increasing the effectiveness of foreign economic relations is to be solved in accordance with the overall strategy for the development of the country's foreign economic complex in two stages.

At the first stage, the real yield from introduction of a new foreign economic mechanism and the sector's participation in international division of labor must be considerably increased, widescale personnel training and retraining must be implemented and the existing contradictions in the foreign economic sphere must be overcome. The currency receipts from exporting scientific-technical products and services should be considerably increased. Import is to be used primarily to solve the social problems of the sector's development and to renovate and modernize the production base.

At the second stage, the sectorial strategy will primarily proceed from achieving the long-term goals of developing the foreign economic complex, which specify a major change in the place and nature of the sector's participation in the international division of labor. It is assumed that a variety of the forms of scientific-technical and economic cooperation and entrepreneurship, applied in world practice, will be used.

The realization of this strategy stipulates drawing into foreign economic relations the maximum number of the sector's associations, enterprises, organizations and cooperatives and increasing their independence, interest and responsibility for the results of foreign economic activity. An integral system of managing foreign economic ties is to be formed, based on economic methods and instruments. Here, we place great hopes on the Vneshtruboprovodstroy Association which has been created.

**The program for 1991.** The plan for contracting work was formed in the amount of R7 billion, of which R3 billion go to the construction of gas industry facilities and R2.1 billion to the petroleum industry. In this case, the proportion of work for nontraditional buyers is being considerably increased, from R100 million in 1990 to R1.1 billion in 1991. This attests to the expansion of our organizations' sphere of activity, the formation of new markets for sectorial products and a certain reorientation toward the construction of facilities for the suppliers of the material-technical resources, to which we are paying particular attention.

The reduction continues in the volume of work on large-diameter pipeline construction, which is R1.3 billion, or about 20% of the overall program, instead of the 50% reached in the middle of the 12th Five-Year Plan. At the same time, the volumes of industrial pipeline construction is being maintained, and surface construction is increasing sharply.

The contracting market provides for a considerable increase in the construction of pipeline-branches made of pipes of the petroleum assortment, and going to construction of low-pressure gas distribution networks, i.e., expansion of the amount of small-diameter pipeline

construction. These proposals were approved with the Gazprom concern, 19 oblast RSFSR soviets and the Belorussian, Ukrainian, Turkmenian and Uzbek SSR councils of Ministers, and will be carried out in the fulfillment of the State program "Nonchernozem Gas," the RSFSR program "On the Development of Gasification for the Rural Area," and in cleaning up the consequences of the accident at the Chernobyl AES. For example, 66,000 km of gas pipeline-branches and gas distribution networks are to be built on the territory of the RSFSR alone in the 13th Five-Year Plan. In this way, about 12,000-14,000 km of small-diameter pipelines are to be built every year, which is 1.5-fold more than in the entire 12th Five-Year Plan. Solving this unusual problem requires working out and mastering, in a very short time, new technology, a general transition to bituminous insulation, the creation of the necessary technical devices and the development of this direction in construction in each pipeline-building trust.

In 1991, R1.9 billion is to be utilized to construct facilities for the social-cultural sphere, and to put into operation apartment houses with a total area of 2.6 million m<sup>2</sup>, preschool institutions for 13,000 spaces, general education schools for 27,000 students and hospitals with 1,900 beds.

The greatest bottleneck in forming the plan for this year is to balance it with the resources.

It was very difficult for us to manage to obtain centrally allotted resources for R4.0 billion worth of construction-installation work.

The main form of material-technical support for the program of work under market conditions should be direct horizontal ties with the product suppliers.

In accordance with the program prepared by the ministry, the sector's enterprises started to work in May of last year. They took the matter seriously. During June-July, contacts were established with many product suppliers, negotiations were made and they signed protocols of intent to perform construction-installation work or render other services instead of guaranteed counter-flow supplies of material resources.

All of this is fine. As soon as we tried to sum up the work done, however, it immediately became clear that in many cases it had not been brought to its logical conclusion.

It is understood that many suppliers, not having limits on their resources, as well as not being clear with respect to the volume of the State order, are for the time being not interested in signing long-term contracts, but many of the directors of our organizations have not shown the proper persistence in this work.

We must not forget that forming direct ties and concluding contracts for supply is the basis of our collectives' stable work in a period that is complicated for

everyone. This problem must be studied daily. All possibilities must be utilized, including work with the buyers. When contracts for subcontracting are concluded with them, there must be clear-cut determination with respect to material-technical support and the work stipulated by the contract and not included in the State order. Contracts should obviously not be concluded in cases of deviation from the solution to the problems of resource support of work.

**The urgent tasks of the transitional period.** The formation of organizational structures (concerns, associations, companies, trusts, institutes, centers, commercial firms, etc.) must be completed in a short time.

The size of the managerial staff and the expenditures to maintain it must be revised, excess units must be eliminated, and economically weak enterprises must be strengthened (combined or broken up into smaller units, depending on the specialization and local conditions).

Each unprofitable and low-profit enterprise must be quickly and carefully examined—and a decision made as to what to do further for each of them.

Once again, the plan for economic and social development in 1991 must be carefully regulated, the degree of reality of the plan be determined for each enterprise and measures taken to balance it.

There must also be careful investigation of the reality of each organization's 1991 financial plan, which still remains outside the field of vision of many directors. If we assume that the financial plan should be the primary planning document, then the approaches to the problems of the associations and the trusts change.

One of the main conditions for stabilizing the economy is ensuring stable economic relations in 1991, in consideration of the unstable nature of the market ties springing up. All directors and those who are engaged in material-technical supply must maintain and strengthen their economic ties.

Direct ties, in which the financing of expansion and modernization of the production facilities of our suppliers and coordination of direct ties between trusts on the sectorial level must be undertaken, should be engaged in more fruitfully. The contractual mechanisms of stabilizing domestic and foreign production ties and guarantees against their violation must be worked out.

We should quickly expand the activity of the sector's newly-created commercial bank, particularly in the commercial sphere. We have all the conditions for this. The bank is an instrument for survival and the maneuvering of monetary resources. Otherwise they will be spent unproductively.

There must be rapid completion of: reevaluating all the sector's property, and putting it into high-quality condition; the inventory of fixed capital, and preparation of the sale of obsolete and unnecessary capital, particularly, the capital of housing and municipal services, and other

property. The rights to land plots, real estate and personal property, the value of which will increase under market conditions, must be secured at the same time.

We must accelerate the completion of working out the process of denationalization and privatization of property.

Denationalization will proceed mainly in two directions: leasing and joint-stock holding. Leasing will not receive the anticipated development unless it is interwoven with a cooperative direction. Priority must be given to setting up joint-stock holding organizations, as the healthiest structure from the standpoint of the economy and morality. Joint-stock holding organizations, however, must be included in associative bodies, in order for them to remain in the overall structure economically. This process must be controlled, though.

It should be determined with the organization of a price formation system, with contractual prices in construction and industry. There must be a competent unit in the system, the work of which should be constructed on commercial principles (not just recommendatory and consultative work, but also an analysis, for example, of the effectiveness of raising contractual prices and narrowing the work front). Prices will play a decisive role in the sector's economy.

Because of the financial confusion, the drop in profitability and profit and the rise in bank rates, many enterprises will experience financial difficulties. In order for them to adapt to the new conditions, it is recommended that stabilization funds be created through withholdings from the profit remaining at the disposal of the enterprises and organizations, as well as receipts from the sale of surplus property, and also that the extension of commercial credit be practiced between enterprises as an element of the new wholesale market. The output of bonds to supplement internal working capital should also be stimulated.

Our scientific institutions and practical specialists must have a sense of profound responsibility for putting into effect wage reform measures. The State tariff system will come forward as a factor for the social protection of the workers and as a powerful stimulus for increased production efficiency.

In addition, a new system of hiring enterprise directors in accordance with a contract, in which the State tariff will always come forward as the minimum (guaranteed) wage, should be introduced.

Increasing production efficiency, eliminating unpromising and low-profit enterprises and organizations and creating new production facilities will lead to redistribution of the work force. Here, a certain part of the workers will be temporarily outside production. In this case, the country is outlining direct subsidies for the unemployed and will implement an employment program and create an employment assistance fund.

The directors of the associations, enterprises and organizations will not only be participants in these programs, they should be ready to use enterprise funds for these purposes. It is recommended that they create their assistance funds through the unutilized wage fund and savings of the material incentive fund.

Appropriations for capital investments will be sharply reduced. Meanwhile, the projects of the construction industry are the basis for structural perestroyka of our production and the condition for survival in the restructuring period. Everything must be done to put them into operation.

At the same time, we are faced with the task of curtailing uncompleted construction, possibly suspending and moth-balling the construction of certain facilities and closing down construction projects that have been started, if construction periods are not observed.

It must be borne in mind that the restrictions on an enterprise spending its own funds, which were introduced beginning on 1 January 1991 in the form of an investment tax, complicates the situation with respect to construction of a number of production facilities. All attention and resources must be concentrated on putting extremely necessary facilities into operation.

We should expand the sphere of paid benefits and services and increase the sale of housing, summer homes, building materials and surplus property to the population.

New interrelations with the union and autonomous republics and local Soviets of People's Deputies must be produced and implemented on the basis of expanding their economic activity.

These are only some of the main, urgent problems that must be solved. There are many other problems.

The sector has drawn up a Program and plan of measures for it, for the transition to a market economy. The program is specific, and the plan of measures is the working mechanism of its realization.

A permanent commission has been created to monitor their fulfillment.

The enterprises and organizations have also worked out measures (programs) for the transition to market relations based on local conditions.

The interests of the cause require that the fulfillment of these economic programs for the transition to market relations be monitored daily and be firmly and consistently implemented.

None of us should panic during the sector's transition to a market economy. Our sector is considerably better prepared than other construction sectors. We have a good personnel, technical and organizational potential.

Having worked out unified approaches to a market economy, we must act with boldness and confidence.

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### Oil, Gas Construction Production Processes Automation Noted

914E0109B Moscow STROITELSTVO  
TRUBOPROVODOV in Russian No 1, Jan 91 pp 19-20

[Article by D.D. Muzhev, chief of the SU ASUS [Automated Planning and Management System Specialized Administration] Zapsibzhilstroy: "The Computerization of Production Processes"; UDC 658.012.011.56]

[Text] When the tasks of computerizing construction are being solved, the special features of the construction process must be taken into consideration:

- mass use of a broad products list of materials, items, structures, building machinery and equipment;
- the territorial assigning of production at certain sites and the resulting mobility of construction personnel and machinery when going from one project to another;
- the effect of the natural-climatic factor;
- the arrhythmic nature of the construction process, etc.

The factors listed mainly characterize the technological features, but they also have a substantial influence on management. For example, mass use of materials and items requires that a data base be set up on computers; the mobility of the construction personnel and machinery makes it necessary to organize the appropriate terminal network to gather, process and transmit information.

Computerization of construction using the Zapsibzhilstroy system is being worked out in the following basic directions: information-control systems; control of individual construction and production processes; planning construction and plant production; processing accounting information. A specialized ASU and communications administration is studying the solution to these tasks.

The technical basis of the computer equipment devices includes: two series YeS computers, 53 8-bit byte computers, and about 40 16-bit byte IBM-type personal computers.

The difficulties in introducing the sets of tasks and computer devices in the association's subdivisions lie in overcoming the habits of the traditional schemes and forms of data presentation and the people's lack of faith in the results of machine counting. In the subdivisions where the directors and engineering-technical personnel realize the need to computerize production, however, the introductory stage proceeds painlessly.

The organizational link between the production of reinforced concrete items at the KPD [large-panel house-building] plant and their technological need for the construction projects is provided by a set of engineering production preparation tasks (ASU-production).

The ASU-production set includes the following basic tasks:

- calculating and formalizing the flow construction schedules;
- calculating the need for KPD items for installation;
- calculating and formalizing the plan to produce KPD items;
- operational accounting of the output and shipping of the finished product;
- sale of the finished product.

The set of tasks functions in three modes by means of ASU-production: routine and operations planning, operational accounting, control and regulation of the output and shipping of the reinforced concrete items.

In the operation of the sets of problems with ASU-production, a uniform load is achieved for the capacities of industrial enterprises, the rhythm of project introduction increases and the outlay of material resources and amount of working capital in the reserves is reduced through precise and prompt determination of the need for reinforced concrete items; the completeness of precast reinforced concrete supplies increases.

One of the most important tasks is correct distribution of the functions between man and computer. In the Zapsibzhilstroy system, at the stage of experimental operation, the following specialized automated work places (ARM), based on a personal computer of the IBM PC type, are in operation: for workers in the planning department, personnel office, plant production engineer, production department engineer, accountant and director. The processes of labor accounting and wage calculation, movement of fixed capital and materials, processing of bank documents and formalizing of order logs are automated for the accountant.

Using ARM in ASU increases the labor productivity of the administrative-managerial personnel and improves the quality and information service of the directors and specialists of the functional subdivisions when they prepare and make administrative decisions.

After integrating ARM into the local computer networks of individual construction and industrial organizations, one can proceed to the development of a unified hierarchical computer system.

Further development of ASU is foreseen, to work out and introduce the tasks of mathematical prediction; expert control systems for production dispatchers and

workers in the production and planning departments; tasks of psychological and sociological testing, business games, etc.

The experience in introducing ASU in the Zapsibzhilstroy system showed that, while it is difficult to computerize subdivisions, the reverse process is totally impossible—specialists who have mastered computers simply cannot and do not know how to work without them.

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## ELECTRIC POWER GENERATION

### Nuclear Power Station Training Exercises Highlighted

914E0106A Moscow ELEKTRICHESKIYE STANTSII  
in Russian No 2, Feb 91 pp 5-9

[Article by engineer A.N. Biryukov and candidates of psychological sciences Yu.S. Krizhanskaya and V.P. Tretyakov of the Kola AES [nuclear power plant] under the rubric "Personnel Training": "Business Gaming When Training AES Operational Personnel for Emergency Operations"; UDC 621.311. 25:621.039. 007:331.86.056]

[Text] Power engineers were perhaps the first after the military to recognize the limited nature of traditional methods of training, and they began to employ gaming in working with operational personnel. Here is what the journal ELEKTRICHESKIYE STANTSII wrote in 1931 (1): "The work of the duty operations personnel of the plants, substations, power grids and dispatch points is of a specific nature in the sense that the burdens of the personnel in operational work under the usual normal conditions are not great, but in time of emergencies the personnel are unexpectedly burdened with considerable operational work that should be completed in the shortest possible time.

"Personnel working under such conditions, having long time intervals that are often completely lacking in any operational work whatsoever, naturally lose their skills gradually, and the most serious and systematic work is required to maintain and raise their qualifications.

"The conventional methods of raising qualifications in the area of operational work, such as general instruction and conventional testing, even in a production setting, do not have the requisite results, since quite often individual workers who understand very well the configuration of the plant or substation they support, knowing the equipment well and handling the work in fully satisfactory fashion under normal conditions, are lost in an emergency, often making completely absurd mistakes.

"All of this has forced Moges [Moscow Association of State Electric Power Plants] to seek new methods of

raising the qualifications and verifying the knowledge of duty personnel. Such an approach was found in the holding of so-called 'emergency games.'"

We have included such a long quotation because the trend of the loss of skills among personnel has not only not been halted, but has rather increased—more automated devices have appeared, dynamic modes and emergency moments arise less and less often and more and more operations personnel are reminiscent of "watchmen." The ideology and technique of the "emergency gaming"—anti-emergency training—remains the same as was proposed in Mosenergo [Moscow Regional Administration of Power System Management] in 1930.

This lack of correspondence of the increasing trend toward the constant loss of skills among personnel and the methods of fighting it is leading inexorably toward an increase in errors by operational personnel.

The techniques for working with the personnel must be updated in order to reduce the number of errors, and that means raising the safety of operations. Their updating should naturally be performed with a regard for contemporary scientific data on averting accidents and, in particular, the data from psychological analyses of the activity of the person in an accident. Such analyses performed by a number of authors (2-5) testify to the fact that the quality of decisions made in an emergency depends on the quality of understanding of the processes transpiring in the facilities under their control by the personnel (reactor, boiler, turbine and power grid). It has been shown that the more complete and profound the dynamic model of the facility being controlled is in the mind of the operator, the greater the guarantee that he will be able to handle any emergency situation that arises.

The resolution of the task of formulating such a dynamic model is made considerably more difficult by the impossibility of a completely formalized description (in the form of an algorithm, for example) of the activity of the person in emergency situations, which leads to the predominant role of individual experience and the individual knowledge of operational personnel.

The methods of working with the personnel should thus be directed at the formation of a dynamic model, but through the transfer of individual knowledge and experience from the more experienced and knowledgeable to the less experienced. Business gaming, in which the creation of the emergency situation itself is the goal of the players, is capable of realizing such requirements. We realized a similar approach to the design of games in a number of games for turbine operators and dispatchers in the power grids (4, 6).

The goal of developing and maintaining individual dynamic models of the facilities under control, i.e., aimed at working with a single person, was posed in the games proposed for working with turbine operators. One specific feature of the control of an AES in a complex situation of an emergency nature is the fact that control

is exercised by a collective of operators. Anywhere from two to thirty people could be involved simultaneously in the control of a nuclear power plant with various changes in the parameters of operation.

This situation requires the working out not only of individual dynamic models, but group ones as well, as well as the arrangement of interaction within the group of operators (shifts). The game "Smena-1" was developed and adopted at the Kola AES to accomplish this task. The game is a collective model of an emergency situation.

Seventeen people participate in the game—the operational personnel running one power unit, who most often take part in eliminating an accident. The players are divided into two groups, those developing the accident—the "saboteurs"—and those eliminating the accident—the "actors."

It is important to emphasize that the players learn their roles only at the start of the game. Each of the participants in the game should thus perform his actions within the framework of his own official functions, but those who end up as "saboteurs" should complicate the progress of the accident, develop it.

The game transpires as follows. The players sit at the game table. The game organizer (the instructor) provides a description of the initial state and introduces the initial situation through one of the players. The description of the situation is given as a series of altered parameters for the operation of the equipment.

The player who receives the initial information on the accident makes the essential decisions, issues the necessary instructions or transmits the information to other players (the first move). The person sitting next to him makes his move next. Later moves are made in clockwise order, with the player having the right to pass if he has no concrete instructions or information about the situation. Passing on a move can also be a form of "sabotage." Each player records the substance of his move on an individual card after the move.

One game lasts 30-40 minutes and, as a rule, includes several rounds of moves for all players. The moderator can introduce additional "inputs" to any of the players during the course of the game, as well as block the actions of "saboteurs," thereby controlling the course of the game.

The end of the game is either the complete elimination of the accident (victory for the "actors") or the obvious impossibility of the complete elimination of the accident (victory for the "saboteurs").

We present one of the games, "Leak of Loop I into II (Phase I)," in the table as an example.



No. of move	Role	Content of move	Point value	Comments
Input	SOE	sharply reduced level in volume compensator (VC)		
		turn on make-up pumps (MP)		
		pressure drop in VC		
		VC heaters turned on		
		SS-2 [scram system 2] actuated by pressure-reduction factor in 1st loop to 115 kg/cm <sup>2</sup>		
		emergency make-up pumps (EMP) turned on		
1	SOE	maintenance of parameters		
		notification of shop shift chiefs		
		search for location of leak		
2	SC/AES	notify per list on condition of unit 1		
		proceed from UCP-4 to UCP-1		
Input	MO/UCP	rise in levels in steam generator SG-6		
		signals:		
		—rise in activity at ejector 1		
		—rise in activity on steam line from 1SG-6		
3	MO/UCP	turn off TG-1		
		transfer power for in-house needs from header		
		turn off excess feed (FP) and condensation pumps (CP)		
		monitor parameters		
Input	SOE	signals actuated: "Failure in MCP-1, -2, -4, -5" [main circulation pumps]		
		pressure drop declines in the core and MCP-1, -4		
		pressure drop declines and is restored in MCP-2, -5		
4	SOE	notification of SC/AES, shop shift chiefs	-10	serious error using basic equipment leading to development of emergency
		shutoff of loops:		
		—close both GZZ		
		—disconnect MCP		
		—removal of loop 6 from monitoring		
		—compression of closed GZZ		
		—feed and start-up of source range chambers (SR) in zone of maximum sensitivity at SS-1		
		—feed to SCR [safety control rods] leads		
		—removal of NSOOT ARK clusters to provide data on dosage situation		
5	SC/TAI	arrive at UCP, call for DES		
		turn on DI channels and report at UCP		
		transcribe signals to report to NTs/TAI		
		begin feed to 1, 2 leads of CSR		
		report to UCP		
6	SO/RD	inspect operating MP, EMP	-5	error on auxiliary equipment leading to development of emergency
		monitor disconnect of MCP-6		
		compression of GZZ		
		closure of purge for 2nd and 1st loops		
input	SC/ES	lights lit at breaker V-GSR-2		
		on panel "C"—"Call to section 2RV"		

No. of move	Role	Content of move	Point value	Comments
7	SC/ES	monitor rundown of GSR-1, -2 and completion of ERW [emergency repair work] in sections 1, 2		
		command to SED to inspect breaker V-GSR-2 according to input		
8	SME	shut off purge in 1st and 2nd loops of loop 6		
		sampling of 1 SG-6		
		compression of GZZ		
		monitor operation of MP, EMP		
		prepare for set-up of feed circuitry for boric acid feed at MP intake		
9	SED/saboteur	6VP-9, -10 not closed all the way, gap, wedged	+10	"subtle" sabotage
		report to SC/TS, MO/UCP		
10	MO/TG	monitor parameters of oil seal for generator shaft by instruction of MO/UCP		
		turn on MNU		
		turn off injector		
		monitor seating of stop valves, closure of GPZ, return valves at bleed-off		
		report to MO/UCP		
Input	SED	disconnect solenoid and disconnect of automatic ShU at breaker GSR-2		
11	SED/saboteur	inspect section 2RV	+5	"flagrant" sabotage
		manual disconnect of MV, <i>V<sub>opr</sub> of 2RV</i>		
		report to SC/ES on presence of smell of fumes from voltage transformer in section 2RV		
12	SC/TS	VP-9, -10 not closed	+10	complete elimination of consequences of "subtle" sabotage in move 9
		ask SC/AES about radioactivity		
		removal of people from machine room, dosage monitoring of machinery room		
		indication to MO/UCP of impossibility of discharging steam condensate into cooling water lines		
		disconnect feed-water semiheader		
input	SC/AES	ejector TG-1 [g] 1.8 E-7 Ci/l		
		UIM-2 1SG-6 [g] 0.5 µm/sec		
		Berest-2 of unit 1 [g] 1E-6 Ci/l		
		Dosage situation in apparatus housing facilities unchanged		
13	SC/AES	Order SIT, NSOOT, analysis to SG	+5	complete elimination of consequences of errors in move 6
		purge open, close 6P-1		
		compress GZZ		
		divide feed headers, halt feed to 6SG-1		
		GSR-2 (MCP-1, -4)		
		residual heat removal of unit		
input	MO/UCP	pressure in GPK increasing (52 kg/cm <sup>2</sup> and more)		
14	MO/UCP	one FP in operation		
		monitor level in SG and pressure in GPK		

No. of move	Role	Content of move	Point value	Comments
		actuate pressure through BRUK-TG-1		
15	SOE	close purge 1SG-1-5, 1SG-6 through expander and into special channels (SC) to SVO-5		
		creation of standing concentration of boron		
		close purge in 1st loop SVO-1		
input	SO/RD	1R-9/6 not fully closed according to indicator		
16	SO/RD	close purge for 2nd loop of SG-1-5		
		open purge SG-6, consumption of 10 tons/hr after switch of purge to SK 1R-9/6, not fully closed, report to SME		
17	SC/ES	report to SC/RTs on unsuccessful ERW in section 2RV and power failure for MCP-1, -4		
		monitoring of ERW in section 4BN-B		
		issue command to SED to inspect TN in section 2RV		
18	SME	on notification of NSOOT together with ORO	+10	actions making the greatest contribution to eliminating the emergency
		inspect 1R-9/6 in A-013/1, separated rod closed fittings manually, report to UCP		
		disconnect SVO-5		
		disconnect purge 1SG-1-5		
		connect purge 1SG-6 through expander to OD SG in B-15, after disconnection of SVO-5 B-15 put into drainage into special channels		
		removal of people from 1st unit		
19	SMO/TS	prepare circuitry for residual heat removal, cut off collector 9 ata, report to SC/TS, MO/UCP		
		monitor parameters of heat system		
20	MO/TG	inspect heat system		
21	SED/saboteur	light TN-2RV, circuitry pulled out	+5	"flagrant" sabotage
		call to inspect 3, 4 BN-B		
		relay RV lit in automated devices of section 3BN-B-4BN-B		
22	SC/TS	SMO/TS prepares residual heat removal RU without checking safety valves		
		remove protection for pressure drop of SG and GPK, NTTs		
23	SC/AES	reveals opportunity of residual heat removal of loop in conjunction with 1st loop		
		order analysis		
24	MO/UCP	report to UCP-2 on temperature reduction in heat system		
		request MO/UCP-2 take burden on self		
		monitor GPK parameters		
		46 kg/cm <sup>2</sup> , pressure 1SG-6-40 kg/cm <sup>2</sup>		
25	SOE	close purge 1SG-6		
		monitor residual heat removal of no more than 30 degrees/hr (boron introduced)		
26	SC/AES	disconnect SVO-1 (SOE, SME)		
		coordinate actions of SMO/TS, SC/TS	-3	inconsequential error using basic equipment (not monitoring operation of EMP)

## ENERGY

No. of move	Role	Content of move	Point value	Comments
27	SO/RD	close purge 6SG, report to SOE		
28	SC/ES	report to SC/RTs and SC/TAI on flaws in ERW in section 4BN-B (4 start-up of CSR and VC heaters)	+10	complete elimination of "flagrant" sabotage of moves 11 and 21
		call repair personnel for TN of section 2RV and ETL personnel to section 3BN-B-4BN-B		
		issue command to SED to prepare workstations for TN of section 2RV and automated section		
29	SME	upon notification of ORO of abnormal operation of EMP, verifies through inspection that tank B-8/1 has been actuated, disconnects EMP from emergency button	+3	reaction to error on move 27
		report to UCP		
		at instruction of SC/RTs, disconnects purge 1SG-6, monitors radiation situation in A-014, 15/1, uses individual protective gear		
30	SMO/TS/ saboteur	reduces vacuum in TG-1, reports to SMO/TS, command to MO/UCP and MO/TG to check level in condenser and basic ejector	+10	"subtle" sabotage
31	MO/TG	disconnects boiler for steam and water at instruction of MO/UCP		
32	SED/saboteur	detects disconnected position of transformer 53T MV	+5	"gross" sabotage
33	SC/TS	residual heat removal for 1st loop		
		in-house needs from unit 2		
34	SC/AES	connect loop 6 to 1st loop		
		request GI		
35	MO/UCP	turn on back-up basic and start-up ejectors	+10	complete elimination of consequences of "subtle" sabotage in move 30
		monitor parameters, TG-1 vacuum drop halted		
36	SOE	MCP-1, -4 turned off with keys		
		close GZZ at head 1MCP-1, -4 and preparation for residual heat removal		
37	DES, TAI	monitor presence of alternating-current power supply to SUZ panel and report to NSS and SC/RTs on lack of ERW on alternating current		
		disconnect lead 4 (alt)		
38	SO/RD	open 1P-17 for boron feed SVO-1 through bypass		
end of game		report of SME		

Notes: 1. The entries made during the game have been edited by the editors. 2. SOE—senior operations engineer; SC/AES—shift chief/AES; MO/UCP—machinery operator/unit control panel; SC/TAI—shift chief/TAI shop; SO/RD—senior operator/reactor division; SC/ES—shift chief/electrical shop; SME—senior mechanical engineer; SMO/TS—senior machinery operator/turbine shop; MO/TG—machinery operator/turbogenerator; SED—senior electrician on duty; SC/TS—shift chief/turbine shop.

After completion of the game, the instructors and the shift personnel investigate the mistakes and successful actions of the players; postgame analysis is exceedingly important in the game. The analysis can last longer than the game.

The formal scoring of the results of the game is possible with the aid of a system of evaluation designed on the basis of the principles of content-analysis. A sample list of criteria for evaluating business games is presented below.

Erroneous actions	Points
Inconsequential error on basic equipment	-3
Error on auxiliary equipment leading to development of emergency	-5
Serious error on basic equipment leading to emergency	-10
<b>Reactions to erroneous actions</b>	
Partial elimination of consequences of error	+3-5
Complete elimination of consequences of error	+10
Display of initiative in eliminating errors	+2
Failure to react to error:	
Failure to react to inconsequential error on basic equipment	-3
Failure to react to error on auxiliary equipment	-5
Failure to react to serious error on basic equipment	-10
Actions making large contribution to elimination of emergency, but not reactions to errors	+10
<b>Actions by "saboteurs"</b>	
"Flagrant" sabotage	+5
"Subtle" sabotage	+10
<b>Reaction to actions of "saboteurs"</b>	
Complete elimination of consequences of "flagrant" sabotage	+5
Partial elimination of consequences of "flagrant" sabotage	+2
Complete elimination of consequences of "subtle" sabotage	+10
Partial elimination of consequences of "subtle" sabotage	+3
Display of initiative in eliminating consequences of sabotage	+1

If we employ a similar system of evaluation to the game presented in the example (the table), we obtain the following.

	Number over game	Value
Erroneous actions	3	-18
Reaction to errors	4	16
"Strong" actions	1	10
"Sabotage"	5	3
Reaction to "sabotage"	1	10

A distinctive typology of "sabotage" was revealed in the games conducted at the Kola AES. It could be simple "sabotage"—passing on moves, motivated by absence from the workplace (left for lunch; running to the workstation after hearing of the accident and breaking a leg); "sabotage" of an extreme type—disabling any equipment that could in principle break down; and, subtle "sabotage"—reporting changes in the parameters of equipment that aggravate the accident.

The game is being used at the Kola AES for the second year. The operational personnel not only like it, but it is, in the evaluations of the personnel themselves and the technical supervisors of the AES, a quite effective means of training operational personnel for actions in emergency situations and, what is also important, making the operational shift more cohesive.

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#### Minister on Electric Power Industry Problems

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[Article by Yu.K. Semenov, USSR minister of energy and electrification: "On the Condition of the Electric Power Industry, Problems of Energy Supply in the Future, and Social Protection of Workers in the Sector" ((Footnote) Paper presented in the Congress of USSR Power Engineers (Moscow, 12 December 1990). Abridged for publication here.)]

[Text] The electric power industry, along with the entire economy, is entering a complicated stage of its development, one whose particular features are determined by the vigorous processes of democratization of the life of our society and by the transition to market relations. At the same time, the progressive radical changes are

accompanied ever more noticeably by an emerging regional separatism, the destruction of production ties, the intensified shortages on the consumer market, rising inflation, a growing disproportion in remuneration of personnel between the state sector, cooperatives, and joint enterprises, and the extremely rapid rise in the cost of living.

There is no question that the changes taking place are fully reflected in the work collectives of enterprises and organizations in the electric power industry and power project builders, in people's moods, in their attitudes toward their work, and ultimately in the state of the sector. Reliability and steadiness in supplying electric power and thermal energy to the economy and the public are being achieved with ever greater efforts. The sector is working at the limit of what is possible.

On 7 December 1990, Mikhail Sergeyevich Gorbachev, the country's president, met representatives of collectives of power industry personnel and of the trade union, people's deputies, and senior officials of the ministry and the fuel and energy complex. That frank and thorough discussion resulted in the order to prepare a ukase of the USSR president which along with the problems of the electric power industry's development in the future is to contain proposals that make it possible to improve the social climate in work collectives.

The sector is today made up of more than 5,000 different enterprises and large construction projects, including more than 1,114 power plants located over the entire territory of the country. The fixed industrial productive assets of USSR Minenergo amount to 118 billion rubles [R].

In the current year, the installed capacity of the country's power plants will reach 348 million kW; it is anticipated that approximately 1,730 billion kWh of electric power will be generated, 75 percent of the total in thermal power plants, 13 percent in hydropower plants, and 12 percent in nuclear power plants.

It is no accident that the electric power industry should be in an extremely difficult position in the present period. The principle that this sector should have a lead in development has not been realized over the last three decades. The growth of generating capacity has been lagging behind the growth of consumption. There has been a corresponding drop in backup capacity and an increase in the length of time the USSR YeES [Unified Electric Power System] operated at reduced frequency.

The installed capacity of power plants in 1990 will turn out to be almost 80 million kW below the level envisaged in the USSR Energy Program adopted in 1983. Above all, there is a substantial lag in the number of nuclear power plants activated; their capacity at the end of the current year is estimated at 37 million kW, which is 50 percent below the targets of the program mentioned.

Fulfillment has also fallen far short of what was planned in the activation of capacities at thermal power plants. In

the years of the 12th FYP, about 23 million kW will be activated at TES's [thermal power plant] instead of 44 million kW.

A system for material motivation of personnel to improve use of installed capacity of power plants on the basis of the efficiency coefficient of use of installed capacity and for fuel conservation, calculated from standard specific rates of fuel consumption, was developed and applied in management practice in 1985 in order to increase the intensity of the ministry's operation of power generating equipment.

The economic measures adopted have helped to organize the operation of the USSR YeES at normal frequency. But in a few years the potential of this economic impact was exhausted. In the last three years, normal frequency has been achieved mainly thanks to the low growth rates of consumption and the warm winters.

Oversights in the strategy for the sector's development are among the main causes of the lag of activation of power generating capacity over the last decade. Technocratic approaches based primarily on balances of power consumption and production linked to the fuel supply have predominated. This is, of course, the basis, but the criteria used in selecting the particular variant for development of the electric power industry were limited to comparing only their economic efficiency and the availability of construction crews. That accounts for the desire to make projects less expensive at the expense of social conditions, the environment, the reliability of the power supply, and safety of operation.

The neglect of the world's experience in natural resource utilization and environmental protection and the simplistic idea of the safety of the first-generation nuclear reactors that existed at that time resulted in development of projects for creating gigantic power generating complexes based on the use of nuclear power and cheap coal, to the detriment of internal consistency among energy systems.

This ideology was embodied in a number of government decrees in the seventies and was reflected in a general way in the USSR Energy Program adopted in 1983. In order to reduce the share of mazut and natural gas in the fuel balance of power plants, primarily nuclear power plants were to be built in the European part of the USSR and thermal power plants—using strip-mined coal of the Ekibastuz and Kansk-Achinsk basins, as well as large hydropower plants mainly in the eastern regions of the country.

The erroneousness of these approaches is now obvious.

Instead of building four or five Ekibastuz GRES's [state regional electric power station] with a total capacity of 16-20 million kW, as had been envisaged in 1977, at this point only one GRES has been activated with a capacity of 4 million kW. A second is under construction, and its

first power generating unit is going into operation this December. Construction has begun on the Yuzhno-Kazakhstanskaya GRES.

The plan for construction of the KATEK [Kansk-Achinsk Fuel and Energy Complex] originally called for four to six GRES's over the period up to the year 2000, each with a capacity of 6,400 MW. In 1977, only the Berezovskaya GRES-1 was under construction. The first 800-MW power generating unit was activated in 1988. Activation of power generating unit No. 2 is anticipated in 1991.

The Chernobyl accident disrupted the program for construction of nuclear power plants. Many construction projects near completion were halted, mothballed, or slated for reconfiguration. They include the Rostovskaya, Krymskaya, Tatarskaya, and Bashkirskaya AES's [nuclear electric power station], power generating units at the Smolenskaya, Khmelnitskaya, Zaporozhskaya, and Kalininskaya AES's, etc. Activation of 6 million kW of nuclear TETs's [heat and electric power station] had to be abandoned because of the tighter criteria applied concerning their location.

Because of the abrupt change in the position of the public and local government authorities toward the electric power industry, design and construction were halted on 64 power plants with a total capacity of about 160 million kW. Opportunities were correspondingly reduced for starting up projects that were practically complete, and activation of capacity in the future is being reduced.

Activation of generating capacity was also reduced because the capital investments allocated were consistently insufficient. Over at least the last two FYP's, projects in the electric power industry have been built with an utterly inadequate level of partial completion carried over. While the standard of partial completion is 37 percent, in actuality it does not exceed 13-17 percent, which in practice disrupts the organization of power industry construction.

Activation of capacity is also adversely affected by the unsatisfactory supply of material and technical resources to power industry construction and unsatisfactory completion of sets of principal and auxiliary equipment. Resources are allocated to the sector on the residual principle. In the last two years, USSR Minenergo [Ministry of Power and Electrification] has been allocated 20-40 percent less resources than in 1988.

Machinebuilding enterprises of USSR Mintyazhmash [Ministry of Heavy Machine Building], USSR Minelektrotekhpribor [Ministry of the Electrical Equipment Industry and Instrument Making], and also the MGO Energomash—the principal suppliers of power engineering equipment—have in recent years been performing their contractual obligations extremely unsatisfactorily. The shortfall was as follows for the 12th FYP: 15 steam turbines, eight hydraulic, seven gas, and 45 steam boilers, 24 generators, 27,500 tons of pipe, 25,000

units of control-panel devices, 1,600 110-kV power circuit breakers, and many other things. A similar situation has come about in the supply of wire and cable, pumps and compressors, and pipe fittings, although the electric power industry consumes no more than 6-8 percent of the total level of their production of many types of equipment.

As a consequence, USSR Minenergo has in the last three years been forced to plan activation of new power capacities, power transmission lines, and substations on the basis of possibilities for obtaining the principal and auxiliary equipment and piping.

Over the last 20 years, the growth in the activation of power generating capacity has been lagging 20 percent behind the growth of power consumption. The growing requirements for electric power have been met mainly by increasing the intensiveness of use of the operating equipment of thermal power plants.

While the standard proportion of backup generating capacity is 13-15 percent, it is at the level of 4-6 percent. In the world's leading countries, backup capacity goes as high as 20-30 percent.

A strained situation has come about in the electric power supply of the republics of the Transcaucasus, the Northern Caucasus, the Ukraine, the Central Chernozem Zone of the RSFSR, the Lower Volga Valley, Central Asia, Buryat ASSR, and Chita Oblast. The power plants in the Coastal Region have been on short fuel rations. A shortage of thermal capacity has been felt in Krasnoyarsk, Vladivostok, Novosibirsk, Ulyanovsk, Chelyabinsk, Kuybyshev, and more than 40 other large cities.

In 1990 and 1991, USSR Minenergo has been forced to institute restrictions on the electric power consumed and on capacity for many republics, krays, and oblasts.

Because the plan for activation of new capacities has not been fulfilled and the backup is inadequate, there has been a chronic failure in the sector to fulfill the plan for dismantling physically worn-out equipment, and the necessary renewal of the active part of fixed capital has not been taking place. Of the 15 million kW envisaged by the five-year plan, only 2.6 million kW were actually dismantled. The problem of renewing fixed capital at thermal power plants has become extremely acute.

Our work collectives are a subject deserving particular attention. There are about two million workers, specialists, scientists, and supervisory personnel working in the sector.

In recent years, the drop in the size of capital investments, the freezing of projects, and the bad state of affairs on the social side have resulted in an exodus of workers from the sector. The unprofessional debate taking place in the central press concerning the harmfulness and unnecessary nature of the electric power industry has been doing appreciable damage to the

prestige of the power engineering professions. There has been a sharp drop in the influx of young people into our specialties in VUZ's, tekhnikums, and vocational and technical schools. The departure of skilled personnel for cooperatives and joint ventures where wages are several times higher and a number of other social factors have had the result that in three years about 600,000 people have left the sector, as a rule the best-trained workers and engineering and technical personnel. For example, in 1989 Mosenergo lost 6,000 people. This year, power networks are staffed at only 80 percent. Supervisory personnel and engineering personnel have become a problem for the sector.

When the market for labor comes into being, these losses can probably be offset in part. But the electric power industry must supply the economy and the public heat and electric power today and every day. Workers cannot be allowed access to power equipment if they have not had appropriate professional training. It is better, then, to keep personnel than to spend hundreds of millions of rubles in the future to replace them.

One of the principal directions in the activity of the ministry to stabilize collectives of power industry and power construction personnel is to form a system for social protection of the workers in which it is essential to define the conditions for hiring and discharging workers, their remuneration, maintaining income in the context of inflation, and other social guarantees so that the workers' standard of living is maintained. As the transition is made to the market, it is becoming particularly urgent to develop and create a system for social protection of the workers in the sector.

In 1989, the average wage of industrial production personnel in the electric power industry was R281, and in the first nine months of 1990 it was R303. Among ministries and departments of the fuel and energy complex, it is in last place, and among the 25 ministries it is in eighth place, where we moved from 12th place in 1988.

But in spite of a certain rise in remuneration, there is growing social tension in the production collectives of power industry personnel, based mainly on worker dissatisfaction with the loss of the value of their wages against the background of inflation and the empty store shelves, the failure to resolve social problems, above all the housing problem, high stress on the job, and the loss of the prestige that the sector once had.

If the sector's prestige is to be restored and personnel stabilized, there will have to be a program of interrelated long-term measures aimed at raising the level of wages and the social protection of the workers and at improving social conditions and everyday services. In his meeting with the country's energy personnel, M.S. Gorbachev summarized the problem of social protection and ordered that a mechanism be created in a presidential ukase that would make it possible to stop the outflow of personnel from the electric power industry, above all

those in its principal occupations, those related to the operation and repair of equipment.

The first step in material support of the sector's workers was the government decision on supplemental awarding of bonuses to workers for fulfillment of the indicators for operating capacity in the fourth quarter of this year and first quarter of 1991 and exemption from taxation of the growth of funds for remuneration for those purposes. In preparing that decree, our point of departure was that a minimum of R186 million would be committed to this in the quarter, which would make it possible to pay a bonus at the level of at least 50 percent of regular wage rates and salaries. In December 1990, the bonus could be paid for October, November, and December on the basis of the results for the quarter as a whole.

The fundamental long-term approach to increasing wages is to raise rate schedules and salaries 50 percent, and it was with this that the ministry went to the USSR Council of Ministers, but so far a favorable decision has not been made.

Alternative approaches were expressed in the meeting with the USSR president. To be specific, the proposal was made that a solution be found above all for the principal occupations, that awards be instituted for length of service, and so on.

In the ministry's opinion, because the Law on Enterprises is in effect in the USSR, it is advisable to alter the principles that govern remuneration of labor. As is well-known, on the average one-fourth or even one-third of the wage is formed from monthly or quarterly bonuses. It is quite natural that work collectives are oriented above all toward "momentary" current results and oppose progressive scientific-technical innovations if their introduction involves a drop of economic results, even in the short term. This is indicated not only by experience in previous decades, but also by experience with management in foreign countries, where as a rule the share of bonuses does not exceed 10 percent. It seems correct to increase the permanent component of the wage—wage rates and salaries from the schedule, and to decrease bonuses correspondingly. It is advisable for rate schedules and salaries to be advisory and to give enterprise managers full independence in remuneration of labor, including payments for length of service.

Benefits for pension coverage of workers in the sector working under harmful working conditions are one of the most important areas of social protection. The lists include 53 construction occupations, 59 occupations of power industry personnel, and also turbine and senior turbine operators on power generating units, machine operators on the central panels controlling steam turbines, crane operators, electrical fitters repairing the equipment of distribution devices, electrical fitters performing operating tests and measurements on distribution devices of 330 kV or higher. The lists are now under consideration in the USSR Council of Ministers.



Power industry personnel, along with coal miners and steelworkers, were given an opportunity to increase the length of their vacations before the USSR Law on Vacations was published. The basic vacation is 28 calendar days, or 18 working days, with an increase of two calendar days for every two years of work. When length of service reaches five years or more, the length of the vacation is 28 calendar days, or 24 working days.

What is more, additional leave of as much as four calendar days is established for multiple-shift operating schedules, in accordance with current legislation, and additional leave from five to 14 calendar days for harmful working conditions. The maximum leave of workers employed in jobs with particularly harmful working conditions will be raised to 46 calendar days instead of 30 as of 1 January 1991.

Measures have been drafted to improve the social security of workers in the branch who live in areas contaminated because of the Chernobyl accident. It is being proposed that additional benefits be instituted for this category of personnel and that they include monthly benefits for minor children in poor families with many children and for mothers on child-care leave and that they be given a lower rate for the heat and power they consume.

The ministry intends to broaden social guarantees, above all of power industry personnel and power construction personnel most exposed to the effect of market conditions.

To speed up resolution of social problems and to stabilize work collectives, it makes sense to create a sector-wide system of social insurance and security (including pension coverage) with the funds envisaged by the USSR Law on Pension Coverage of Workers. The effectiveness of this system has been confirmed by experience abroad.

The USSR Law on Resolving Employment Disputes and Conflicts has prohibited strikes in the electric power industry. The measures proposed for social protection are compensation for infringement of the rights of the workers and are aimed at preventing crises from occurring in the sector.

It should be emphasized that local management is very timid in taking advantage of its rights to establish employment benefits and social benefits and benefits in living conditions for their collectives out of the internal reserves they have.

For example, workers of power enterprises do not receive a higher supplement for harmful working conditions, they are not paid for the time lost on acceptance of the shift by operating personnel, workers are not supplied the necessary special clothing (over and above that envisaged by standards). It is rare for supplements to be paid to the pensions of workers, for lump-sum awards to be paid to pensioners, or for benefits to be paid to families with many children, and so on.

The ministry is making an active effort to solve the housing problem. In the 12th FYP, 13.7 million m<sup>2</sup> of housing will be open to tenancy, as against the target of 12.3 million m<sup>2</sup>, which is an increase of 1.4-fold over the previous FYP. But the rates achieved are not high enough. The line for housing is getting longer.

At the same time, customers and construction contractors are failing every year to use up the capital investments planned for construction of nonproduction facilities. In the 12th FYP, R717 million will go unused, which results in a loss of 35,000 apartments, mainly in the regions of the Far East, Transbaykalia, the West Siberian oil and gas complex, and Siberia.

In the period 1991-2000, 50 million m<sup>2</sup> of housing are to be built along with facilities for social and cultural services, including 22 million m<sup>2</sup> in the period 1991-1995, which is 1.6-fold more than in the 12th FYP. It is a complicated task, but realistic, if we rely not only on construction contractors, but also substantially increase the activation of housing built by the direct-labor method as well as private construction.

In 1991, USSR Minenergo plans to open 2.64 million m<sup>2</sup> of housing to tenancy. In addition, additional funds are being sought to activate another 800,000 m<sup>2</sup>. Some of these funds will be committed to eliminating dilapidated housing and housing affected by accidents.

It seems appropriate to mention that only in rare cases do the ministry's associations, enterprises, and organizations use remainders of the economic incentive funds to award loans or grants for construction of private housing, or for workers to purchase housing of their own, for the granting of benefits related to the sale of apartments, for the purchase of shares for apartments for members of housing construction cooperatives, etc.

The need for preschool institutions has dropped off considerably. During the FYP, it is expected that kindergartens with a capacity of 50,000 will be activated, which is 5,000 places more than the target assigned and 16,000 places more than activated during the 11th FYP.

The ministry annually allocates about R50 million of capital investments to develop health care facilities. During the FYP, hospitals will be activated with 2,200 beds, polyclinics to handle 13,600 visits per shift, rest centers to accommodate 4,500, preventoriums with a capacity of 3,500, and other facilities. Health centers are being built on the Black Sea and at Caucasian spas with a capacity of 5,000.

At the same time, local demands have been growing more and more in recent years. Analysis shows that most of them can be met by the management of enterprises, and many of them have the funds to do that.

The electric power industry has practically exhausted opportunities for increasing the intensiveness of utilization of existing equipment, and it does not have reserves for increasing activation of new capacity. In 1989 and

1990, the steadiness of the power supply has been determined largely by the warm weather, reduced consumption of electric power by industrial enterprises, and, of course, by the high level of organization and discipline of power industry personnel.

But even with a vigorous energy-saving policy, the need for electric power will grow. According to calculations of USSR Minenergo, the electric power requirement to meet the needs of the economy and the country's population, using all possible potential for power conservation, will increase to 1,930 billion kWh in 1995, 2,200 billion kWh in the year 2000, and 2,480 billion kWh in the year 2005.

Moreover, about half of the growth of electric power is needed to solve social problems: to increase housing construction and to intensify electrification of worker households, the personal service sector, to automate and mechanize labor-intensive production processes and technologies, and on that basis to improve working conditions, to raise labor productivity, and to improve the environmental situation.

To achieve the required level of production of electric power, it will be necessary to activate 161 million kW of power generating capacity over the period 1991-2005, including 39 million kW in the period 1991-1995, 57 million kW in the period 1996-2000, and 65 million kW in the period 2001-2005. This is practically one-half of what was outlined in the 1983 Energy Program. But under the conditions that have come about in the electric power industry, it is impossible to carry out even this minimal program.

The total partial construction of power generating capacities in the period 1991-2005, represented by power plants built in 1990 by the efforts of USSR Minenergo and power generating units being built by other ministries, represent slightly more than 100 million kW (not counting construction of AES's). The gap between what is necessary and the realistically possible activation of generating capacities is thus 60 million kW.

If this situation with partial construction is to be eliminated and activation of power generating capacities envisaged up to the year 2000 by the draft of the new Energy Program assured, permission will have to be obtained in 1991 and 1992 to build and develop 48 new construction sites with a total activated capacity of 96 million kW. There will have to be revision of the decisions made to halt and mothball power construction projects, hydropower construction will have to be stepped up, and we will also have to move faster in developing and creating nuclear power plants that meet world standards in reliability and operating safety.

The economic prerequisites should be brought about to motivate local government bodies and inhabitants to accept the placement of energy facilities with a view to the social development of the region. In this connection, a draft has been prepared of a decree of the USSR Council of Ministers which proposes—simultaneously

with the construction of AES's and also large thermal power and hydropower plants—construction within a 30- and 10-km zone of those respective power plants of social service facilities and roads and resolution of other socioeconomic problems with funds amounting to as much as 10 percent of the estimated cost of the power plants to be built, and electric power would be delivered to the population in these zones at preferential half-price rates.

When the plan for 1991 was being shaped, USSR Minenergo laid before the USSR Government a number of problems that need to be solved:

- centralization in the ministry of as much as 20 percent of depreciation for replacement of retired assets in the amount of R880 million to solve sector-wide problems;
- furnishing centrally distributed material and technical resources for construction of facilities for the heat and power supply of cities and power networks and also for construction of projects by the "turnkey" method;
- exemption of enterprises of USSR Minenergo of payment into the budget of 30 percent of the estimated cost of new construction projects and 10 percent of the amount of unfinished construction for mothballed projects, as envisaged by the well-known Decree No. 1097 of the USSR Council of Ministers, dated 25 November 1990.

In order to increase the motivation of regions to build their own power capacities, the new mechanism for state regulation of electric power rates envisages that consumers connected to power networks of power systems with a surplus of power would pay for the electric power they consume at a lower rate than consumers of power systems with a shortage of electric power.

Much attention must be paid in the future to application of new environmentally clean equipment based on highly efficient steam-gas and gas-turbine installations, whose installation over the next two decades should increase to 40-50 percent of total activation at thermal power plants. Other activation at TES's, based on traditional steam-power 200-800-MW power generating units, must be accompanied by a mandatory improvement of their environmental characteristics.

A most important direction in the very near future is to institute natural conservation measures at operating power facilities. By 1995, nitrogen oxides are to be combated in 650 boilers, emissions of toxic substances are to be reduced at more than 80 thermal power plants located in cities with high air pollution, and there will be other measures carried out. New TES's will be furnished power generating equipment incorporating dust catchers and scrubbers and monitoring equipment.

The key problem in performing the environmental tasks of the electric power industry is to improve the quality of the fuel used in generating power. The mazut arriving at the TES contains as much as 3.5 percent sulfur or more.

Enrichment of high-ash coal is equally important to improvement of the environmental situation.

Unfortunately, we must observe that the situation in the electric power industry has the features of a crisis. And, most important, as of this date no way out of this situation and no prospect for the sector's development has been defined at the union level.

In briefly touching upon the problems of the future development of the electric power industry, I want to emphasize the main thing, which is that production efficiency and improvement of people's social services and living conditions are unthinkable without increasing consumption of electric power. Accordingly, we need to bring about all the necessary conditions to bolster the sector.

In view of the electric power industry's strategic importance to the country's economy and population, the legal basis has to be shaped for its operation and development, and this must be based on the USSR Law on the Electric Power Industry, the country's Energy Program, the economic mechanism, and a system for social protection of the workers.

The USSR Law on the Electric Power Industry should define such fundamental concepts as the place and role of the electric power industry in the economy and its development as a forerunner, the concept of ownership, the structural principles of the organizational structure and of the economic mechanism for management of the electric power industry, economic relations with consumers, social welfare guarantees, and so on. In other words, the transition has to be made from the subjective approach to management of the electric power industry, which has predominated up to the present, to management based on legislative and normative documents.

The fundamental document determining development in the future must be the country's Energy Program. It should be transformed into a socioeconomic program and should show what people will get from its realization. The Energy Program must be transformed from a declarative statement to an effective document that comprehensively links together finances, physical resources, and the efforts of all sectors of the economy.

Under present conditions, the country's Energy Program must be based above all on the proposals of the republics and regions, on their increasing responsibility for development of the electric power industry. The problems that should be concentrated at the level of the Union would mainly be the building of power facilities determining how fuel and raw materials will be used from interpublic sources and those sources that are crucial to the reliability, safety, and development of the USSR Unified Electric Power System. The Energy Program must, of course, be drafted with a view to the conditions of the sovereignty of the union republics and autonomous republics, the economic independence of regions, and a market economy, and it must be based on the corresponding economic mechanism.

USSR Minenergo has prepared a draft of the country's Energy Program up to the year 2010 insofar as it pertains to the electric power industry. But at present this amounts only to the proposals of the ministry, and no foundations have been agreed on for new construction, for financial and physical resources, and the fuel has not been guaranteed to support these proposals.

The economic mechanism for management of the country's electric power industry is at the center of constant attention; it must be the basis for linking into a unified production and economic complex the project planning and construction organizations, the plants of the construction industry and machinebuilding, power industry associations and enterprises, which guarantee the operating reliability and safety and development of the USSR Unified Electric Power System in the context of the sovereignty of the union republics and the economic independence of regions. A great deal of work is being done in this area to improve the organizational structure of management. A number of all-union associations and main production administrations have been eliminated. The structure of the ministry's central apparatus has been considerably simplified.

The power systems and trusts have not undergone reorganization. Nor is this an accident. The ministry is examining power production associations, trusts, and plants as the basic production entities.

In 1991, the Law on Enterprises in the USSR is taking effect; its implementation requires certain organizational changes in the structure of management.

This law essentially calls for a two-tier structure of management whose upper tier is the state property fund or ministry which has been granted the right to manage that property. The Law on Enterprises in the USSR does not envisage a middle tier of management.

The USSR Council of Ministers has granted USSR Minenergo the right to manage the property of subordinate associations, enterprises, and organizations under union jurisdiction. The ministry has also acquired the right to retain associations and trusts of the mixed type that include enterprises along with structural units. This makes it possible to retain production associations for power generation and electrification as the basic tier in the electric power industry, while in construction it would consist of construction and installation trusts, which are to operate in accordance with the Law on Enterprises in the USSR.

In managing state property, USSR Minenergo assigns it to the full economic administration of the production associations, trusts, and enterprises and appoints their managers representatives for management of the property assigned to the enterprises and associations.

The ministry is concluding contracts with the managers of associations, trusts, and enterprises that will define not only the social guarantees, but also the accountability of the managers to the ministry. In view of the fact that

we are operating in the Unified Electric Power System, each power system, trust, and plant must be concerned not only with its own problems of surviving under the conditions of the market, but also and first of all with the tasks of the sector.

Power associations and construction associations would be modeled after regional power associations and specialized construction associations, conforming to the structural principles of trade associations and concerns, and this would be done on a voluntary basis. We hope that this will make it possible not only to increase the accountability of the TEO's [regional power association] and SSO's [specialized construction association] to power systems and trusts, but also preserve their influence on achievement of the reliability of power supply, on improvement of production efficiency, and on the sector's development.

The ministry has drafted regulations concerning the TEO's and SSO's to be created on a voluntary democratic basis. The associations are now being actively formed, and their bylaws are being approved. The concerns Soyuzgidroenergostroy, Kazenergostroy, Uralenergo, and many others have already been formed.

At the same time, the principle of voluntary downward delegation of powers is being combined with upward delegation of powers by the associations under consideration. These associations (TEO's, SSO's, and NPO's [scientific-production association]) must represent the interests of USSR Minenergo in management of the property, must take part in conducting personnel policy, in supplying centrally distributed capital investments and physical resources to power systems, trusts, and enterprises, and at the same time they are to represent and defend the interests of the power systems, trusts, and enterprises before local and republic government agencies and before USSR Minenergo. I think that with a reasonable joint approach we will be able to solve the complicated problems of setting up the sector's new structure.

The structure and staff of the ministry's central headquarters are undergoing essential changes. By comparison with the beginning of 1988, before the master management chart was instituted, the number of personnel has dropped from 1,858 to 1,080. The number of subdivisions has dropped from 45 to 27, including 10 main production administrations that were abolished.

The staff of the State Inspectorate for Operation of Power Plants and Networks was reduced by 342 (30 percent), and that of subdivisions for departmental acceptance by 348 (38 percent). A decision was made to abolish departmental acceptance in 1991.

Prices and rate schedules are becoming the central element of the economic mechanism in the context of a market economy. Beginning in 1991, negotiated prices are being applied in the ministry to all the products of plants in the construction industry and machinebuilding and also to construction and installation jobs, except

those performed at facilities for the needs of the state and financed out of centralized state capital investments. Wholesale prices remain fixed only on major repair jobs on power equipment.

On the recommendation of USSR Minenergo, state regulation of electric power and thermal energy has been introduced; it makes it possible to make the transition from the rigidly fixed rate schedules to "floating" rate schedules that vary as a function of the level of production costs.

This is the innovation that the ministry is proposing for introduction of the new economic mechanism and for accomplishing the transition to self-financing of the entire sector.

Pursuant to the regulation, councils of ministers of union (autonomous) republics, or corresponding pricing agencies and oblsipolkoms [oblast soviet executive committee] or krayispolkoms [kray soviet executive committee], by their order, are extended the right to establish on the recommendation of power systems coefficients up to 1.15 for increasing rate schedules of electric power and thermal energy as contained in Price List No. 09-01 (1990). If a coefficient of 1.15 should be insufficient or disputes arise at the local level, decisions are to be made by USSR Goskomtsen and USSR Minenergo jointly with local administrative agencies. The average level of the rate schedule, taking the coefficients into account, must cover the funds necessary for operation and development of the power systems. The procedure for calculating these coefficients and the procedure for applying them have been sent to the power associations.

The ministry feels that the reflection of wage costs in the rate schedules must be based on the standard number of personnel and an agreed rise of wages.

The regulated rate schedules are supposed to cover accumulation of funds necessary for development of the power system's production, science and technology, and social facilities as well as the meeting of environmental requirements.

For the first time in the drawing up of rate schedules, provision is made for the participants to develop and build their own power facilities in that the rate for delivery of power to power systems with a shortage of it is calculated from the production cost on the marginal low-economy equipment plus profitability at 20 percent. The larger the surplus of power generated by the power system, the lower the rates will be for its own consumers. The further the consumer is from the generating sources, the more expensive the electric power will be. In view of the fact that this proposal is an innovation, the main thing now is not to discredit the new economic mechanism. Experience in shaping the plan for 1991 shows that raising the rate for power transfers provides a strong incentive for increasing the efficiency of utilization of capacity in power systems that have a shortage of electric power. For example, Kuzbassenergo and Barnaulenergo withdrew their original orders for transfer of capacity,

and Mosenergo not only withdrew the order for 600 MW, it went so far as to offer delivery of 100 MW in hours of peak loads.

The basic distinguishing characteristic of the mechanism for regulating rate schedules is the principle it contains for broadening the rights and accountability of local soviets of people's deputies. This is the reason for creating regional power commissions, which even now, and all the more in the future, must solve the problems of developing the electric power industry within regions. The task of the management of power systems is to strengthen the joint effort with soviets of people's deputies and to speed up the creation of regional commissions and organization of their regular operation.

USSR Minenergo hopes that state regulation of rate schedules will make it possible to eliminate many shortcomings which have accumulated in the rigid policy of pricing that was in effect in the electric power industry. To be specific, this applies to the rates of electric power delivered to the rural population, which are barely more than half the production cost.

Given the sovereignty of the union republics and the economic independence of regions, it is becoming especially urgent to delineate functions among USSR Minenergo, the power systems, and the soviets of people's deputies of the republics (krays and oblasts).

The ministry's relations with republics and oblispolkoms and krayispolkoms must be structured on a trilateral agreement which must specify which development problems of the USSR YeES are to be solved by USSR Minenergo, while the region's electric power industry would be developed by the power system and the regional administrative agency, with the help of USSR Minenergo.

Development of the USSR YeES should be financed with the funds from the union budget and sources centralized in USSR Minenergo, and that of energy facilities at the regional level from the funds of the energy association, the local budget, and funds supplied by electric power consumers on the basis of shares. When these sources are insufficient for development, the power associations must obtain additional funds by taking credit.

Economic relations within the sector are to be put on a contractual basis: the ministry with the PEO [production and economic association], and the PEO with the enterprises making it up. All forms of cost accounting (khozraschet), including leasing, transformation into joint stock companies, cooperatives, and small enterprises, must be used. The first joint stock company that has emerged in the sector is Spetsgidroenergomontazh.

Beginning in 1991, a number of measures are to be carried out in the electric power industry to improve financial and credit relations. Profit is the principal financial indicator in a market economy. The profit of enterprises is to be taxed. In view of the specific features

of the generation of electric power, in order to offset the desire to realize maximum profit, even by uneconomical expenditure of fuel, USSR Minenergo has proposed expanding the system of tax benefits encouraging application of energy-saving technologies, electric power economy by the consumer and fuel economy in the power association, retooling and reconstruction of power plants and power and heat networks, faster achievement of rated capacity in new generating facilities, and expanded use of the ash and slag waste from power plants.

Centralized funds need to be formed within USSR Minenergo to finance sectorwide scientific research programs in the field of power engineering, including development of new energy-saving and environmentally clean equipment, and also for development of the construction industry in the production of building fabrications and materials. If there are no centralized funds for development of science and for construction of facilities in the construction products industry, the sector will no longer have prospects for development of its production and scientific-technical development; it will be forced to terminate performance of the most important scientific-technical programs to develop new types of power equipment being carried out by enterprises and organizations of the machinebuilding complex, with which contracts have been concluded for 1991 in the amount of more than R400 million, and construction would also have to be mothballed on 63 projects in the construction products industry.

As the transition is made to the market and prices accordingly rise on fuel and materials, as the amount of centralized funds for capital construction decreases, and as changes are made in the procedure for financing construction, the performance of enterprises, associations, and organizations in the electric power industry and power construction, the construction products industry, and machinebuilding can be successful if a unified sectorwide financial system is created. Elektrobank, which was registered on 5 December 1990 and is a commercial joint stock bank for development of the electric power industry, is to become the basis of that system.

The main task in the activity of Elektrobank is not to derive maximum profit from conducting credit operations, but ensuring stability of the financial condition of enterprises and organizations in the context of rigid financial constraints in the stage of the transition to the market. To build up financial resources and provide enterprises and organizations comprehensive credit and settlement services. Elektrobank will place its branches in areas with an advanced energy infrastructure, thereby affording greater opportunities for moving money resources around and creating conditions for financial reliability and stability.

Analysis shows that the introduction of regulated rate schedules for electric power and thermal energy guarantees the power association full economic dependence on

## ENERGY

the principles of self-financing. When income drops because of a change in economic conditions envisaged when the rate schedules were adopted, they must be offset by taking credits and later paying them back by including the funds necessary for that purpose in the rate schedule for the next year. Elektrobank is necessary in this connection as a helping hand in the closed cycle of the "rate schedule—credit—rate schedule."

So that USSR Minenergo as a whole would not depend on centrally allocated resources to finance capital construction of projects to meet the needs of the state, we propose that when the rate schedules are set, the production costs include funds in the amount of 5 percent of the value of fixed industrial productive capital.

In conclusion, I would like to emphasize my position as minister and as a professional power engineer, a position that is fully supported by the collegium of USSR Minenergo, concerning a number of fundamental problems determining the reliability of power supply to the economy and the population.

1. The prestige which the electric power industry has lost must be restored. Under present conditions, the sector's prestige must be based on a strong system of social protection of power industry personnel. We need to raise wages and later maintain them at the level of the top three sectors of the economy.

2. The integrity of the USSR Unified Electric Power System and its centralized management, based on union-wide ownership in accordance with the Law on Ownership in the USSR, must be retained.

3. The USSR Unified Electric Power System cannot be viewed solely as the sum total of power plants and networks. It is the basis of a production-economic complex performing the full cycle of operations from design and construction to operation and power supply of consumers. Only in that kind of unified complex can the USSR YeES function effectively and develop.

4. The future of the USSR Ministry of Power and Electrification depends entirely on the new economic mechanism for management of the country's electric power industry, which must be based on regulated rate schedules for electric power and thermal energy that recover all costs of the development of production, scientific-technical development, and social development; full economic independence of enterprises and organizations; the principles of self-financing of the sector "electric power industry" as a whole, including its expanded reproduction; agreed division of rights and responsibility for reliable power supply among regions, republics, and USSR Minenergo, and also the active participation of every state administrative agency in development of the electric power industry.

5. Development of the electric power industry requires accelerated drafting and approval of a realistic energy program for the country, one that is balanced with respect to financial and material and technical resources and provides fuel and approval of sites for construction of new power plants, including nuclear power plants. We need the USSR Law on the Electric Power Industry, which defines the legal basis for the operation and development of the sector along the most important lines of its vital activity.

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**Draft USSR Law on Labor Safety**

914F0245A Moscow *RABOCHAYA TRIBUNA*  
in Russian 18 Jun 91 pp 1, 3

["USSR draft law: 'On Labor Safety'"]

[Text] The present law is directed toward providing for realization of USSR citizens' rights to labor safety.

**Section I. General Provisions**

**Article 1. The right of USSR citizens to labor safety**

USSR citizens have the right to labor safety, that is, to the protection of their life and health during the process of labor activity.

**Article 2. The concept of labor safety**

Labor safety is a system of socioeconomic, organizational, technical, hygienic, and therapeutic-preventive measures and means, operating on the basis of legislative and other normative acts, that provides for the safety and protection of a person's health and ability to work during the process of labor.

**Article 3. Legislation on labor safety**

Legislation on labor safety consists of the present law and other legislative acts of the USSR and republics.

Guarantees established by legislative acts of the republics for ensuring the rights of workers to labor safety must be no lower than the analogous guarantees established by USSR legislation.

**Article 4. The sphere of effect of legislation on labor safety**

The effect of legislation on labor safety extends to all workers involved in labor relations with enterprises, institutions, and organizations (henceforth called "enterprises") with various forms of ownership and management, including with individual employers; members of cooperatives, students in higher educational institutions, vocational and technical schools, secondary specialized educational institutions, and general educational schools, and military servicemen gaining production practice who have been enlisted for work at enterprises; individuals serving court sentences, during the period while they are working at enterprises of corrective labor institutions or enterprises, determined by organs in charge of carrying out the sentences, and also participants in other kinds of labor activity organized in the interests of society and the state.

**Article 5. Basic principles of state policy in the area of labor safety**

The state policy in the area of labor safety envisions unity of actions of the USSR, the republics, and soviets of people's deputies at all levels for improving working

conditions and labor safety and preventing production injuries and occupational diseases, and it is based on the following principles:

- the priority of the life and health of the worker over the results of the enterprise's production activity;
- coordination of activity in the area of labor safety with other areas of economic and social policy and with activity in the area of protection of the environment;
- the establishment of unified requirements in the area of labor safety for all enterprises, regardless of their forms of ownership and management;
- provision of independent and effective supervision and monitoring for daily fulfillment of the requirements of labor safety at the enterprises;
- extensive use of the achievements of science, technology, and advanced foreign and domestic practice in labor safety;
- encouragement of the development and introduction of safe equipment and technology and means of protection of the workers;
- state participation in the financing of labor safety;
- the implementation of a tax policy that contributes to the creation of healthful and safe working conditions at the enterprises;
- provision of special clothing and footwear, means of individual protection, and therapeutic and preventive nutrition for the workers free of charge;
- the obligation to investigate and account for each production accident and each occupational disease on the basis of this investigation and to inform the population of the levels of production injury and occupational disease;
- social protection of the interests of the workers suffering from production accidents or occupational diseases;
- training of specialists in labor safety in higher and secondary specialized educational institutions;
- all-around support for the activity of trade unions and other social organizations, enterprises, and individuals directed toward providing labor safety;
- international cooperation in solving problems of labor safety.

**Article 6. State control of labor safety**

State control of labor safety is provided by the USSR Cabinet of Ministers (USSR Ministry of Labor and Social Problems), the governments of the republics, the local soviets of people's deputies, and also state organs especially authorized for this, in keeping with legislation of the USSR and the republics.

**Article 7. Participation of social organizations in the development and adoption of decisions on labor safety problems**

Enterprises, specialists, and citizens may join into social organizations to solve problems of labor safety, which operate in keeping with legislation of the USSR and republics concerning social organizations.

Organs for state and economic management, supervisory organs, and also enterprises render all kinds of assistance and support to these organizations and take the proposals and recommendations that have developed into account when working up and adopting decisions regarding questions of labor safety.

**Article 8. Labor safety in the fulfillment of international contracts or agreements for the performance of work abroad with the participation of USSR enterprises or citizens**

When USSR enterprises and citizens perform work abroad on the basis of international contracts or agreements the requirements for labor safety envisioned in them apply unless otherwise stipulated.

**Section II. Provision of Labor Safety**

**Article 9. Development and observance of requirements for labor safety**

The state, through organs authorized by it, establishes the levels of the requirements necessary for providing for labor safety in production through the development and adoption of scientifically substantiated standards, rules, and norms, and it also develops and finances state target programs for preventing production injury and occupational diseases and monitors their implementation.

The administration of the enterprise, the owner, or the administrative organ authorized by him (henceforth called "administration") provides for meeting the requirements of the standards, rules, and norms for labor safety at the enterprise and also the commitments stipulated by the collective agreement.

Enterprise workers must observe the requirements of the rules and norms for labor safety established by the corresponding legislative and normative acts and collective agreements.

**Article 10. Meeting labor safety requirements when designing, building, and operating enterprises and facilities**

The designing, construction, and reconstruction of production buildings and structures, the development and output of means of production, and the introduction of technologies, including those invented abroad, that do not meet the requirements of the standards, rules, and norms for labor safety are not allowed.

No new or reconstructed enterprise, facility, or means of production may be accepted and put into operation without a safety certificate issued in keeping with the established procedure.

The work of enterprises or the operation of means of production that do not meet the requirements of labor safety and create a threat to the health and life of the workers are subject to being halted by the authorized organs according to the procedure established by legislation of the USSR and republics until such time as they are brought into line with the requirements of labor safety.

**Article 11. Training of labor safety specialists**

The state provides for the training in higher and secondary specialized educational institutions of specialists for work in the labor safety services of enterprises.

Higher and secondary specialized educational institutions must organize compulsory study for students in the "Labor Safety" course, taking into account the peculiarities of the productions of various branches of the national economy.

**Article 12. Financing labor safety**

Financing for labor safety is provided both by the state and at the expense of the enterprise.

Budget allocations for labor safety (funds from the Union, republic, and local budgets) placed on a separate line in the corresponding budgets are used for maintaining labor safety administrative organs, financing scientific research work, and implementing state target programs for labor safety.

Each enterprise annually allots the funds necessary for labor safety in the amount determined by the collective agreement. Enterprise workers do not bear any additional expenses for these purposes.

Enterprises have the right to create funds for labor safety from profit (revenues) from their economic, commercial, foreign economic, or other activity, and also other sources. Profit placed in the labor safety fund is not subject to taxation under the condition that it is used exclusively for purposes of labor safety.

Funds for labor safety may be created at the Union, republic, and local levels. The procedure for their formation and expenditure is determined, respectively, by the USSR Cabinet of Ministers and the republic governments with the participation of the corresponding trade union associations.

**Article 13. Provision of healthful and safe working conditions at enterprises**

Working conditions at the enterprise and at each work station must meet the requirements of the labor safety standards, rules, and norms.

Providing for healthful and safe working conditions at the enterprise and organizing monitoring of dangerous and harmful production factors as well as promptly informing the labor collectives of the results of the monitoring are the responsibility of the administration.



Mutual commitments of the administration and the workers for providing healthful and safe working conditions at the enterprise are envisioned by the collective agreement.

In productions with harmful and dangerous working conditions and also in jobs performed under special temperature conditions or involving pollutants, the workers are given free of charge special clothing, special footwear, and other means of individual protection as well as washing and disinfectant materials in keeping with the established norms.

The administration and workers of the enterprise work together to provide for labor safety.

#### **Article 14. Services for labor safety at enterprises**

At enterprises with 50 or more workers, labor safety services are created (engineering positions are introduced) from among the individuals with the appropriate training. At enterprises with fewer workers, at which labor safety services are not created, these functions are performed by their leaders.

In terms of its status, the labor safety service is on the same level as the main services of the enterprise and answers to its leader.

Specialists of the labor safety service have the right to monitor the observance of labor safety rules and norms by all workers, to issue to the leaders of the structural subdivisions mandatory instructions for eliminating violations that have been discovered, and also to submit petitions to enterprise leaders to bring charges against individuals who violate labor safety legislation.

Specialists of labor safety services may not be enlisted to perform work not included in their job descriptions.

Labor safety services are eliminated only if the activity of the enterprise is discontinued.

#### **Article 15. Providing economic incentives for producing means of labor safety**

There are tax breaks for some of the profit of enterprises of scientific research and planning and design organizations obtained for the creation of new and the output and realization of existing designs of means of collective and individual protection of workers, instruments for monitoring the production environment, and dosimetry equipment.

#### **Article 16. Social insurance for enterprise workers against accidents and occupational diseases**

Enterprise workers are eligible for mandatory social insurance against accidents and occupational diseases according to the procedure and under the conditions determined by legislation of the USSR and the republics.

### **Section III. Guarantees in Realization of Workers' Rights to Labor Safety**

#### **Article 17. Guarantees of the right to labor safety upon hiring**

The conditions of the labor agreement must meet the requirements of legislative and other normative acts for labor safety.

The hiring of citizens for work that is counterindicated for them because of their health is prohibited.

When a worker is hired for a job where the potential for an occupational disease is known to be great, the enterprise administration must warn him of the most probable time period for the appearance of this disease and conclude a labor agreement with him, which stays in effect until that time period has expired, and then he must be given different work for the same pay.

#### **Article 18. Mandatory medical examinations**

The enterprise must organize a preliminary medical examination, when the labor agreement is concluded, and periodic ones, throughout the time it is in effect, for workers of a number of occupations and productions in keeping with the procedure established by the public health organs. Workers do not have the right to refuse the medical examinations.

If workers refuse to take the medical examinations or fail to follow the recommendations made by the medical commissions in keeping with the results of the examinations, the administration has the right to take disciplinary action against these workers or refuse to allow them to work.

During the time the medical examinations are being conducted the worker retains his job (position) and his average earnings.

#### **Article 19. Guarantee of the right to labor safety during the process of labor activity**

The administration must introduce modern means of labor safety and provide sanitary and hygienic working conditions that will prevent production injuries and occupational diseases.

In the event that the administration violates labor safety legislation and this is confirmed by supervisory and monitoring organs, the labor agreement may be dissolved at the instigation of the worker with payment of severance pay.

If the worker discovers symptoms of an occupational disease, the administration, on the basis of a medical conclusion, must transfer him to a different job in keeping with the established procedure.

#### **Article 20. Worker training and instruction in labor safety**

For all new workers and also those being transferred to different jobs, the administration must conduct labor

safety instruction and organize training in safe work methods and first aid for accident victims.

For workers starting to work in productions with increased danger or work where professional selection is required, preliminary training in labor safety is conducted with examinations and subsequent periodic recertification.

All enterprise workers, including leaders, must undergo training, instruction, verification of knowledge, and recertification according to the procedure and within the time periods established for their occupations and kinds of work by state supervisory organs.

It is prohibited to allow individuals to go to work if they have not undergone training, instruction, and verification of knowledge of labor safety in keeping with the established policy.

**Article 21. Workers' right to information about conditions and labor safety**

Enterprise workers have the right to demand and the administration must give them information on the conditions and labor safety in the work positions as well as the means of individual protection and benefits and compensations associated with this.

**Article 22. Peculiarities of regulation of relations in the area of labor safety for individual categories of workers**

The peculiarities of the regulation of relations in the area of labor safety for individual categories of workers (women, youth, individuals with limited ability) and also workers employed in heavy work and jobs with harmful working conditions, are established by legislation of the USSR and the republics.

The peculiarities of the regulation of relations in the area of labor safety for foreign citizens working at enterprises of the USSR and for USSR citizens working abroad are established by agreements among the involved parties.

**Section IV. State and Public Supervision and Monitoring of the Observance of Legislative and Other Normative Acts for Labor Safety**

**Article 23. State supervision and monitoring of the observance of legislative and other normative acts for labor safety**

State supervision and monitoring of the observance everywhere of legislative and other normative acts for labor safety are provided by a state organ (inspection) especially authorized for this, whose workers bear responsibility for incorrect or poor-quality performance of their duties in keeping with the established procedure.

**Article 24. Public monitoring of the observance of legislative and other normative acts for labor safety at the enterprise**

Public monitoring of the observance of legislative and other normative acts for labor safety is carried out by

labor collectives and trade union organizations through authorized labor safety agents elected by them.

Authorized labor safety agents who have gone through special training have the right to conduct labor safety inspections at the work stations without interference and make suggestions about eliminating violations that were discovered and bringing charges against the individuals to blame for them. In order to perform his duties, the authorized labor safety agent is given no less than two hours of working time each week for which he is paid his average earnings.

**Article 25. The rights of trade unions in supervising and monitoring the observance of legislative and other normative acts for labor safety**

Trade unions participate in supervising and monitoring the administration's observance of legislative and other normative acts for labor safety and, for these purposes, create inspection teams which operate according to provisions approved by the Union trade union center and have the same rights as state supervisory and monitoring organs.

Trade unions participate, in keeping with the established procedure, in the development and coordination of normative acts for labor safety, and they have the right to protest, through the corresponding state organs, the introduction of acts that have not been coordinated with them.

Trade union representatives participate in the work of state commissions for testing means of production and accepting them for operation and in the investigation of production accidents by conducting inspections of labor safety conditions and taking measures to improve them, as envisioned by the collective agreements at the enterprises, and from the results of these they make mandatory suggestions for the elimination of the violations that have been discovered.

When officials deliberately violate the requirements of labor safety or cover up production accidents, the trade unions have the right to appeal to state, economic, and law enforcement organs with demands to bring charges against the guilty parties.

In cases where there is a direct threat to the health or life of the workers, the trade unions have the right to halt the work and the effect of the administration's decisions that violate labor safety legislation. Protests from the administration regarding such actions on the part of trade unions are considered in the courts.

Trade unions, on their own initiative or at the request of the workers, may file suit in court to defend their rights to reimbursement for damage caused by injury or other harm to the health related to the performance of job duties and in other cases of encroachment on the workers' rights to labor safety.

**Section V. Responsibility for Violation of Legislative and Other Normative Acts for Labor Safety**

**Article 26. Responsibility of enterprises for failure to meet labor safety requirements**

For failure to meet labor safety requirements enterprises transfer funds for purposes of social insurance against production accidents and occupational diseases at higher rates, which are periodically revised, depending on the condition of labor safety, and the danger, harmfulness, and difficulty of the work performed.

The basis for the revision of the rates is the conclusion of the state expert commission on working conditions.

**Article 27. The economic responsibility of enterprises for the output and sale of products for production purposes that do not meet labor safety requirements**

Enterprises that produce and deliver products that do not meet labor safety requirements reimburse the consumers for the harm caused to them according to the procedure and under the conditions determined by legislation of the USSR and the republics.

The sale and advertising of means of production and means of collective and individual protection, including those acquired abroad, that do not meet the requirements of the standards, rules, and norms for labor safety are illegal. Profit gained by the enterprise as a result of this activity is subject to transfer into the budget (Union, republic, or local).

**Article 28. Responsibility of officials for violation of legislative and other normative acts for labor safety**

In keeping with the policy established by the USSR and republics, administrative, disciplinary, material, or criminal charges are brought against officials who are guilty of violating legislative and other normative acts for labor safety or who interfere with the activity of representatives of state supervisory and monitoring organs.

**Article 29. Responsibility of workers for violation of the requirements of normative acts for labor safety**

For violation of the requirements of normative acts for labor safety, workers of the enterprises are faced with disciplinary charges in keeping with the established procedure.

If the actions of the workers indicated in Part 1 of the present article have caused grave consequences they may have other kinds of charges brought against them in keeping with legislation of the USSR and the republics.

**Article 30. Material responsibility of the enterprises for harm to workers who have been injured in production**

A worker who has been fully or partially disabled as a result of a production accident or an occupational disease is paid a one-time stipend by the enterprise and reimbursement is made for damage caused to the health

according to the procedure and in the amounts established by legislation of the USSR and the republics.

The amount of the one-time stipend is determined by the collective agreement and must be no less than a year's earnings for the victim.

The enterprise compensates the victim for expenditures on treatment, prostheses, and other kinds of medical and social aid if they are deemed necessary. If necessary, the enterprise provides for occupational rehabilitation, retraining, or job placement for the victim in keeping with the medical conclusion, or else it makes reimbursement for expenditures for these purposes.

**Article 31. Material responsibility of the enterprise in the event of the death of the worker caused by a production accident**

If a worker dies because of a production accident, the enterprise makes reimbursement for material damages to the individuals who have the right to this according to the procedure and in the amounts established by legislation of the USSR and the republics, and it also pays them a one-time stipend whose amount is established by legislation of the republics and the collective agreement, but it should be no less than 10 years' wages for the deceased.

**Pension Fund Board Chairman Gives Positive Outlook**

914F0249A Moscow IZVESTIYA in Russian 19 Jun 91  
Union Edition p 7

[Interview with Oleg Tarasov, chairman of the board of the USSR Pension Fund, by IZVESTIYA correspondent T. Khudyakova: "The USSR Pension Fund Has Surmounted the Crisis"]

[Text] The fund's financial status was very serious two months ago. The war of pension laws, provoked by opposition between the republics and the center, made it appear that obedience to the law was optional. And the disorder in the economy and the slump in production provided a kind of excuse for the persons in payment arrears.

The payments received were insufficient to pay for the pensions and allowances, which forced the fund to obtain credit from the state and to appeal to the debtors in April to carry out their obligations to children and the elderly.

The financial crisis was surmounted by the beginning of June. How did this happen?

Our correspondent discusses this with Oleg Tarasov, chairman of the board of the USSR Pension Fund.

[Khudyakova] Oleg Nikolayevich, what is your assessment of the Pension Fund's condition today?

[Tarasov] The problems of the organizing period are behind us. The necessary structures have been established in all the republics which are members of the fund.

Thanks to their efforts, as well as the active support of deputies and executive authorities locally, we have managed to substantially increase the flow of obligatory payments coming in.

In addition, wages have increased at enterprises in the metallurgical and coal industry and for employees in the nonproduction field. The amounts of the deductions have been increased accordingly.

As of today, the overwhelming majority of republic departments of the Pension Fund are paying the pensions and allowances in their territories without resorting to bank credits.

[Khudyakova] Judging by everything, the need for public appeals to debtors has passed. What are your intentions with regard to the persons that persist in being in arrears?

[Tarasov] The law's requirements are equally binding for everyone. For this reason, influence must be brought to bear by legal means on those who fail to pay—the debts must be recovered in the established procedure. With respect to cooperatives, this right is consolidated by the Law "On cooperatives in the USSR." The USSR Supreme Soviet recently considered this question as applied to other persons who fail to pay, and ruled in favor of the fund, granting it the right to recover the payments due in an incontestable procedure.

We intend to act in this spirit from this time forward.

[Khudyakova] In conformity with the Law "On the provision for citizens' pensions in the USSR," enterprises are to pay for benefit pensions [lgotnyye pensii] from their own funds beginning this year. Has this provision come into force?

[Tarasov] Yes, but this refers to partial reimbursement for the expenditures to pay for benefit pensions. This year, enterprises will pay half of the estimated sum of the payment up to 1 October 1991. The procedure for reimbursing the fund for the expenditures to pay for benefit pensions was specified by the USSR Goskomtrud [State Committee for Labor and Social Problems] and Pension Fund decision of 20 May 1991.

This measure also guarantees that benefit pensions will be paid in the necessary amounts and removes part of the financial pressure in the fund.

[Khudyakova] Oleg Nikolayevich, one of the reasons that the Pension fund was "on the rocks" turned out to be the need to make use of part of the bank credit for a different purpose. You were compelled to pay compensation to pensioners from these funds as the result of the retail price reform. Has the state made up for the unforeseen expenses?

[Tarasov] As of today this question has not been resolved, although the USSR Ministry of Finance was instructed to find sources of funds to cover the Pension Fund's unplanned expenses.

But this is not the only problem—in preparing for the reform, the Cabinet of Ministers should have specified a financial mechanism to implement decisions that are so important in the social field.

If the money is not returned to the fund in the near future, we will begin balancing on the verge of insolvency again. Of course, the problem here is not the Ministry of Finance's unwillingness to carry out the government's instructions—they have their own difficulties. A decision was adopted to establish a unified union-republic financial fund to provide social support for the people with funds received as the result of introducing the new retail prices. But its formation is being handled extremely unsatisfactorily, inasmuch as agreement has not been reached with the republics on all the important points. Withholding payment of pensions and allowances in higher amounts is unacceptable.

[Khudyakova] Intensive work is now under way on a draft agreement between the USSR and the republics on mutual obligations in implementing social programs and providing social guarantees for citizens. Will it also make it easier for you if it is signed?

[Tarasov] The agreement covers a wide range of questions, including provision for the rights of pensioners, families with children, and disabled persons. More specifically, it deals with the obligatory implementation of the norms of the pension law, which are considered to be minimal. The republics may increase the norms in any amount, but through their own budgets.

The document is particularly important because it is called upon to provide social guarantees for all citizens, regardless of their nationality or place of residence and work. There is no question that this will make it easier to carry out our functions, especially as no less than 90 percent of all assets in the Pension Fund are at the republics' disposal.

[Khudyakova] What purposes will the remaining funds be used for?

[Tarasov] There is the reserve fund, intended to guarantee the union pension norms and allowances in all republics which do not have the necessary funds for payments because of objective circumstances. In addition, the money from the reserve will be used in different emergency situations (natural calamities, disasters, and so forth) for social protection of the public.

Money also will be needed for complete computerization of the system. We need to conduct our affairs on an up-to-date organizational level from the start and shift to electronic record-keeping and the development of an information computer system.

Finally, it is time to get rid of the "kettle" method of collecting and distributing funds and shift to personified accounting. This applies chiefly to that 1 percent of personal insurance payments which are still interpreted so negatively by the public.

[Khudyakova] As far as I recall, you were a supporter at one time of the "kettle" collection of funds, coming in the form of personal payments from citizens. Has your position changed?

[Tarasov] We were not psychologically prepared to take part in forming the Pension Fund with personal funds, although this is what is done by citizens in practically all countries. This is why the government instructed that an individual account of obligatory insurance payments be organized in order to increase the amounts of pensions with them.

In other words, the higher the earnings, the larger the sum put down in the amount of one percent, and the larger the pension. In my view, this will serve as an additional incentive for work, relieve social tension, and change the people's attitude toward this "ill-fated" percent for the better.

[Khudyakova] Oleg Nikolayevich, I have heard that the Pension Fund has become a member of the International Social Security Association. What does this "threaten" us with?

[Tarasov] Yes, this decision was made by the ISSA [International Social Security Association] Bureau and should be approved in the General Assembly of this organization. This is very important for us for a number of reasons. We will receive the opportunity to join in world experience and have access to the most advanced methods of organizing social work, including pension services. Top experts will be evaluating our programs. And financial assistance will be useful as well. Equipment, programs, and knowledge of the normative base of other countries will be required for computerization of our service. Through the ISSA, we will be able to organize employee training: foreign specialists will be coming here and our specialists will be receiving on-the-job training in other countries.

In other words, membership in the association will help us to become part of the world economy, to keep in line with generally accepted norms, and to conduct our affairs in a civilized manner.

#### **Report on Progress of Ministry-Trade Unions Labor Accord**

914F0249B Moscow TRUD in Russian 18 Jun 91 p 1

[Unattributed report on progress in implementing the Agreement Between the USSR Cabinet of Ministers and the General Confederation of Trade Unions on Labor and Social and Economic Matters in 1991: "Dictated by the People's Interests"]

[Text] Today we report again on how the Agreement Between the USSR Cabinet of Ministers and the Council of the General Confederation of Trade Unions on Labor and Social and Economic Matters is being carried out.

Meetings of the bilateral commission have been discussing specific actions related to the agreement's implementation. Though mutual understanding has not been reached on all the problems.

#### **There Is Progress**

There is no doubt that the commission's actions speeded up adoption by the country's parliament of the 11 June decree on the income tax. It is not assessed now for those payments with which enterprises, institutions, and organizations compensate (within the limits of 50 rubles per month) for the higher cost of food in dining rooms and snack bars. And the income tax is not extended to the sums with which enterprises cover the expenditures—in full or in part—to obtain travel authorizations or to get to one's place of work by city and suburban transport.

#### **More Remains to be Achieved...**

Allocation to the Social Insurance Fund of the USSR the full amount of those funds which are being used for the payment of allowances for temporary disability, pregnancy and childbirth, to feed children in health camps, and to compensate for expenses in connection with the higher prices for travel authorizations to the trade unions' sanatorium and health resort institutions (Paragraph 6).

Removal of a number of restrictions on payment from enterprises' consumption funds for workers' urgent social and health needs (Paragraph 8); this refers to compensation for the cost of travel authorizations for treatment and rest, for the more expensive food in children's camps, the granting of loans to young families and allowances to veterans, and aid to large families.

Exemption of territories used for sanatoriums, rest homes and centers, and children's health institutions from the fee for land (Paragraph 11).

#### **Unemployment Impact of Impending Market Conditions Discussed**

914F0250A Moscow ROSSIYSKAYA GAZETA  
in Russian 19 Jun 91 p 2

[Article by V. Kovalenko: "The Secret Fruits of Socialism." (Continuation of article published in 18 June 91 issue No 126)]

[Text]

#### **2. Homo Excessus [The Excess Man]**

It has not been the custom in recent times to speak of unemployment. The belief is that we should not frighten the people. Let them wait for the market, and they will see everything for themselves. Then we can think about what to do.

I have always been amused by this "ostrich" [head-in-the-sand] policy, which is inevitably presented as the concern of a smarter leadership for a more stupid people.

In general, however, the people do not need such patronage and, if we speak of the present situation, they have long ago "tried on" the wages and labor intensity of the cooperator-leaseholders. They have also made a mental note of the fact that the numbers of their collectives are reduced by one-third, if not half, in the very first months. And after that it is not at all difficult to imagine that as soon as the market "breaks through," similar processes will occur at all the enterprises, and an average of one out of three persons will become unemployed. All these calculations and computations have been discussed many times both at home and in the smoking-rooms, yet quite unexpectedly they have not evoked much concern.

In principle, the mass output of unemployed is not as terrible as it is made out to be. Something similar happened in the USA in the post-war years, when defense contracts were reduced 13-fold and 12 million people were left out of work. Plus also an equal number were discharged from the army. And it was all right. The market in the United States during that time was half-empty. Therefore, it was possible to disperse these millions of people rather easily and painlessly.

Objectively, the capacities of our market are in no way less than those of the post-war American market. Yet how will the subjective factor come into play? How will the people react to mass lay-offs? It is very difficult to give a prognosis here. Nevertheless we will risk doing so, using as our point of departure one of the possible variants of social protection for the transitional period: the payment of a benefit to the unemployed worker in the amount of half his labor wage for a period of six months.

Why only half the wage, and why for half a year? These are the first questions which the socially protected person will surely ask. And try as we may, we cannot convince him that now he is getting a pile of money for nothing, money for which before he had to "plow" for half a month. All arguments of this sort will be shattered by one totally illogical counter question: But what is this to me? Is it my fault that at one time they practically dragged me into this work, taught me a profession, I worked honestly, and now they tell me they don't need me?

We are not Americans, each of whom has become accustomed to relying only on himself for everything. We are people of the state. Traditions of a person's communal dependence, traditions of dependence on the state, have from the very beginning been elevated to an absolute in our society. Through the mechanism of minimal wage (just so long as it is enough for the physical reproduction of the work force), the principle of "whoever does not work does not eat" has become ingrained in our economic system in the literal sense of this notion. A person deprived of work cannot feed himself, not to mention his family.

But then no one in our country is deprived of work. There are, of course, exceptions—in the rayons with excess labor force, but that is why they exist, to confirm the rule. And the rule is expressed in the "help wanted" signs which hang at every entryway. Hidden behind them is the main achievement of Soviet man: it may not be much, but I will always get my money.

Here, I believe, it is appropriate to draw an analogy with the unemployment benefit in the developed countries, which in the 50's reached such an amount that would allow an unemployed person to support not only himself, but also his family. It is characteristic that in this same period (late 50's-early 60's) our country achieved full employment of all the able-bodied population. This fact somehow went unnoticed, and was not interpreted during its time. Probably because it was viewed as the fulfillment of a promise—to feed the people, only it was 50 years late. Yet the main point was overlooked: **employing different mechanisms, yet practically at the same time, both "there" and "here" the same important social boundary of the 20th century was achieved—society began to guarantee each of its members not only today's piece of bread, but also tomorrow's.**

From this moment, the mechanism of fear and compulsion as the mainspring for motivation for labor ceases to operate. The denationalization of man begins. Assurance of tomorrow must have helped to weaken the bonds of feudal dependence. The possibility of fighting for one's interests appears. The direct path, it is true, is obscured, since the state still strictly controls the labor wage level. And then the most effective instrument under conditions of supermonopolism is assimilated—the instrument of deficit.

An artificially created manpower shortage forced the state to pump surplus labor resources into production, various offices and institutes. This, naturally, led to stagnation and the aggressive rejection of technical progress. However, it allowed the opposing side to solve its main problem: To reduce the labor intensity to the level of the labor wage. And ultimately it succeeded in this. "They pretend to pay us, and we pretend to work." Behind this widespread formula is not so much cynicism as the recognized and very precise perception of the present wage as an unemployment benefit.

In order to get the full picture, we need only add that all the other elements of the social protection system were also formulated under the influence of strictly soviet specific conditions. Their essence may be reduced to one phrase: our man's entire life is tied to the plant.

Work is that umbilical cord which ties him with society. Through it pass practically all social ties—from obtaining housing and hospital benefits to participation in electoral campaigns and demonstrations. Not only are economic and political interests realized through the labor collective, but also purely human interests. Therefore, having torn people away from the plant, we are in

fact placing them in the category of asocial elements which have been cast out of society.

These are the peculiarities of our socio-economic environment and they formulate, in my opinion, the main contradiction which must be resolved on the way to the market. On one hand, the outlandish structural distortions are quite apparent—the militarization of industry which has exceeded all capacities, the sphere of production of means of production which has blown up into a giant swollen mass, and the abundance of artificially created jobs. These growths suck the last juices out of the economy. They must be cut off, and as soon as possible.

Yet let us take a look at the same problem from another side—from the side of the individual person. We will see that all these enterprises, including the defense enterprises and those which are operating at a loss, exist primarily to provide him—the working man—with social protection. There is no other infrastructure in the country intended for this purpose. And the crisis which the country is today experiencing arises from these positions as a social crisis. Having guaranteed every person the assurance of tomorrow, the old system has provoked the formation of principally new demands in the sphere of individual consumption as well as in the sphere of production relations. However, it was unable to fill these demands with real content. It did not have the strength for that. Continuing to feed the people with the same piece of unbuttered bread for three decades, the state widened the gap between their expectations, which it itself engendered, and its inability to meet them. This contradiction has exploded today in general dissatisfaction with everything and everyone.

States traditionally emerge from a crisis at the expense of their citizens. However, this path is closed to our country. Soviet citizens do not have that "fat" which they might shed for the sake of the state's survival. The 2 April effort to raise prices once again conclusively proved this fact. The miners' strikes and Belorussian demonstrations, which showed not only their massive character, but also their degree of organization, confirmed the truth: it is impossible to lower that which already lies at the bottom level.

I have no doubt that the reaction to mass unemployment will be exactly the same. The manpower shortage is the main class weapon of the Soviet worker in his struggle with the state for his rights. He will not simply give it up just like that. We should not even hope for that. Yet today's state clearly does not have enough strength for a victory in the social conflict with its own people. The people understand this very well, and it is specifically this fact which, in my opinion, explains their Olympian calmness. The only variant of structural reorganization which they will accept is the leading creation of jobs to which they may immediately transfer from the enterprises which are being closed down.

Such a tendency has in essence already been formulated. From the defense industry alone, 70,000 people have

already moved to an alternative sector. It is true, however, that the attitude toward this is as a rule negative. And I believe it is not only a matter of natural competition which is developing today between the state sector and the alternative economy. The deeply ingrained notions of work as an activity inevitably associated with material production are coming into play.

That is how it is in our country—three-fourths of the able-bodied population are employed in the material sphere. But is this good? In the United States, for example, as well as in other developed countries, the ratio is just the opposite. There only 25 percent of the people work in material production, which, I might add, in no way hinders them from fully meeting society's demands—from pantyhose and computers to pork chops and submarines. Such a ratio is the main characteristic of a current informational society, an indicator of its effectiveness and its advantages over the industrial society.

The current market is not only the presence of free buyers and sellers. It is also the colossal branched infrastructure employing tens of millions of people. It is they who allow the American farmer to obtain information on prices, competitor's harvest prospects, and hundreds of other types of vital data on his home computer at any moment. We have only to deprive him of this information, of the services of the numerous firms and small companies created especially for his needs, and there would be not even a trace left of the entire much-praised farmer's productivity. And we too, whether we like it or not, will have to transfer people from today's industrial society to tomorrow's informational society. It is true, "they" have spent 40 years on this. However, we have necessity—the most powerful stimulus—on our side. And also—economic expediency.

Let us figure: How much does a work site in the informational sphere cost? It is enough to place four desks with computers in an ordinary room, and four work books may be placed in the personnel departments. Obviously, we also need reliable communications channels, and many other things must be added to these channels. But even with consideration of this fact, still it turns out to be much cheaper than to create work sites at a metallurgical plant. And the main thing is—we are in dire need of all this.

It will be most difficult, I believe, to overcome the ideological and social-psychological stereotypes. Let us take, for example, the problem of the working class. What kind of a leading force is this if its relative share in society will be continually reduced to 15, or a maximum of 20 percent? I am speaking of this without any irony, because there are real people behind the stereotype who have become accustomed to showing a respectful attitude toward the man with the shovel and a disdainful attitude toward the manager. Yet it is specifically here, to the sphere of management, that the main mass must rush, leaving their mines and machine tools. And they must not only change their profession. They must also

change their social status and begin the formation of the middle class to which our society is unaccustomed.

### Director of Public Fund For Unemployment Protection Interviewed

914F0261A Moscow *RABOCHAYA TRIBUNA*  
in Russian 26 Jun 91 p 1

[Interview with Anatoliy Kapustin, USSR people's deputy and executive director of the All-Union Public Fund for Protection Against Unemployment, by *RABOCHAYA TRIBUNA* correspondent: "While Not Hiding One's Head in the Sand"]

[Text] Anatoliy Kapustin, USSR people's deputy and executive director of the All-Union Public Fund for Protection Against Unemployment, responds to questions by a *RABOCHAYA TRIBUNA* correspondent.

[Correspondent] In your opinion, how severe is unemployment throughout the country?

[Kapustin] There are various estimates and this is by no means an accident. Indeed, it was only recently that the USSR Supreme Soviet adopted the Legislative Principles Governing Unemployment and defined the status of an unemployed worker. Thus we still lack a computational method and no statistical data is available that would make it possible to compose a reasonably accurate estimate. Nevertheless, the specialists are roughly of the same opinion regarding the number of unemployed workers—several million individuals.

[Correspondent] Can the fund furnish true assistance to the millions of unemployed?

[Kapustin] Actually, the fund has very few realistic opportunities for furnishing assistance to all of the unemployed. Thus the fund's personal programs will be oriented towards those people who are in dire need of social protection. In addition, our programs supplement the state programs.

[Correspondent] What are the sources for the formation of the fund's budget?

[Kapustin] We count upon receiving support from Soviet and foreign citizens and the labor collectives of enterprises and organizations. We rely upon the carrying out of monetary and gift lotteries, auctions, concerts and other charitable measures. Various cost accounting organizations will be created in the interest of ensuring self-recoupment and developing the fund's activities directed towards realizing its philanthropic programs.

[Correspondent] What will be the consequences of high unemployment in our country?

[Kapustin] The proportion of unstable labor relationships is increasing. Many unemployed workers are enduring economic hardships. Prolonged unemployment leads to a reduction in social contacts and disruptions in

family relationships and child development. An individual falls down a step or two on the professional and social ladder. All of this leads to mental and physical illnesses.

On the other hand, the consequences resulting from the non-payment of taxes and contributions and also the problem of paying out unemployment benefits are placing a heavy burden upon the social budgets and the system of social protection.

[Correspondent] Is there a need for a USSR union of unemployed workers?

[Kapustin] I believe that the very idea of creating such an organization is not in keeping with the principles underlying the practice of merging into professional unions, the foundation for which is a common nature in the labor activity involved. Indeed, if a union of unemployed workers is created, the chief principle will be completely opposite to this—the alienation of people against labor activity. In short, the contradictory nature of the principles underlying the merging of unemployed workers into a union and also the unacceptability of conferring upon people who are out of work the status of unemployed, as the basis for their social status, in my opinion casts doubt upon the legality of the idea of creating a union of unemployed workers.

[Correspondent] But such associations exist in foreign countries.

[Kapustin] Yes, a union of unemployed workers in the former GDR pursued the following tasks: the carrying out of representative interests, collaboration with other organizations and parties and furnishing assistance to the members of their union and their families.

In Mongolia, a union of unemployed workers considers one of its priority tasks to be the adoption of a permanently active system of unemployment benefit payments, collaboration with MOT [International Labor Organization] and the creation of new jobs.

[Correspondent] In your opinion, how is society relating to the problems of unemployment?

[Kapustin] One frightening aspect is the fact that at the present time many individuals are not devoting serious attention to the impending events. We are constantly encountering the position "this does not apply to me, nor will it help me." Even a number of my colleague-deputies believe that unemployment is a problem that has been exaggerated somewhat.

We are obviously being influenced by the thought that has been drummed into us for decades that there can be no unemployment in our country. Unfortunately, it can happen and with all due respect to the state employment service I must responsibly state that its efforts in combating this evil will be inadequate.



### Republic Receptiveness to Miners' Cares Probed

914F0246A Moscow LITERATURNAYA GAZETA  
in Russian No 24, 19 Jun 91 p 5

[Article by Mikhail Loginov: "The End of the Coal 'Renaissance': From the Latest History of Our Country's Labor Strike Movement."]

[Text] In following the troubles of the recent political strike that encompassed the country's coal basins, we were diverted for a time from the economic crux of the conflict between the miners and the state. But now, since the center has transferred the coal industry to republic reformers, economic demands of the miners are again coming to the forefront. Will the republics be able to respond to the miners "on the substance" of the matter?

#### 1.

First of all, let us ask ourselves a few questions. Why did the coal industry turn out to be the "weakest link" in the chain of socialism? Why did labor strikes actually begin in 1989? And why, if the demands of the strikers were fully met, was there no improvement for them because of all this?

The most recent history of our country's labor strike movement is still very short. And let us not be too severe with Soviet scholars who have not, thus far, given us any basic works on this subject. Let us turn to foreign sources. Obviously, the research on labor strikes in the West cannot be mechanically transferred to our soil, but it can give us food for thought.

Thus, for example, the English writers, S. Kerr and A. Sigal, discovered that certain branches of the industry are characterized by an increased propensity for strikes: "Branches of industry have a high propensity for strikes when the workers comprise a relatively homogeneous group that is isolated from the rest of society and is capable of displaying its cohesion." Miners are a classic example of such a group. Some scholars make the assumption that a propensity for strikes is also predetermined by the nature of the work: heavy physical labor develops a sense of independence in workers. Again, it hits the mark.

Very curious are research findings conducted by the Secretary of State for Employment in England. It turns out that those who go on strike the most are in branches where, first, labor is the most intensive; second, where enterprises are larger; and third, where fewer women are

employed and consequently, there are more men. But the fourth factor was the most amazing. Workers go on strike more often in those branches where wages are the highest. It turns out that strikers are not the ones for whom the going is the worst of all, but those who have something to lose. Mikhail Shchedov, Minister of Coal Industry, said in one of his presentations: "Soviet coal miners today have the highest wages in the country and the shortest work week in the world."

#### 2.

The dialectics of the miners' movement consists of their aspiration "to change in order to preserve," to change the political and economic system so that their privileged and relatively secure positions will be preserved.

I do not know who first introduced and circulated the expression, "to pull the blanket around oneself," but it exactly reflects the essence of the matter.

What do we see, then? The curve of the wage increase of workers in mining practically duplicates the movement of monetary incomes of the population as a whole, but ... with a lag of one year. Miners, in the second half of the 1980s, began losing their advantage over workers in other branches. Average wage levels in the coal industry and those in the country in general began to narrow the gap. In 1985, the average wages of a miner comprised 182.5% of the country average, but in 1988 it was only 169.2%.

In addition, a new category of people earned wages which, by Soviet standards, were simply colossal. Our traditional concepts of what constitutes "good wages" fell apart. The branch is maintained by the treasury; therefore, in order that the miners not demand a wage increase, a longer vacation, or new investments in coal mining, the fulfillment of any demand will become an additional burden on the budget and will lead to a redistribution of a part of the national income to their benefit. But why did this acute condition occur in 1989 and not another time? The miners' action was one of the consequences of the sadly famous "revolutions of incomes" of 1987 and 1988. Ryzhkov's government held the completely incorrect concept that as soon as wages were increased nominally, labor productivity would begin growing immediately. It turned out that this was not the case at all. People did not begin working any better, but you see, citizens' monetary incomes rose unevenly.

The table below shows the rates of growth of some indices (in percentages, compared to the previous year):

	1986	1987	1988	1989	1990
Monetary income of the population	3.6	3.9	9.2	13.1	—
Average monthly wages of workers and employees in the national economy as a whole	2.9	3.7	8.3	9.4	—
Average monthly wages in the coal industry:					
—for all industry and production personnel	1.5	2.2	5.0	8.9	10.2
—for miners	1.6	1.5	4.0	9.7	10.6

It can be seen, against this background, that the miners' 400 to 500 rubles were not such a tasty morsel after all.

Further. Even before perestroika we had hidden inflation in our country. Now this phenomenon has begun to take on the characteristics of national poverty. Store shelves became empty and the quality of merchandise grew worse. The deficit made the miners' rubles, which until recently had been so significant, have less and less value. The miners probably did not even understand this, but could feel that "the blanket is being pulled out from around them." And they pulled it back. In July 1989 the miners asked the government to restore the balance and the former situation of relative well-being (in comparison to other strata of the population) to which they had become accustomed. One of the demands of the Prokopyevsk miners was the following: "Give the Kuzbass back its Category 1 supply." And when the government was not able to do this, the miners yelled: "Out."

### 3.

There is another reason for making one think that, notwithstanding the external political radicalism, in time the miners' movement may also show strong tendencies for self-preservation.

As an inheritance from past times we received an extensive economy with an unnatural and distorted structure, a hypertrophied heavy industry, and an immense military-industrial complex. Among those who serviced, fed with fuel and power, and put this machine into motion were the country's miners. Coal mining expanded so much because it developed according to the laws of a spending economy. Now the miners have no objective interest in an organizational restructuring of the national economy, which is the pivotal point of economic reform, because it does not bode well for the old branches.

When the coal industry was transferred to the jurisdiction of the republics, the USSR Ministry of the Coal Industry had a huge administrative-economic organization with 509 mines, 77 open-pit mines, 162 enriching and briquet factories, a countless number of machine-building and repair plants, automotive garages, institutes, and God knows what else. The branch employed 2.2 million people. This monstrosity existed in order to "give the country so many lumps of coal that ...," as the old miners' story goes. In other words, give the country a great deal of coal.

In accordance with the concept of acceleration, the coal industry continued increasing its production: 1985—726 million tons; 1986—751; 1987—760; and 1988—772. The USSR Basic Directions for Economic and Social Development for 1986-1990 projected an increase in annual production until it reached 800 million tons. This provided the basis for Minister M. Shchadov's remarks about the beginning of the coal "renaissance." In actuality, however, the branch was headed for a crisis at full speed.

### 4.

The time has come to say the sacred word, "subsidy," out loud. Why was coal production subsidized over many years? At a minimum there are two features here.

First, having "torn away" the selling price from actual expenditures, it was easier to support stable prices in a system of directed price-setting. You are freed from having to review all prices annually because the cost price of a ton of coal has increased.

But far more important is another aspect, one that affects the producers—the miners themselves. Here are some data, even though fragmentary, on the average cost price of a ton of coal throughout the branch: 1980—11.57 rubles; 1985—14.78; and 1988—14.97. In 1990 the cost price went above 18 rubles. What do these figures mean? It is a typical example of "an average temperature according to the hospital." The only difference is that the averaged index in the coal industry hides a much greater scattering of data.

For example, the "Bogatyr" open-pit mine in Ekibastuz is unique both in production capacity and in equipment. This is the largest open-pit mine not only in our country, but in the world. They have the highest average monthly labor productivity rate in the branch, but the cost price of mining a ton of coal is just a bit higher than one ruble. And here is a completely different kind of example: the Mine imeni Voroshilov ("Prokopyevskgidrougol")—76.48 rubles. Which one is higher? The "Petrovskiy" mine ("Donetskugol")—132.16. Which one is higher? The Mine imeni Gayev ("Artemugol")—300.9.

In a normal economy, enterprises with such great differences in cost levels could not "peacefully" coexist. The conclusion, therefore is: unpromising, technically backwards, and unviable enterprises were supported with subsidies. This was done not only because, according to existing "rules of the game," the importance of the ministry was determined by the gross volume of production, the number of workers, the number of enterprises, and the size of the departmental budget. This was the consequence of the state's paternalistic policy towards working people, a policy of "confidence in tomorrow."

### 5.

Why then did the miners, who had essentially achieved all three of their demands, not achieve the main thing: a real improvement in their situation?

The main reason lies in the financial crisis which has staggered the country in the last few years and which is the consequence and the result of the crisis of a spending economy. In 1987 the coal industry received state budget assistance amounting to 6.75 billion rubles; in 1988—7.37; in 1989—8.35; and in 1990—8.39. It is expected that total subsidies in 1991 will be 21-23 billion rubles. Simple calculations show that each 1% increase in coal production cost the state very dearly: first, the cost price increased; and second, the volume produced grew. After

1989, the volume of production decreased, yet expenditures continued to climb, but this was now tied to satisfying the demands of the strikers.

The state, however, has not had enough actual resources for a long time, and it is now resorting to its last means, monetary issues, in order to cover budgetary expenditures. Using an expression from an old French parable, it can be said that the state is paying the miners "with the jingling of its own money."

The mechanism is simple. The escalation of strikers' demands leads to an increase in budgetary expenditures and an increase in the deficit which, in turn, causes higher inflation, which—like a boomerang—hits the same miners who now present new demands. And so it goes, *ad infinitum*.

It is becoming entirely clear that the crisis in the coal industry cannot be resolved within the framework of the old system. This branch, in the form in which it exists today, is one that we simply cannot afford.

6.

Of course, the transfer of coal mining enterprises to the jurisdiction of the republics was provoked not so much by economic reasons as by political. But for us it is important to have the leadership of the republics make a pronouncement to the effect that they hope to find a basically new way of resolving this problem. This is understandable. The republics are not interested at all in having the stone removed from the neck of the union government and putting it around their own necks. This is why I was very carefully reading the regulations of the new Russian program for transitioning to a market economy, which I think could influence the future of the coal industry.

First of all one should note the intention of the republic government "to end the fallacious practice of financing the national economy through the budget." Although there is no direct reference to abolishing subsidies, what meaning can be given to the phrases, "to reform the methods of spending budgetary resources" and "to abolish the financing of ineffective budgetary programs"?

From now on, saving drowning people will be up to those who are drowning themselves. The republic government is prepared "to free prices on the output of the Russian industrial complex for fuel raw materials." The only thing is, how will it work in reality?

If the cost price of production in coal industry enterprises were relatively small, the miners could easily organize a "coal cartel" and set prices for a ton of coal on a worst-case basis. But when the difference in the level of expenditures is in the hundreds (!), it is impossible to establish a single price that would guarantee income-producing work in all the mines. Even if coal prices are increased repeatedly, some of the branch enterprises inevitably will fail. They will have to be shut down and

the people working there will have to be fired. Unfortunately, I was unable to drag out two very important figures from the officials at the USSR Ministry of the Coal Industry: the number of enterprises where the cost price of mining a ton of coal is higher than the branch average, and the number of workers at these enterprises, that is, the first candidates for receiving unemployment benefits. They were either holding these figures in secret or did not ever calculate them. I am afraid, however, that the numbers will be in the tens and tens of thousands, respectively.

In addition, the decrease in production, "buyers' shock" (coal prices are certain to increase, causing a decrease in consumption), and the organizational restructuring may lead to an absolute decrease in demand for solid fuel. Miners will not be able to "drive up" prices too high, and will increase the number of mines that will be closed, as well as the number of workers that will be fired.

The market solution to the "coal problem" may be that severe. It was strange to see how over the past two years the miners bit "the hand that fed them," pulled down the system that had protected them for so long, and awakened the "sleeping evil." If the miners think that market reforms in the branch will be limited to giving them a 10% quota (the right to do what they want with 10% of the coal they mine), I think that they will be in for a rude awakening. If the Russian government thinks the same way, then a rude awakening awaits all of us.

The present market economy is not fussing over unneeded and inefficient output. It is killing it. It is possible that this is the fate that awaits many mines. Miners stood shoulder-to-shoulder in laying the road for the economic system which, when it establishes itself, will throw them out the gate.

Of course, neither the government of Russia nor the governments of the other republics want to deal too severely with their loyal allies in the struggle with the center, but if the republic authorities, in implementing economic reforms, will place political considerations first, there will be an unavoidable confrontation with conflicts that are difficult to resolve.

The coal industry, as witnessed by the experience of developed countries, will be dying a long and painful death, retreating step-by-step under the blows of scientific-technical progress and competition from those more successful. And there will be new labor strikes. The miners will protest the shutdown of mines, firings, modernization of production, introduction of automation, etc. In 1985, in England, 67% of total lost workdays were attributed to labor strikes having to do with being fired, 25% were connected with dissatisfaction with pay, and 3% due to conflicts with problems of seniority and the nature of the work. Sooner or later, we shall also have what other people have.

## Miners Oppose 'Social Partnership' Concept

914F0263A Moscow TRUD in Russian 28 Jun 91 p 1

["I. Klochkov: A Partnership Cannot Be Initiated by an Ukase"—TRUD headline]

[Text] The editorial office has learned that the FNPR [Russian Federation of Independent Trade Unions] does not share the concept of the Union government regarding a system of social partnership. What is the gist of the differences? This is the answer I.Ye. Klochkov gave to this question, which was asked by a TRUD correspondent.

Unfortunately we in the FNPR council and in branch Russian trade unions only the other day had the opportunity to familiarize ourselves with the packet of documents which, as has become clear, are being developed by the USSR Cabinet of Ministers with the participation of specialists of the VKP [General Confederation of Trade Unions].

The gist of our negative reaction is in the following. Under the pretext of accelerating the transition to a market economy and recovering from the crisis situation, the Union government in April made a number of decisions aimed at freezing the incomes of the workers, and it now has begun to speed up the introduction of the so-called system of social partnership in the country. A mechanism has been readied for its implementation. In the last few weeks, wage rate agreements for 1992, which must be signed at the Union level, have been worked on at a rapid pace.

But in the last few days, once again behind the back of the workers and without discussion in the primary trade union organizations, a packet of documents was prepared, including a draft of an Ukase of the USSR president, on the system of social partnership in the sphere of socio-labor relations and a decree of the USSR Supreme Soviet on a temporary suspension of action of certain legislative acts of the USSR and the republics. All of this indicates, in our opinion, an intention to deprive labor collectives of rights granted them in accordance with existing legislation, and also, in fact, to place the activity of trade unions under the control of the state.

Thus, in particular, it is proposed to suspend the action of Article 5 of the principles of legislation of the USSR and the Union republics on labor and the provisions of the RSFSR [Russian Soviet Federated Socialist Republic] law "On Increasing Social Guarantees for Workers," which envision the introduction of a 40-hour work week and the establishment of annual leave for all workers for a duration of not less than 24 workdays.

As a result, first, the state sovereignty of Russia is ignored inasmuch as the Supreme Soviet, the government, and the independent trade unions of the RSFSR are actually removed from decisionmaking on a number of questions that fall within the exclusive jurisdiction of our republic. In this, they literally do not want to deal with the fact that such an important document exists on

the regulation of socio-labor relations as the agreement signed in February of this year between the Council of Ministers of the RSFSR and the FNPR council.

Second, an attempt is being made to paralyze the social activity of the workers in their fight to obtain real social guarantees, by depriving them, for example, of the right to strike.

Third, as an equal partner in socio-labor relations, Union administrative structures are being proposed that practically either cannot resolve these questions, or are simply eliminated—starting from 11 July of this year—like the USSR Minlesprom [Ministry of the Timber Industry].

The Union government proceeds from its own understanding of social partnership in which obligations once again are imposed on the trade union organizations from above that are not at all typical of this social institution, such as, for example: the aims of its activity, the exercise of control over the relationship of the wage fund, and the increase in the pace of realization of products; the removal of workers' demands on reducing work time; the conduct of work to increase labor discipline, etc. The independent trade unions of Russia have decisively shed this "yoke" from themselves!

At the same time, the proposed draft of the USSR Government is attempting to avoid the assumption of specific obligations in socio-work relations, placing the functions of guarantor on a central economic organ that is subordinate to it (USSR Mintrud [Ministry of Labor], USSR Minfin [Ministry of Finance], etc.), and also on a third partner (unions and associations of employers), who today do not yet have authoritative powers, and this means real capabilities of implementing the social guarantees of the workers in production-labor relations.

The FNPR supports legislative reinforcement in the RSFSR of the conduct of negotiations and the conclusion of collective contracts and agreements between state organs, trade unions, and employers at all levels, the development of the concept itself of social partnership with the continuous participation of trade unions, and its broad discussion in labor collectives. Russia, like every sovereign participant in the future Union treaty has a right to independently resolve its socio-labor problems without any kind of interference and instructions from above in a genuine partnership of really equal forces: the government of the Russian Federation, the independent trade unions who express the will and the interests of hired labor, and, as a consequence, the union of owners and employers, but who are already organizationally formed and financially firmly established.

And, finally. We are convinced that questions of the regulation of social partnership at the Union level can be resolved only after the signing of a Union treaty that will delimit the jurisdiction of the Union and the republics in the sphere of socio-labor relations.

We informed USSR President M.S. Gorbachev and Prime Minister V.S. Pavlov of this position of the FNPR council and the Russian trade union branches. We appealed to the RSFSR Supreme Soviet for support in the resolution of these questions.

### Strike Developments at Tsentralnaya Mine

914F0263B Moscow TRUD in Russian 28 Jun 91 p 1

[Article by A. Golyaev: "Reaction to the News From 'Tsentralnaya'"]

[Text] The series of our newspaper articles concerning events at "Tsentralnaya" mine—about the underground hunger strike of the miners—is supplemented today with one more piece of information. As reported to the press service of the FNPR [Russian Federation of Independent Trade Unions] in the RSFSR central council of trade union workers of the coal and metallurgical industry, the presidium of the Chelyabinsk Oblast trade union committee issued a severe reprimand to V. Ogurtsov, director of the Karabash copper smelting combine, and V. Bespalov, chairman of the trade union committee, for the commission of errors in adopting a decision on closing the "Tsentralnaya" mine.

It is unlikely that the miners' demand that the director of the combine be relieved of his post will be satisfied. The workers of the combine's metallurgical shop announced that in the event V. Ogurtsov is discharged, they will declare a strike as a sign of protest. The metallurgical workers believe that despite the errors made in reaching the decision on closing the mine, such harsh punishment measures should not be taken against the director, who has worked only half a year in the position.

### Economist Examines United Workers' Front

914F0251A Moscow ROSSIYSKAYA GAZETA  
in Russian 20 Jun 91 p 2

[Article by Yuriy Shushkevich, economist: "A Dead-end Program"]

[Text] The OFT [United Workers' Front] is offering us a dead-end program.

To appeal at the end of the second millenium for the sake of the primordial ideals of Marxist-Leninist utopia—is an ignoble undertaking. An individual setting out on this path risks being misunderstood not only by society but also by a considerable number of his party comrades. Such is A.A. Sergeyev, a leader of the OFT, who, together with A.M. Makashov, attempted to occupy the post of Vice President of Russia. There is Aleksey Alekseyevich [Sergeyev]—a serious and even-tempered conversationalist, whose conclusions and arguments cannot be described as lacking in logic or common sense.

What support is there now for the insolvent ideology, and whose interests is it trying to defend?

In the opinion of Sergeyev, who is pursuing a course aimed at developing the market and re-creating the institution of private ownership, the leadership of the country and the CPSU have irreversibly departed from the principles of socialism. The replacement of the government of the soviets by an authoritarian nomenclatura government began back in 1988 and neither Klyamkin nor Migranyan anticipated this development. Instead they viewed this fact as being "in vitro." The democrats are now usurping this authoritarian government. The market and the simultaneously developing exploitation of hired labor are bringing about a concentration of national wealth and power in the hands of a small social layer, while the rest await unemployment and raised prices. This is the true path to discord, before which our present chaos will fade in comparison. Thus we can restate briefly the thoughts of the economist and politician A. Sergeyev.

It should be noted immediately that many of these thoughts are well founded. Only the accents of all life's logic must be arranged differently.

Soviet authority, conceived as a method for maximizing the democratic realization of political interests, was unable to manifest itself under conditions in which economic freedom is lacking and there is a shortage of life's most needed blessings. In order to accelerate economic development, a need exists for replacing the system of collective irresponsibility with a system of economic interests. The greatest opportunities for realizing economic interests were concentrated in the hands of a higher nomenclature, and its active inclusion in the process of capitalization of authority served to initiate perestroika.

Beyond any doubt, this was seen as a "rejection of socialism" and viewed as disinterested service to the ideals of general equality.

The leaders of ministries that were converted into associations and concerns and the directors of commercial banks, joint enterprises and other large market structures have begun orienting themselves mainly towards profit, which in the final analysis determines their personal income. There is some logic to Sergeyev's accusation against Abalkin, Aganbegyan and other "perestroika economists" that they are carrying out the social order of the "Soviet bourgeoisie": initially in a veiled manner and subsequently openly "directing state policy towards private ownership and the market."

But in such a situation a scientist is obliged to ask himself: What are the moving forces of the current market process?

We are confronted by the position established long ago of large-scale financial capital, controlled primarily by the union nomenclatura (and which defines the economic policy of the center). The idea of a national market, associated with the functioning of light capital,

## LABOR

commercial initiative from below and the broad attraction of labor collectives to the leasing movement and to privatization is forging its own path.

It is assumed that the position taken by the OFT, as defined by Sergeyev and his colleagues, reflects the interests mainly of the "third group" of our nomenclatura—governmental hierarchies of the local level (rayon, oblast). Trained exclusively for the carrying out of commands "released from on high," distinct from the union nomenclatura in that they are deprived of the right to handle any important property and distinct from the nomenclatura not having a republic social base which they could rely upon for changing their hierarchical status, the rayon-oblast hierarchies are the most conservative part of society. Could they not see, charged as they were by faith and truth to serve the system, how under pressure from below and a sharp change in the program on high, that they are not needed by the system? A similar situation prevails among the lumpen groups politically aligned with them, groups which traditionally suffer from a complex of professional uselessness.

Thus, instead of using the awakened interest of people in savings and in prosperous living, in the interest of economic revival, it was proposed that all once again be returned to equal starting positions.

Only I was unable to determine from the works of Sergeyev in which economy we were supposed to start. It has been said that the time is at hand for "returning the obligations to the working class," after lowering the rates and raising the output norms and making salaries directly dependent upon the final results. But why must this be done over a period of three years? Would it not be for the purpose of thereafter once again establishing normal control over salaries with regard to labor productivity and beginning to take away from the labor collectives a greater portion of the value created by them—in the interest of its subsequent centralized distribution.

The absolute inadmissibility of unemployment is postulated, but Sergeyev states in the process that the prices must be lowered (everything is just the opposite in a market economy: the prices decline only during a crisis period of curtailed production). And in order to make ends meet, a small economic "discovery" is carried out: salaries must be based not upon growth in profits but rather upon reduced production costs.

From the very first, this failed to work: does not a reduction in production costs point towards increased profits? No, we are corrected by Sergeyev. Profit does not play a role here, since prices must be lowered immediately following a decline in production costs. And if the price is lowered only to a slight degree, then the salaries can be raised. Is this not a mechanism for a general reduction in prices?

Only there is one bit of bad luck here: with such a mechanism, the income of workers increases, but the quantity of goods nevertheless declines. We are all troubled by the well-known deficit—with lines, receipts and special distributors. Thus the total distribution system, which deprives a worker of the right of free selection—is similar to Sergeyev's ideal. But what then will interest a worker in increasing the production of goods that are in short supply?

Sergeyev's program assumes a social confrontation. Indeed, there remain for him not only the nouveau riche but also the middle class—people who achieved prosperity through their intellect and labor.

I do not think that Sergeyev hoped to win during the last election and yet I am confident that he will not stop propagandizing his ideas. But naturally he will not succeed in concentrating around them the best resources and minds—skilled and highly trained workers, talented intelligentsia, work-loving peasants or honest entrepreneurs. And by no means will the work progress with a group of retired switchmen.

## CIVIL AVIATION

### Antonov Design Bureau Work Reviewed

914H0191A Kiev *RABOCHAYA GAZETA* in Russian  
31 May 91 p 2

[Interview with P.V. Balabuyev, general aircraft designer of the OKB [Experimental Design Bureau] imeni Antonov, by T. Kuznetsova on the occasion of the OKB's 45th anniversary: "People and Aircraft"]

[Text]

[Kuznetsova] Petr Vasilyevich! You came to the design bureau when it was just eight years old. The collective has really been shaped before your very eyes and with your participation. What do you recall from the first steps that were taken?

[Balabuyev] At that time, when I was assigned to Kiev with a group of graduates of the KhAI [Kharkov Aviation Institute] Aircraft Construction Department in 1954, everything was much less sophisticated than it is now. The collective was small and clearly unorganized: it had been two years since the youthful, intelligent group moved to the Ukrainian capital from Novosibirsk. We lacked a great deal—accommodations, equipment, and specialists, but it seemed that no one noticed this. We worked with an enthusiasm it is hard to imagine today. It was just the OKB's second aircraft then—the An-8 transport. We built it in two years.

[Kuznetsova] How was your career as a designer shaped?

[Balabuyev] Naturally, I did not expect to become the general designer, the manager of a collective of this type; they can be counted on the fingers of your hand in this country—the Tu, Yak, Il [Tupolev, Yakovlev, Ilyushin] firms... I loved to work and I still do. No matter what I was charged with, I did it with enthusiasm. I did not acknowledge any hopeless situations, and I finished what I started without fail. My childhood and youth taught me this. I was born near Lugansk in a kolkhoz farmer's family. My father, a partisan in the Donbass during the war, was shot by the fascists. My mother, left with three children, could not pamper us, and as the only man in the house, I learned early what hard times are, as they say.

The atmosphere in the collective at that time played an important role in my career as a designer (and not only mine). By his personal example, O.K. Antonov insisted on creativity, conscientious work, inventiveness, and genuine enthusiasm. Under these circumstances, we could not think of working just to complain about hardships and giving in because of a difficult task. I tried to learn as much as possible, and if true aircraft builders proved to be there with me, I have been lucky.

[Kuznetsova] Engineer-designer, chief of the repair shop, chief of the assembly shop, lead engineer for flight

testing, deputy chief designer, chief of the OKB branch at a series plant... And you accomplished all this in the first difficult decade?

[Balabuyev] This is the way it happened, and I am very glad it did. Not everyone manages to pass through all the stages in aircraft manufacturing, but this is a real academy whose lessons are memorable throughout life, you know. As an example, we began series production of the world's largest aircraft at that time, the An-22 "Antey," at the Tashkent Aviation Enterprise. As a 30-year-old deputy chief designer at that time, I had occasion to work with the most experienced production workers, recognized as "authorities" in aircraft series-manufacturing—S.I. Kadyshev, K.S. Pospelyy, and V.N. Sivets. New designs and technical processes, unique work pieces, experimental complexes... All this and a great deal more for the first time in the sector when tests of an experimental aircraft were continuing, the periods of time were inflexible, subcontracted deliveries were disrupted, and there were all kinds of shortages. But then, this experience proved to be useful when we were building the "Ruslan," which united the efforts of dozens of institutes and 700 enterprises in the country!..

[Kuznetsova] You were the first director of the experimental plant attached to the OKB...

[Balabuyev] Yes. The plant had just started to take shape and problems were cropping up like mushrooms—the development and introduction of unified comprehensive planning for the firm's entire creative process, renovation of the shops and erection of new buildings, construction of a sports complex, a pioneers camp, sanatoriums and rest centers... Where did we get our strength?..

In order to solve the "managerial" problems professionally, it was necessary to add to my knowledge: to study the foundations of management, economics, and production organization. As far as I recall, I studied everything in general. I learned how to manufacture aircraft and lead people, to keep up my spirits when things were going badly and not to get a swelled head when things were going well. To demand what seemed impossible from people and to believe that they are capable of this. I learned to be self-confident, persistent and consistent. And I am still studying now. I have visited many foreign aircraft manufacturing firms. It was instructive, although we have much of interest to them as well. But this is another story.

I had to become involved with more complex problems when I became the chief designer and first deputy to O.K. Antonov. These included the strategy for the OKB's development, the development of an experimental base, and many other problems. When I was appointed general designer in 1984, I thought of the OKB as my home. It was headed for takeoff at that time, so to speak. More than 100 types of Antonov aircraft were flying, not only in our country but on the air routes of 42 other states, performing all the jobs in aviation. The "Ruslan" made its first flight—it was the aircraft

## TRANSPORTATION

that opened a new era in the history of air transportation, and designers had quite a number of cherished dreams in their "briefcases."

[Kuznetsova] This was probably easier than taking an industrial facility that had fallen apart and developing a new and successful one.

[Balabuyev] On the contrary, it was a hundred times more complicated. It is always harder not to lose and extend a legacy than to acquire it. Definite traditions, attitudes, and a psychological climate had taken shape in the collective. Everything had to be maintained and augmented.

It is a different time now. How was it before? We developed a good design, and the rest would come. Some 70 to 75 percent of the orders came from the Ministry of Defense, the department with the money then (not what it is now). Now we ourselves have to look for new forms of organizing labor and financing when laws in the various republics are vague and sometimes contradictory. After all, aviation can develop only where there is the broadest possible integration and unity of efforts. We are attempting to resolve these problems with the help of associations of designers and aircraft and engine builders. Two such associations are being formed. One will be turning out the An-74 (Kharkov, Omsk, Arsenyev, Zaporozhye, and the OKB imeni Antonov), and the other one will be building the new An-218 passenger airliner (Dnepropetrovsk, Zaporozhye, Kazan, and our OKB).

Do not be surprised: we have changed the specialization of our work somewhat and manufacturers of passenger aircraft have been included in the group. Passenger flights have doubled and tripled, and Aeroflot has practically nothing to provide them. In transport aviation, which held a position of priority for Antonov before, our collective has reached the summit, one may say: the "Ruslan" and "Mriya" are testimony of that.

We are developing the An-218, An-180, and An-38 passenger aircraft. Each one of them is interesting in its own way, but they all are distinguished by their low fuel consumption (14.5 to 18 grams per passenger-kilometer), which is of paramount importance with the critical fuel shortage today. Designers are also working on a 690-seat aircraft of the Boeing 747 type. These new aircraft will cross the boundary of the year 2000 and play an important role in passenger service of the 21st century. For that reason, we are trying to incorporate as many innovations as possible in them, working in anticipation, taking tomorrow's trends and level of equipment development into account.

[Kuznetsova] The general designer's first job has been and continues to be the aircraft, but they do not exhaust all of your concerns, especially now with the rising prices and universal shortages.

[Balabuyev] Unfortunately. We have been forced to develop by ourselves and to provide ourselves with new

equipment. We need money for this, chiefly foreign exchange. The "Ruslan" commercial firm is earning it by filling the orders from foreign firms. Our An-124 is providing humanitarian assistance in our country and other regions as well. In order to build housing quicker and better, we are accomplishing this with our own resources; we have mastered the method of casting expanded-clay lightweight concrete, we are building our own cement plant with imported equipment, we are raising vegetables under greenhouse conditions, breeding fish in ponds, and running a pig farm. We have supplied our medical personnel with up-to-date domestic and foreign equipment and built a fine polyclinic for them ourselves. The people who develop unique aircraft deserve more, of course, but there are no opportunities at present.

### New Aviation Concern Highlighted

914H0197A Moscow VOZDUSHNYY TRANSPORT  
in Russian No 26, Jun 91 p 4

[Interview with Vitaliy Timofeyevich Pinayev, general director of the "Yakutavia" concern, by M. Ilves: "This Is the Way a Concern is Born"]

[Text]

[Ilves] What led to the Yakutsk Administration's transformation into a concern? Won't this be a change in masks when the previous work methods are retained? Exactly what are the structural changes and what hopes are you pinning on them?

[Pinayev] The time requires that those subunits making up the administrations have more independence.

We began preparing for this last year. Different alternatives were considered. We decided on the concern form because it is precisely what will provide the opportunity for the current structural units to survive under the conditions of independence. But to bring this about it will not be enough for us to engage in our principal activity. We are proceeding to organize a number of small enterprises. We are essentially developing an entire system of interactions, even with other sectors.

For example, one American banker suggested that a joint venture be formed as a concern. He is interested in Southern Yakutia, an area that is rich and not very developed yet. He is prepared to invest his funds, establish a base there, and later open several small and medium-sized enterprises of different specializations on that basis—for mining coal, processing stone, and so forth. This matter has already been coordinated with the republic government, the appropriate documents have already been signed in our ministry, and the work is beginning. His cofounders are the "Yakutavia" concern, the Neryungri Aviation Enterprise, the Moscow "Atlant" Bank, which has the right to engage in international operations, and the Texas (Hacker) Bank.



The second example is in Western Yakutia. Here all our work has been oriented toward the "Yakutalmaz." This is a very rich organization, but it is deducting the lion's share of its profit for the state at present. However, it has the right to set up its own transportation organization. And we decided to follow this route together. This is profitable for the diamond miners, for their operations have already been expanded substantially, and for us, because in this case we are shifting part of our financial concerns to the shoulders of our wealthy neighbor. Though there are difficulties here—many things rest on the formality of legalization, but a solution has been found all the same. It was found in the establishment of an association. And now an agreement has been signed by our concern, the "Yakutalmaz," and the Mirnyy Aviation Enterprise.

Changes will be taking place in Yakutsk itself as well. The unified aviation detachment here has already been divided into an airline and an airport. The airport is becoming a joint-stock enterprise, and the "Yakutenergo" Association has expressed interest in the detachment of cargo aircraft. We will be negotiating with them. In this same direction, we intend to resolve the problem of the unprofitable Kolyma-Indigirka enterprise. Service is being planned there with its steady customers—the Far East Shipping Company, the Goskomgidromet [State Committee for Hydrometeorology], and the Arctic and Antarctic Institute.

[Ilves] In other words, you are looking for financial partners?

[Pinayev] We cannot proceed in any other way now, of course. Maintaining social commitments with the current expenses will cost us 77 million rubles a year. But there is nowhere to obtain them. So we have to develop a conglomerate such as this. Incidentally, we are taught this by foreign experience as well. At many municipal airports there, for example, half of the activity does not conform to their specialized functions. We are missing many opportunities here. Now we will be making up for this. We need to develop the airport service facilities—set up booths, build shops, make souvenirs, and expand the entire complex of services, right up to transportation of passengers and trade services on board. We need to expand the opportunities of our production base as well: to charge batteries, let us say, repair radio equipment and motor vehicles, and become involved in carpentry work. All this is also through the establishment of small enterprises. And all this is for the purpose of obtaining additional funds.

[Ilves] How have the collectives reacted to the concern concept?

[Pinayev] It was hard at first. But we have been explaining its features, and now they are beginning to understand them, apparently.

[Ilves] Are you confident of success in this undertaking?

[Pinayev] I do not have any exaggerated optimism, and I am trying to be careful. But I am hopeful, of course. And we will not be working alone here later on. The entire republic is headed in this direction.

#### Aviation's Agricultural Work Noted

914H0197B Moscow VOZDUSHNYY TRANSPORT  
in Russian No 26, Jun 91 p 6

[Interviews with A. Nikitin, commander of a flight; V. Pshenichnikov, commander of a unified squadron; and S. Rodionov, first deputy chief of the Aviation Work, Transport Operations and Services Main Administration, by B. Sidorenko: "What Is to be Done With the PANKh [Use of Aircraft in the National Economy]?"]

[Text] Bukhara-Moscow—Who among us is not familiar with this picture—an "Annushka" [An-2 aircraft] over the fields, followed by a long plume? The tireless An-2 has been respectfully called the farmer's winged helper, the grain grower-aircraft, and the flying provider. But life is changing. And now one seldom sees an An-2 engaged in its usual work over the fields of Central Asia.

"We treated much more than a meter or two of land with dust and other poisons," Ella Khachaturovna Avanesova, who worked for many years as an engineer for agricultural aviation subunits, but who is now the director of Aeroflot dormitory facilities, told me with some bitterness. "Then people came and settlements were located close together in the productive areas. So defoliation and other operations involving the airborne application of toxic chemicals are disappearing here."

But what about the An-2? There are 29 of them in the Bukhara Unified Aviation Squadron alone, you know. And there are 300 in the Uzbek Administration. They are now roaming our immense country in search of work. In this interview, we discuss the situation taking shape in the Bukhara OAE [Unified Aviation Squadron], as well as what is to happen with the PANKh in general.

[Nikitin] "I have just returned from Stavropol. There are 11 of our aircraft there. There is work at present, but there is a problem with the gasoline, a critical shortage. So our aircraft are operating at 40 percent of their capacity there now, no more.

[Sidorenko] And were there many assembled there?

[Nikitin] Some 180 aircraft! From Karshi, Samarkand, Novosibirsk, Makhachkala—from everywhere! And only half of them are really operating continuously. So each one is trying to get as much work as possible.

Generally speaking, our subunit is in a difficult situation at present. We had 107 persons, but only 42 are left. We don't even have copilots now, only commanders, and each one has been working for no less than 8 years.

We are looking for other work, of course. We are concluding contracts with the Ministry of Health and Bukharneftegaz [Bukhara Oil and Gas]. But all this is

only incidental. And clients have become more reluctant to establish contacts after the increase in tariffs.

Maybe work will be found for us in other countries? I went with several of our pilots recently to the Mongolian Consulate in Tashkent. They said there that work will be found for us. The consulate is next door to the Uzbek Administration of Civil Aviation. Perhaps our leaders are interested in this?

[Sidorenko] Viktor Nikolayevich [Pshenichnikov], how is the work volume for PANKh aircraft taking shape this year?

[Pshenichnikov] The situation is difficult. While we performed 70 percent of the work in Uzbekistan two years ago, 90 percent of the work volume has to be found outside the republic and there is a chance of performing only 10 percent of it in the republic. The area covered by our aviation enterprise has been expanded considerably: Rostov and Ulyanovsk oblasts, Stavropol Kray, and Kustanay, Kokchetav, and Turkmenia. Naturally, all this involves tremendous organizational as well as social problems.

But the worst problem is the extremely critical shortage of gasoline. Half of it has been provided, after a fashion. The problem with oil is just as bad. For Stavropol, for example, we had to organize a cooperative with Karshi and Samarkand, and through our joint efforts we recently sent a 20-ton tank car with oil there.

In a word, our main problem is the problem of survival. We are actively seeking contacts with business managers within the oblast. Though we are handicapped by the increased tariffs. But we even manage to get a subsidy from employers for certain flights.

The route from Bukhara to Zarafshan (this is the gold miners' town) to Tamda has become more or less regular, as an example. From Tamda we bring flour and other products for shepherders in distant pastures. We also keep an air ambulance aircraft there.

We were expecting losses from PANKh operations last year. Some 470,000 [rubles] had been planned, but we even managed to receive 70,000 in profit.

But this year we are not dreaming about results such as these. In the first quarter, only 201 hours, that is, 30.9 percent, of the planned 650 hours of flying time were accrued.

[Sidorenko] So this subunit in Bukhara may be discontinued? What point is there in flying to look for work many kilometers away?

[Pshenichnikov] Yes, I doubt that it is expedient to keep so many PANKh aircraft in Bukhara. But how do we resolve another problem then—finding work for 200 aviators? These are people's lives, after all; each one of them has an apartment or house, and each one has only one profession.

And we see the solution here in a gradual reduction of PANKh operations and retraining of pilots in stages for other types of aircraft. But we do not have this equipment.

Why not find two An-24's for us, as an example, even in a cooperative arrangement with another squadron? Even if only with neighboring Samarkand, which has 11 of these aircraft. We could work in a cooperative with Tashkent in operating the Yak-40, where they already have experience in joint operation with Karshi, for example. But no, the Uzbek Administration is not meeting us halfway.

Meanwhile, a positive solution to the problem would help us for 2 or 3 years in retraining our personnel and providing them with new specialization without aggravating the social situation, which is difficult as it is, and without reducing our work volume.

[Sidorenko] Stanislav Ivanovich [Rodionov], please comment on my interview in Bukhara.

[Rodionov] The interview you mention correctly reflects the problems of our PANKh aviation. Indeed, our volume of work has been cut back lately. But there are more applications for airborne chemical treatment operations this year than ever before. And if we had the fuel, all the Uzbek Administration aircraft which are in Stavropol, Krasnoyarsk Kray, and other regions would be occupied.

As an example, I will note that we were unable to treat nearly seven million hectares, stipulated under contracts that had been concluded, in four months of this year because of the gasoline shortage. For this reason, about 200 aircraft have been idle at operating sites and about 300 prepared aircraft have been standing at base airports.

So we cannot say now that airborne chemical treatment operations are on the wane as before. On the contrary. It was emphatically stressed at one of the recent conferences held by the USSR deputy minister of agriculture that agricultural aviation is essential, and that you cannot do anything without it.

[Sidorenko] It is probably very gratifying that the economic sensation in rural areas is disappearing and that kolkhozes and sovkhozes are once again becoming aware of the critical demand for aviation.

[Rodionov] Yes, they realize it. The talk that we bring a great deal of harm is disappearing. Cleaner methods of performing the operations have also been developed, and flights are made at an altitude of two meters. Our crews have been trained and they are flying at that altitude.

But take our operations in Egypt. Quality is evaluated very strictly there. And the Egyptians are making a strict assessment. We are striving to reach the same level of quality within our country—the same procedures and the same equipment.

So our main problem today is the lack of fuel. Judge for yourselves. In May, 11 to 12 million hectares should have been treated. We prepared over 2,000 aircraft, for which 70,000 tons of aviation fuel are required. But we were given just 34,000 tons. It is even worse in June—we need 80,000 tons, but they are planning 30,000 tons. But the pests and diseases are already making their appearance, you know. And we should be extending the use of aircraft.

[Sidorenko] And there are no rays of hope for fuel now?

[Rodionov] It is hard for me to speak about the Minneftekhimprom [Ministry of the Petroleum Refining and Petrochemical Industry] now. At least we have written a letter to the Cabinet of Ministers signed by the minister of agriculture and the minister of civil aviation of the USSR, asking that plants of the Minneftekhimprom produce the amount of fuel necessary to carry out the operations mentioned.

[Sidorenko] I would like to return to the conversations in Bukhara. To what extent is it expedient for agricultural aviation subunits to exist in those regions where the volume of operations has been cut back substantially?

[Rodionov] It is hard to answer this question. After all, this involves a cutback in personnel. It is no coincidence that they are persistently looking for work in Bukhara. And squadron commander V. Pshenichnikov was fully justified in raising the question of retraining and specialization for other flights. And they should resolve the problem of cooperative aircraft use with the Uzbek Administration, which has now been given all the rights needed, along with others, of course.

At one time the customer came to us with outstretched arms. But now all specialists in agricultural aviation must actively look for work themselves. We are also persisting in our search for additional work for such detachments and squadrons. Including in other countries. We have sent telegrams to all our foreign representatives.

But there is considerable difficulty here—our country has equipment that has not been certificated. It has been common knowledge for a long time that we have nothing except the An-2. There was an agreement with Poland before to cooperate in developing a new aircraft, but this work has been discontinued now as well. They say that the OKB [Experimental Design Bureau] imeni Antonov is only planning to design an aircraft such as this.

[Sidorenko] So the OKB owes a great deal to agricultural aviation?

[Rodionov] It is not enough to say the OKB. The entire aviation industry is in its debt. We have made so many decisions of all kinds! But they are still only on paper.

### Spare Parts, Fuel Shortages Plague Aeroflot

914H0193A Moscow PRAVDA in Russian 14 Jun 91  
Second Edition p 3

[Article by Miroslav Buzhkevich: "Will We Cure the Air Service Problems?"]

[Text] Not a day passes that Aeroflot is not criticized in the press. The criticism is very sharp, and sometimes simply malicious. And we can understand the journalists. Aeroflot really causes us a fair amount of distress. The managers of the Ministry of Civil Aviation admit that the quality of passenger service not only does not meet international standards, but the level set by Aeroflot itself. A great deal may be written about this. However, in my view, it is much more useful to gain an understanding of why this is taking place. Are the managers and employees of Aeroflot the only ones at fault or are there other reasons as well? Without setting a goal of providing exhaustive answers to these questions, I will attempt to touch upon certain problems which have a pernicious effect on the level and quality of service in aviation.

The current situation in Aeroflot is simply critical. In order to welcome passengers cordially and attentively and see that they depart and reach their destination on time, we need up-to-date, comfortable and economical aircraft with runways, aircraft maintenance services, and reliable facilities and systems for controlling flights that meet today's technical level. And of course, convenient, spacious air terminals where a passenger can feel at home. At first glance, all this "has its place," but in actual fact, it is practically nonexistent.

Let us begin with the aircraft. Who among us has not had occasion to hear announcements such as this over the radio at airports: "The flight is delayed because the aircraft has not arrived from the point of departure." We are indignant and demand that another aircraft be assigned. But we, the passengers, are unaware that Aeroflot continually is short of aircraft. Over the past 5-year period, it received less than half the planned number of Yak-42 and Tu-154M aircraft from the manufacturers. But this has entailed an increase in the workload assumed by the existing fleet of aircraft—people have to be transported. So it turns out that the aircraft being operated have not only become obsolete, but have been "worked" substantially longer than envisioned by the designers. Repair personnel, the specialists engaged in servicing and preparing aircraft for flight, and pilots are demonstrating a great deal of resourcefulness in extending their work "lifetime." But there is a limit to everything.

It is very likely that photographs of the new Il-96-300, Tu-204, and Il-114 airliners and the enthusiastic reports on these aircraft which meet world standards have made the rounds of the press throughout the country. However, they have not "taken off" from the pages of newspapers and journals yet—they have not been flying on Aeroflot routes thus far.

Why is it happening this way? Here is the opinion of A. Aksenov, the deputy minister of civil aviation and chief of the Scientific and Technical Main Administration:

"Those taking part in designing and developing advanced aircraft are operating separately. The chief designers are not coordinating work on the projects. Experimental design bureaus, plants, and engine and instrument manufacturers do not have common economic relationships and are operating without coordination."

I will add: the main reason here is the Ministry of the Aviation Industry's total monopoly in aircraft manufacturing. There is no competition in this business. And a natural consequence is the lack of responsibility to the customer. Who else can Aeroflot order the development of new airliners from when their production is in the same hands?

Many persons imagine the sky to be boundless, where airliners can simply "disperse." In point of fact, the Fifth Ocean is divided into narrow corridors which only aircraft may use. And at precise altitudes. It is very complicated to organize traffic on the airways. This is handled on the ground by special services, primarily air traffic controllers. Meanwhile, Aeroflot aircraft are not the only ones in the sky. Aircraft of the Ministry of the Aviation Industry, the Ministry of General Machine Building, and the military department are also using the airspace. And not all the "airspace users" are acting in concert. So the primary task is to develop a unified system of airspace control and the technical facilities for this. Attempts have been made in this direction, but have not been carried through to their logical completion. For this reason, Aeroflot itself has been ordering radio navigation and radar systems and communications facilities from industry. The military also did this independently, but often in a different configuration. Dubbing is being carried out and huge sums are being spent. But order is not being improved on the airways and at the airports.

Now a decisive step has finally been taken to surmount all these problems. The State Commission for Airspace Use and Air Traffic Control in the USSR—the USSR Gos aeronavigatsiya—has been formed. It is part of one of the structural components of the country's Cabinet of Ministers. It is hoped that the Gos aeronavigatsiya will bring order to the airways.

But now let us descend to earth. While the aircraft commander is performing all the functions for an approach, let us speak about how it is carried out. There is a professional term—the categorization of airports. Under international rules, they have been divided into three categories—I, II and III—in accordance with weather conditions and certain other factors. Category III is assigned to an airport which can accommodate aircraft arrivals and departures under the worst weather conditions, with a low ceiling and minimum visibility, that is, practically in any weather. Aeroflot has nothing

to brag about here. Less than one-third of our airports have been authorized to handle Category I flights, about eight percent can accommodate Category II flights, and none of the airports are in Category III. For this reason, we find ourselves quite frequently in Gorkiy or Kiev instead of Moscow, where we were flying. I will note by comparison that the United States has 520 Category I airports, 64 Category II airports, and 14 Category III airports. So we must try to keep up with the leading aviation powers.

Here we are on the ground. The passengers are leaving for the air terminal. Preparations which we do not see are under way around the aircraft and inside it for the next flight. And they often bear a resemblance to the tears that are unseen by the world. There is a chronic shortage of spare parts. Only 40 percent of the deliveries were completed in the first quarter of this year. But after all, there are many dozens of assemblies and thousands of types of parts on an aircraft. The lack of one of them can delay a departure. More than one-third of the downtimes of Yak-42, Tu-154, and Il-86 aircraft are caused by a shortage of assemblies in the air conditioning system.

But even if there were enough of everything, there would still be problems in repairing aircraft and preparing them for flights. For the gap between development of a fleet of aircraft and the technical base to maintain them is increasing every year. Over the past 10 years, the volume of aircraft repair has increased by more than 1.5 times as much, but the appropriate production capacities have been increased by 15 percent.

And fuel is one more "toothache" for Aeroflot. You cannot take off or land without it. But the failures to deliver fuel are becoming a distinctive clot in the flow of air traffic more and more frequently, "freezing" dozens of aircraft on the ground, especially during peak periods. According to specialists' estimates, one million tons of aviation kerosene need to be added to the supplies already allocated in order to bring the throughput capacity of air routes up to the level demanded by the public. But how can we do this? Even if we obtain what was planned.

Now we are in the air terminal. Not in a specific one, but a typical one. It is crowded and stuffy, and the information is confusing and unintelligible. The passengers are nervous. The scene is a familiar one at any airport in the capital, at Borispol in Kiev, Koltsovo in Sverdlovsk, and dozens of others. Their employees can be blamed for a great many things: for the lack of attention to passengers and decades of the undisguised boorishness which has taken root here. But let us look "behind the scenes" of this theater of the absurd. The country's airports have been provided with a little more than half of the production capacities required. Have you noticed that passengers have been seated and disembarked from airliners on one ramp (there is no second one) for a long time? Industry is delivering very few of them. And how much time we lose waiting for our baggage. Baggage is

unloaded manually more often than not, and there are not enough vehicles to carry items to the terminal. Just as there are not enough buses to take passengers to the airliners. All this disrupts the rhythm of work by airport services.

Readers may be tired of the flood of figures. But I have cited them not to "squeeze out" a tear and force some person to exclaim: "My poor aviators!" I have not sought to relieve them of responsibility for all the disgraceful practices in the sector. But statistics confirm that Aeroflot is in a critical situation. In acknowledging this, it is time to think about how to find a way out of such a complicated situation. Not only the aviators themselves, but the passengers as well, must rack their brains. And the passengers on special flights or those who occupy the deputies' chambers first of all. More often than not they do not have a real conception of how simple mortals are flying and what they owe the personnel for their trips in the country and abroad, on the ramps where they refuel and prepare the aircraft, in the shops where they repair them, in the stuffy air terminals with the empty snack bars, in the crowded hotels at the terminals, and in the city ticket offices.

We talked with Boris Yegorovich Panyukov, the minister of civil aviation, for a long time. The 16 pages of notes on our conversation transcribed from a dictating machine attest to this. Panyukov has risen from an ordinary aviation technician to be the head of the ministry. He knows about all of the sector's problems, and not from secondhand reports.

How is the situation to be improved? There are several scientifically substantiated and comprehensively developed programs for reequipping and expanding Aeroflot's technical facilities, building airports, air terminals, and runways, introducing the latest passenger service methods, making use of electronics and other human achievements. Part of these programs have been begun and part of them are being defined more precisely. I will not speak in detail about the plans that have been outlined. Their implementation will inevitably require many billions in expenditures and a lengthy period of time (a minimum of 10 years). But passengers are waiting to find relief from their fate tomorrow or the day after tomorrow, figuratively speaking—in the coming years. This is what the government and the aviators should be thinking about.

Adoption of a market economy lies ahead. The transition to it, as world experience shows, takes more than one year. But decisive steps should be taken today on the path toward new economic relationships. What does the minister think about this?

"Before answering your question, I want to acknowledge that we have been operating much worse than we are able to even with all our shortages," B. Panyukov said. "And passengers' complaints about Aeroflot are entirely justified. We have only to increase exactingness toward everyone involved with their transportation, which we

are doing now. As far as working under market conditions is concerned, the first steps are already being taken here. First of all, we are proceeding to decentralize the management of civil aviation. Airlines have begun to be formed on the basis of our territorial administrations. They are receiving full economic and operating independence, naturally. During the transition period, the ministry is to distribute aircraft, manage air traffic, and handle certain other matters. At the same time, the airlines may obtain airliners themselves, including from other countries. The Azerbaijan Airlines, Sibavia, Aerovolga, Krasnoyarskavia, Komiavia, Far East Air Corporation and other concerns are already in operation. All this is providing the impetus for the development of competition—the main engine for improving the work of such enterprises. By being able to channel a substantial part of their profit into consolidation of the material and technical base and development of favorable working and living conditions for aviators, the airlines will be improving the quality of service and thereby gaining passengers."

The end is approaching for Aeroflot's monopoly. The OKB [Experimental Design Bureau] imeni Antonov, the OKB imeni Ilyushin, and military transport aviation have already acquired the right of free commercial activity, including in the international market. Sharp competition has begun among them. Though they are "on the offensive" against Aeroflot at present. We would like to see their gaze directed more boldly abroad to gain recognition on international routes. The Association of Ultralong Air Routes—ASDA, established as an alternative to Aeroflot, may be very beneficial as well.

Both the major airports and those for local air routes are becoming independent enterprises. They are being transferred to the jurisdiction of local soviets of people's deputies, which are interested in seeing that the "air gates" to their city or oblast are in excellent condition.

So on one hand, improvement in air service in the coming years depends on how effectively the state will help Aeroflot, which will be the country's largest airline for many years to come, to overcome its crises. On the other hand, it also depends on how rapidly market relationships will penetrate and be consolidated in this most important sector of the national economy. The sharper the competition among the various concerns and joint stock companies which are true alternatives to Aeroflot, the sooner our ailing air service will come up to international standards.

**Taganrog's 'Albatros' Aircraft to Paris Air Show**  
914H0193B Moscow *RABOCHAYA TRIBUNA*  
in Russian 5 Jun 91 p 3

[Interview with G.S. Panatov, chief designer of the Taganrog ANTK [Aviation Scientific and Technical Complex] imeni G. Beriyev, by *RABOCHAYA TRIBUNA* correspondent Gennadiy Belotserkovskiy: "The 'Albatros' Is Hurrying to Le Bourget"]

[Text] The "Albatros"—this is what designers of the Taganrog Aviation Scientific and Technical Complex imeni G. Beriyeve have named their latest creation. The name is no accident, because the amphibian resembles the legendary bird not only in its external appearance. It can land and take off at sea—when the waves are over two meters, and when operating from dry land it can soar over the ocean for extended periods. The economical turbojet engines enable the aircraft to fly 5,500 kilometers at a cruising speed of 700 kilometers per hour. But if it is refueled in flight from an air tanker—and such a possibility has been provided for—its range is practically unlimited. And there will be another surprise for many persons. "With a little extra effort," the aircraft, which has the dimensions of the Tu-154 airliner, is able to come right on shore from calm water. A startling sight, take my word for it.

The unique features make it possible to organize the production of aircraft with very diverse specialties on the basis of the "Albatros," otherwise known as the A-40. The one flying to France—it has been named the BYe-42—is for air-sea rescue. It has all the necessary lifesaving equipment on board, as well as a fine operating room and first aid center. The aircraft can accommodate up to 60 persons in its 42-meter "belly." And not necessarily persons rescued from sinking vessels. For example, the aircraft crew can be replaced, relieving it of the need to come into port. Isn't that enough?

I spoke with Gennadiy Sergeyevich Panatov, chief designer of the Taganrog ANTK, about the new aircraft's capabilities and the prospects for the ANTK's development. I was in his office, where it would have been unthinkable for a journalist to come a year ago: the complex had been "tied up" for defense since 1934, when aircraft designer Georgiy Beriyeve founded the only firm in the Soviet Union to develop and manufacture flying boats. Many of them—maritime reconnaissance aircraft, for example—made their contribution to the great victory over fascism and strengthened our defense during the "Cold War" period. And when it ended, a "window" for conversion appeared for the Taganrog workers as well.

"Previous attempts were made as well," Panatov said. "We designed the BYe-30, a small, strictly land-based passenger aircraft for local air routes. We applied a number of advanced technologies. It passed all its tests and met with success at Le Bourget as well. But production of the Czechoslovak L-410 was thrust on us from the top unexpectedly; it was an uncomfortable aircraft with underpowered engines and poor takeoff and landing characteristics. Think of it: we helped our friends in the socialist camp, but we were left high and dry ourselves. It is still not too late to put our model in series production—all the designs are ready, you know."

"But the 'Albatros' is the main aircraft as of today," the chief designer continued. "If we had had it sooner, we could have saved the entire crew of the sinking submarine Komsomolets. But the air-sea rescue aircraft was

only being tested at that time. At present it is the largest aircraft of its type. But we need an even larger one so that tragedies such as the Admiral Nakhimov do not take place again. We need to have the ability to take hundreds of persons from sinking ships on board for one flight. Work on such aircraft is already under way at Taganrog, and we have good reserves."

The "Albatros" is capable of bringing about a revolution in firefighting. It does not have to return to a remote airfield for water—it can fill up its water tanks from a lake or river while it is hydroplaning.

There are other missions for the aircraft—patrolling the 200-mile economic zone, escorting vessels in the northern latitudes, and simply flying passengers in those countries where there is not enough land to build airfields.

## RAIL SYSTEMS

### Container Transport Improvements Viewed

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[Article by M.A. Basyrov, candidate in Technical Sciences, and G.Ye. Pisarevskiy, candidate in Economic Sciences: "The Introduction of a New Generation of Large Containers"; UDC 621.869.888.004]

[Text] With a view to increasing the throughput capacity and heightening the efficiency of railroad operations, a group of studies are now being made on improving container transport. A great deal of attention is also being paid abroad at this time to increasing the efficiency of using the existing container fleet and improving the parameters and construction of the new ones, based on the changing needs for this type of transport. Here, this problem, under the conditions of a constant reduction in the proportion of container-suitable freight, is being solved through expanding the use of containers having a larger interior volume than standard ones. In this case, the maximum gross weight of the containers is not a decisive factor. (Footnote 1) (See ZHELEZNODOROZHNIY TRANSPORT, 1990, No 5) The data on some of the large containers with increased capacity, already being used abroad, are given in the table. It can be seen that a change in the basic technical parameters of the containers affects the increase in their interior volume, as compared with standard ICC and IAA (in the table, letter designations of the versions studied are introduced in accordance with these types of containers). For example, in container version C3, the exterior length is increased to 7,442 mm, the width to 2,591 mm and the height to 2,896 mm, and the interior volume by approximately 48%, and in container version A5, which has an exterior length up to 17,100 mm, a width up to 2,591 mm and a height of up to 2,896 mm—by almost 70%. Widening the containers, and consequently increasing the floor area, improves their utilization when loading with transport packages on standard pallets with a side of 1,200 mm, which increases the total average load.

Description of indicator	Container versions									
	1CC	C1	C2	C3	1AA	A1	A2	A3	A4	A5
Exterior (numerator) and interior (denominator) measurements of containers, mm:										
length	6,058 5897	6,833 6680	7,442 7,290	7,442 7,290	12,192 12,027	13,716 13,561	14,935 14,793	14,935 14,793	16,150 16,000	17,100 16,958
width	2,438 2,330	2,500 2,440	2,500 2,440	2,591 2,490	2,438 2,330	2,500 2,440	2,500 2,440	2,591 2,490	2,591 2,490	2,591 2,490
height	2,591 2,398	2,896 2,685	2,896 2,685	2,896 2,685	2,591 2,380	2,896 2,685	2,896 2,685	2,896 2,685	2,896 2,685	2,896 2,685
Interior volume, m <sup>3</sup>	32.9	43.3	47.8	48.7	66.7	88.9	96.9	98.9	106.9	113.4
Floor area, m <sup>2</sup>	13.7	16.3	17.8	18.2	27.9	33.1	36.1	37.0	40.0	42.3
Estimated tare weight, t	2.3	3.5	3.8	4.0	3.5	4.6	4.9	5.1	5.5	5.8
Estimated average load, t	11.5	15.0	16.3	16.8	21.1	23.0	23.4	23.6	23.8	23.84
Number of packages in container with dimensions, mm:										
1,200 X 1,000	10	12	14	14	22	26	28	28	32	34
1,200 X 800	14	16	18	18	28	32	36	36	40	42
Number of containers on flatcar-container carriers:										
long-base	3	2	2	2	2(+1CC)	1	1	1	1	1
modernized	2	2	—	—	1	1	—	—	—	—
Use of railcars (%) of long-base (numerator) and modernized (denominator) by:										
capacity	84.6 76.9	65.1 88.8	70.99 —	73.5 —	84.9 77.4	65.3 89.1	71.0 —	73.5 —	79.6 —	84.4 —
load capacity	63.7 14.5	56.9 59.7	61.8 —	64.0 —	61.9 39.7	42.5 44.5	43.5 —	44.2 —	45.1 —	45.6 —

The possibility of transporting large containers with the increased capacity of non-standard parameters along domestic railroads was considered according to the example of using existing flatcars. In this case, it was considered that the containers, in addition to corner fittings, were also equipped with intermediate fittings, with a standard distance between the centers of the openings in them, both along the width and along the length of the body. This makes it possible to use the pin stops permanently installed on specialized railcars, and to use the existing load-lifting grips.

Large containers, just as other freight suitable for transport within the limits of the road network under general conditions, should not have dimensions exceeding the general network loading gauge established by the MPS [Ministry of Railways]. With the possible width of a nonstandard container being 2,591-2,600 mm, its height can be 3,100-3,125 mm, based on the loading height of specialized flatcar-container carriers and all-purpose flatcars, from 1,275 to 1,320 mm, used for their transport. When the containers are 2,896 mm high, their width, within the limits of the clearance, can reach 2,900 mm. There are thus substantial reserves for an increase in the linear parameters of large containers.

Otherwise, the arrangement of nonstandard containers on rolling stock is formed as seen in the table. They are generally transported on specialized four-axle flatcars with a frame 18,400 mm long (railcar models 13-470 and 13-9004) and on flatcars re-equipped from all-purpose cars with a frame 13,400 mm long (model 13-N455) or

12,974 mm long (model 11-N004). The instructions for operating large containers, as an exception, also permits them to be loaded onto all-purpose four-axle flatcars with sides, the basic technical specifications of which coincide with the characteristics of the re-equipped cars. When loaded on specialized flatcars, nonstandard containers will be secured like ordinary ones, by pin stops permanently fixed on them. On all-purpose flatcars, the containers are secured by single-use devices (bars and guy lines).

Therefore, nonstandard large containers, with their capacity increased through changing the dimensions along the height and width, while maintaining the standard length, can be arranged on cars similarly to standard containers of 1CC type-sizes (6.1 m long), 1BB (9.1 m long) and 1AA (12.2 m long). When the length is increased, the arrangement of nonstandard large containers will be different. For example, two type C containers, each from 6,058 to 6,833 mm long (here the freight does not extend more than the maximally permissible 400 mm past the limits of the end beams) or type A containers, not over 13,716 mm long, can be placed on model 13-N455 and 11-N004 modernized flatcars. No more than two type C containers, but up to 7,442 mm long, can be placed on long-base specialized flatcars with a frame of 18,400 mm. In this case 1,720 mm of the load length of the car remains unused on both ends.

When nonstandard large containers are loaded onto all-purpose flatcars, with one-time fastening devices used, allowance must be made for the width of the cross



bar, which is 125-150 mm. For example, if cross bars even 125 mm wide are used for fastening, it is impermissible to load type C containers 6,833 mm long on model 13-N453 and 13-N459 flatcars (with a frame 12,974 mm long), while nonstandard containers less than 6,833 mm long can be placed on them. It is permissible to load containers of this length on all-purpose flatcars (frame, 13,400 mm), allowing for the use of cross bars 125 mm wide. When containers with increased length (7,442 mm) are placed on an all-purpose flatcar with a frame 18,400 mm long, it is not fully used. It is better to use long-base flatcars when accommodating large containers up to 17,100 mm long.

Therefore, the loading gauge and technical specifications of the existing fleet of flatcars do not restrict the possibilities of transporting containers along the road network. The extent of using the load capacity of the fleet of flatcars when transporting these containers, however, tends to be reduced, as compared with that for standard ones. As can be seen from the table, maximum use of the load capacity of the cars is achieved when loading 1CC and 1AA standard containers, as well as container versions C3 and A5. In this case, the version C3 containers ensure only 73.5% use of capacity of the car, and version A5 (with the same car capacity) permits 45.6% use of the load capacity of the car.

Widescale distribution of freight transport in the promising large containers with increased capacity in domestic service, however, is complicated by the virtually total absence of operating and technical conditions for their use in motor vehicle transport. The existing dimensions of highways permit the operation of means of transport with dimensions by width—2.5 m, height—4 m, length (tractor and trailer rig)—20 m and weight 36 tons. Consequently, the use of certain versions of large containers with increased capacity is permissible only according to the length and weight of the tractor-trailer rig. To satisfy the conditions for transport with respect to height, a fleet of trailer-container carriers, new in principle, must be developed, with the corresponding load capacity and lowered loading platform. The limits specified by the rules of road traffic when freight exceeding the clearance dimensions is transported must also be removed.

The production of a new fleet of motor vehicle rolling stock and a change in the existing restrictions will require considerable expenditure. Therefore, we shall dwell on the question of economic substantiation of the possibility of using large containers with increased capacity (with nonstandard parameters) only in railroad transport. Studies conducted at the VNIIZhT [All-Union Scientific Research Institute of Railroad Transport] of the possible changes in the average load for containers with increased capacity, on the basis of the structure of the freight transported along domestic railroads, showed that increasing the gross weight of type C containers from 24 to 30.5 tons gives a negligible increase in the static load (only 2.3%), while increasing the height of the container by 300 mm gives an almost 11% increase in it.

Changing the linear measurements of type C containers (up to 2,591 mm wide, up to 2,896 mm high and up to 7,442 mm long) with an existing gross weight of 24 tons leads to increasing the average load by 35.9%, and with a simultaneous increase in their gross weight to 30.5 tons—by 46.6%, i.e., when the volume of the container increases, the effect of its gross weight on the average load level grows considerably.

A comparison of the versions of type A containers shows that widening the original 1AA container from 2,438 mm to 2,500 mm, while maintaining the rest of the parameters, gives an average load increase of 5.8%. With a simultaneous increase in its height or height and length, the effect of the width of the container on the increase in average load is reduced to 1.5%. A negligible increase in this indicator is also observed when the container is widened to 2,591 mm. The table shows the estimated average loads for only eight possible container versions, although there can be a considerably larger number of them. The criterion for selecting the versions adopted was their most efficient placement on the existing fleet of flatcars.

In connection with the designing of new structural types of containers and modernization of the existing ones, technical-economic estimates were made for them, based on the premises of existing methodological recommendations on determining the economic efficiency of measures for scientific-technical progress in railroad transport. The effectiveness of their introduction was established on the basis of the useful result of performing the transport of container-suitable freight, as well as the expenses for the national economy for the period under review, i.e., in consideration of the time factor. The comparability of the container versions was ensured by comparison in respect to the volume of transport implemented and the level of transport parameters achieved, such as traffic safety, preservation of the quantity and consumer properties of the freight transported, delivery periods, work reliability and also work conditions and other social and ecological factors.

In view of the fact that at the stage of technical-economic substantiation, the parameters of the containers compared, which determined the level of the results and expenditures for the transport performed in them, were unknown, the technical-operational indicators used in the calculations were accepted as invariable for the years of the period under review. The amount of the economic effect was determined according to the formula

$$E_T = [(P_y - I_y)/(\lambda_r + E_N)] - K,$$

where  $P_y$  is the cost evaluation of the basic and attendant results of transporting freight in large containers, invariable for the years of the period under review;  $I_y$  are the yearly current expenses of railroad transport and other sectors of the national economy when containers of different type-sizes are used in calculating the yearly



volume of transport implemented by the more productive container (not counting the deductions for renovation);  $K$  are the one-time expenses of railroad transport and other sectors of the national economy, necessary to ensure normal operation of the containers, estimated for the transport volume implemented by the most productive container;  $\lambda_r$  is the norm for renovation of fixed capital when using the container, determined on the basis of the time factor;  $E_N$  is the norm of the efficiency of the capital investments ( $E_N = 0.1$ ).

The cost evaluation of the basic results is determined as the level of the tariffs to transport freight in containers, in relationship to their load capacity, as well as of the charges to perform loading-unloading operations with the containers. Included in the costs resulting from the directly calculable volume of transport, are the expenditures for capital repair of the cars and containers needed for this (not counting the deductions for their renovation), as well as the expenditures for technical service, repair and depreciation of the technical devices.

Among the corresponding one-time expenditures are: the cost of the containers and container-carrying cars handling the yearly transport volume, as well as of the train and shunting locomotives; expenditures to develop a repair base for railcars and locomotives, track installation at stations and the throughput capacity of open lines. The changing current expenditures, along with expenditures for the basic railroad activity, include the accompanying expenditures related to the performance of loading-unloading operations, maintenance, repair and depreciation of the crane equipment and container areas, which differ according to the container versions being compared.

Considering the network nature of container handling, the expenditure norms used in technical-economic calculations reflect the present-day average network level of wholesale prices for materials and fuel, wages, etc.

The basis of the studies made at VNIIZhT were the parametric models that made it possible to determine the current expenditures and one-time expenditures of railroad transport, related to the use of the container versions being compared, differing in the level of the technical-operational parameters. They include: the dynamic and static loads of the containers, the run of a container carrier car when loaded and the coefficient of the empty run to the loaded one, the average distance of the freight transport, the number of containers per container-carrying car and the length of it along the coupling axes, the tare weight of the car and container, the idle time for freight operations, etc. The relationships worked out make it easier to perform the calculations for a comprehensive estimate of the effectiveness of introducing large containers. Attempts to evaluate the efficiency of a container by regarding any one indicator as the main one were unsubstantiated in principle.

Multi-variant calculations of the efficiency of delivering freight in large containers with varying parameters (for

the period under review) show that transport in type C containers (C1 version—the effect is 97.8 million rubles [R] calculated per transport of 1 million tons) is most efficient. The use of modernized flatcars to deliver containers, as compared with long-base specialized ones, reduces the road expenditures by R9.2 million. The relatively low efficiency of transporting freight in type A containers (A1 and 1AA versions—effect from R7.1 million to R18.9 million, calculated per million tons) stems from the fact that the railroad transport revenues from this type of transport are formalized on the basis of common tariffs for large containers with a load capacity of 30 tons and do not take into consideration their high cost and technical parameters.

The calculations performed made it possible to determine the economically expedient spheres of use of large containers of the new generation, on the basis of the costs for delivery to mainline railroad transport and their removal from the stations to the consumer. For example, it is expedient to use type C containers when performing intra-road transport, if the distance of their delivery-removal by motor vehicle transport is within a range of 150-320 km, and type A containers—within a range of 970-1,480 km. When determining the relationship of the economic effect to the degree of loading the containers, additional consideration must be made of the effect from reducing the freight weight en route. In consideration of this extra-transport effect, optimal values were established for loading the containers. It is advisable to load type A containers up to 24-27 tons, while the extent of loading type C containers is only 15-17 tons.

Studies made of the efficiency of delivering freight in large containers of the new generation with increased capacity along domestic railroads made it possible to find potential ways of intensifying freight transport. The efficiency of this transport at the present stage can be calculated only in close interaction with other types of transport. With a change in the series of fundamental principles in the national economy, problems of the quality of the freight transport take on priority. The concept of "transport quality" presupposes not only the speed and regularity of freight delivery (which affect the timely changes in the market and the reduction in commodity reserves), but also the safeguarding of the freight when it is delivered in the new transport devices, as well as when intermediate transshipping operations are eliminated, which is of great social and economic importance. Solving this set of problems requires working out the concept of combined freight transport, which makes possible the optimal use of the parameters of different types of transport in the country's unified transport system. One of the traditional means of combined transport is also the use of large containers.

Large containers of the new generation substantially improve the quality of the transport, ensuring, through the large capacity of its body, an increase in the loading of the containers during transport of lightweight freight, better arrangement of the transport packages, acceleration of freight delivery, etc. When these containers are

introduced, however, allowance should be made for the parameters of the existing technical devices. This situation leads to the need for stagewise introduction of containers of the new generation, the need for their operation in combination with other existing types of containers in order to maintain and expand the existing market for transport services in international transport, particularly favorable with the prospects of opening a Transasiatic railroad mainline (Southeastern Asia -China-Kazakhstan-Urals-Europe).

At the first stage, large containers can travel along domestic railroads in transit from port to port. In the future, they can be transported from ports to the border railroad stations of contiguous countries, with preliminary study and a solution to all the related technical and technological problems. It is possible that delivering large containers of the new generation to large container terminals for general use (with unloading at the site) and to the access tracks will have to be provided. Setting up the appropriate motor vehicle transport with increased roadability and reduced loading platforms will ensure exit onto internal lines.

Each stage of introducing large containers of the new generation presupposes carrying out the appropriate technical-technological research, based on creating demands for new technical devices, the initial data for which should be worked out after the appropriate decisions of the International Organization for Standardization (ISO) are made. In addition, expanding the use of these containers should be stimulated by the existence of a well-developed tariff system, which encourages this new type of transport and ensures sufficient profitability in carrying it out.

It should be emphasized that the problem of introducing large containers must be solved in the aggregate, in working out the overall concept of developing combined freight transport and ensuring maximal unification of these devices (their mutual complementary nature or interchangeability). It is impossible to solve this problem without working out the appropriate intersectorial program, oriented toward creating a modern transport infrastructure, conforming to the new economic conditions being formed and ensuring its outstripping development.

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### **Program for Increasing Train Speeds Reviewed**

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[Article by S.I. Shkapich, chief of the Belorussian Railroad, and G.V. Akhramenko, engineer: "Increasing the Speeds of Passenger Trains in Inter-Oblast Service"]

[Text] Within the framework of the sectorial scientific-technical program (ONTP) "Uskoreniye," aimed at increasing the speeds of passenger and freight trains on the main routes of the network, a methodology has been worked out which makes it possible to determine the minimum required capital expenditures to carry out the

assigned reduction in running time, or vice-versa—the maximum possible reduction in running time, given the capital investments allotted. In both cases, the site and nature of the work to modernize permanent installations are precisely fixed. The problem of accelerating passenger train traffic, however, exists not only for long routes, but also for the polygon serving a certain local region of the country, in which the population centers and business centers need rapid and efficient communication, between each other and in service with the main center of the region.

Studies made at the Belorussian Institute of Railroad Transport Engineers (BelIIZhT) show that on the Belorussian Road, trains providing maximum convenience for passengers making business and personal trips between the main centers of the republic can be put into operation. The requirements for the traffic parameters of these trains are the following: departure from the residential center should be assigned on the basis of the operating schedule of urban transport; arrival at the destination and departure from it should ensure time to solve production problems and coincide with the length of the working day of the enterprises and organizations located here; the maximum time spent by a passenger en route, from the stand point of offering maximum convenience, should not exceed 4-5 hours; the train stops should be assigned on the basis of economic and social factors, and their length should be minimal, but sufficient for the passengers to board and alight safely.

The average speed between stops that ensures fulfillment of the conditions listed above is regulated by the distance between the departure and destination points, the time for the train to accelerate, slow down and stop, and the number of intermediate points where a stop is specified. In this case, it is the number and system of arranging the halting points along the length of the route, as well as the length of the stop, that have a substantial effect. The point is, that with an increase in the number of stops, the average speed between stops should be increased to cut down the running time. This is not always possible, however, due to speed restrictions, the state of the permanent installations and the technical characteristics of the rolling stock, etc. Therefore, reducing the number of stops is one of the real reserves for increasing passenger train speed.

As a result of reducing the number of train stops, there will be a reduction in the expenditures entailed in the additional mechanical work involved in the process of accelerating and slowing down, and also in the delay incurred by train passengers en route. On the other hand, however, the expenditures will be increased for passengers living at a population point where a stop has been canceled. On the basis of these considerations, BelIIZhT has worked out a mathematical model study of the solution to the problem of assigning the stops. It consists of individual elements determining the abovementioned factors, and characterizes the process as a whole. The calculations made of the average speeds between stops along routes which ensure more favorable conditions, on the social plane, for passengers using non-stop trains in inter-oblast service, are given in the table.

Routes	Length, km	Type of traction	Number of main tracks	Total time for the train to accelerate, slow down and stop	Minimum required average speed between stops, km/hr, with time for passengers to stay at destination point, hrs		
					6	8	10
Minsk-Gomel	301	D	II	1.13	77.8	104.9	160.9
Minsk-Brest	345	E	II	0.63	78.9	102.4	145.5
Minsk-Grodno	340	D	II/I	0.92	87.3	115.6	171.2
Minsk-Vitebsk	295	D	I	1.15	76.7	103.5	159.4
Minsk-Mogilev	212	D	I	1.80	66.2	96.5	170.0

The data from the table makes it possible to establish the effect of the average speed between stops on the time a passenger stays at the destination point, from the condition for ensuring the average necessary speed between stops by means of the designed parameters of rolling stock types DR1, D1 and ER9, which can be additional information when compiling a traffic schedule for trains in inter-oblast service. It is most expedient to use these trains, since the passenger's travel time is not over five hours.

The weight of a train in inter-oblast service depends on the number of passengers that must be transported. For this, we must know the data on the accumulation on the route of the flow of passengers who will presumably use these trains. The weight of the trains for each route is determined on this basis. It should be, on the routes, Minsk-Gomel—300 tons, Minsk-Brest—360 tons, Minsk-Grodno—225 tons, Minsk-Vitebsk—210 tons and Minsk-Mogilev—255 tons.

When the average speed between stops for a train of the given weight cannot be realized because of the state and parameters of the permanent installations (switches, permanent way, bridge superstructures, roadbed, platforms), measures must be taken to eliminate the speed restrictions. As the experience in working out the ONTP "Uskoreniye" showed, the largest number of permanent passenger train speed restrictions stem from maintenance-of-way work, and as a rule, the measures taken to eliminate them involve considerable capital investments.

At the same time, the effect from removing the restrictions depends to a great extent on the level of the speed restriction, its length and, very essential, on the mutual location of the restrictions with respect to each other. In view of the comparatively short length of the sections being discussed, along which non-stop trains in inter-oblast service are specified to operate, dividing the lines into sections by length on the line, a method successfully used for very long lines in the ONTP "Uskoreniye" study, does not in this case make it possible to reflect the specific nature of the task. Therefore, a different approach is suggested, in which the boundaries of the section are compulsory stopping points. Within the limits of each such section, measures are designated to eliminate the speed restrictions for the trains. This task amounts to forming a sequence of work on modernizing

permanent installations that is optimal according to the criterion of the efficiency indicator. It can also be applied to combinatory optimization tasks, the essence of which lies in finding, among the multitude of alternatives, the one that best accords with the extreme importance of the target function adopted. Formulation of this task may be joined to the tasks of integral programming.

The problem of integral programming may be solved by the method of simple sequential search. As a rule, however, it is not efficient to use this method with a large number of variables, and the process of computation requires a machine time input that is unjustified from the practical standpoint. Therefore, it is obvious that the general algorithm for solving the problem should exclude the need for a simple sequential search of all the permissible alternatives. Methods are thus required that ensure a partial sequential search of a relatively small number of permissible variants and implicit sequential search of all the rest. The method of partial (implicit) sequential search is most suitable for solving the problem of seeking the optimal program. Here, a systematic review is made of the subset of solutions, and by evaluating the values of the functions corresponding to the solutions to these subsets, it is determined if the optimal one, or a better one than the known permissible ones, is found among them.

It is advisable to carry out measures to reduce the running time of a non-stop train in inter-oblast service in the following sequence. First, the length of the stops should be reduced to the maximum without creating inconvenience for the passengers. Then the number of stops should be reduced, on the basis of the fact that at higher speeds, the time for slowing down and particularly for accelerating, with the constant ratio "tractive power—weight", increases substantially. After this, measures are taken to modernize the permanent installations adopted when working out the ONTP "Uskoreniye." Finally, measures are implemented to rebuild the permanent installations which will make it possible to remove the speed restrictions (they should be resorted to in cases when the above-listed measures do not give the required effect of accelerating passenger train traffic).

Let us examine the example of carrying out the above-listed measures on the Minsk-Grodno route. With the existing stays at the stopping points, the total running time of the train, allowing for losses in accelerating,

slowing and stopping, is 5.61 hours, more than the maximum possible time of the stay of the passenger en route, which is five hours. Therefore, the task lies in reducing the running time by 36 minutes. It is clearly inexpedient to accelerate the throughput of the trains merely by cutting out stops, since this will virtually lead to abolishing them altogether, which is highly undesirable from the social standpoint. Therefore it is expedient to cut only part of the time through abolishing a number of the train stops, and part of it—through modernizing the permanent installations.

It should be noted that train stops made in the area of major population centers, of course, should be retained, and the rest, where the accumulated passenger flow is negligible, can be abolished. For example, on the route under discussion, train stops are retained at the operating control points of Molodechno, Lida and Mosty, but the possibility of abolishing the rest of them is being discussed. The total saving of time in this case was 26 minutes, and the net gain—299,000 rubles. Another 10 minutes was cut through removing the speed restrictions. These stopping points are the boundaries of the sections within which modernization of the permanent installations is being carried out. The sites of speed restrictions were ascertained on each section, the reasons for them were established and measures aimed at removing the speed restrictions and the cost of these measures were determined. For example, on section I (Minsk-Molodechno), the number of restrictions was 19, on section II (Molodechno-Lida)—30, etc. By means of the method of partial (implicit) sequential search, the possibility of removing the restrictions or groups of them on each of these sections was examined, and the sequence, ranked according to the indicator of efficiency, and the dominating sequence were plotted.

As was noted above, the optimal solution is the one which achieves the maximum efficiency in the use of capital investments, while ensuring the given reduction in running time. From the standpoint of the technology of the work done on modernizing the permanent installations, it is expedient to concentrate the work front on one or two sections. In this case, two sections are being considered, since the greatest reduction in running time is reached on them. As the result of solving the problem on the first section, seven speed restrictions are eliminated, which ensures a 3.1 minute reduction in the running time, and on the second section—24, with the running time reduced by 7.01 minutes.

The plan for designating the stops can be corrected. For example, a train stop at the Bogdanov Station may be provided, after the proposal has been evaluated by the appropriate method. This will lead to the need to compensate for the loss of time through additional removal of speed restrictions.

The proposed method makes it possible for the person who has made the decision to examine and evaluate alternative variants of achieving the goals set, allowing

for the social factor, the necessary capital expenditures and the effect and real possibilities obtained.

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### High-Speed Rail Project Addressed

914H0200A Moscow *ELEKTRICHESKAYA I TEPLOVOZNAYA TYAGA* in Russian No 2, Feb 91 pp 2-5

[Article by B.I. Zimting, special correspondent of *ELEKTRICHESKAYA I TEPLOVOZNAYA TYAGA*: "The High-Speed Train in the 21st Century: From the 2d All-Union Conference on High-Speed Traffic"]

[Text] We have prided ourselves for too long on our ER200 train. We called it a superexpress and printed publicity booklets and calendars with its picture. Meanwhile, on the railroads of Germany, trains were beginning to rush along at a speed of 407 km/hr, and the French TGV reached a milestone of 515.3 km/hr. Once again we have to catch up with the West.

Two years ago, the USSR Council of Ministers approved a State scientific-technical program, "High-Speed, Ecologically Pure Transport," the railroad section of which was discussed in the summer of 1989 at the 1st Conference on High-Speed Traffic. At that time, the basic directions in the development of this advanced method of passenger transport were outlined, and a unique "think tank" was created.

In the time that passed between the 1st and 2d conferences on high-speed traffic, scientists did a considerable amount of work. The scientific plan for the high-speed mainline (VSM), Center-South (Leningrad-Moscow-Crimea, Caucasus) was developed, and is now in the hands of a commission of experts at USSR Gosplan. Its main premises have already been approved by the transport commissions of the USSR and RSFSR supreme soviets, Lensovet, Mossovet, the collegium of the MPS [Ministry of Railways] and the scientific-technical community.

The 2d All-Union Conference on High-Speed Traffic could even have been called international. Representatives of railroad and transport firms in France, Germany, Japan, the United States, Austria, Belgium, Spain, Poland, Czechoslovakia and Switzerland attended it and took a very active part in the discussions of the problems.

B.N. Yeltsin, chairman of the RSFSR Supreme Soviet, sent greetings to the participants in the conference. A.A. Sobchak, chairman of the Lensovet and deputy of the USSR Supreme Soviet, gave a speech of good wishes to those who had gathered there. He noted that construction of a VSM is particularly important for Leningrad. A course has been taken here toward creating a free economic zone and widescale conversion, which cannot be implemented without an improvement in the means of transport linking the city with West and East.

Railroad transport operation can be improved only on the basis of the most up-to-date scientific-technical achievements. In making the decision to build a high-speed mainline, wide use must be made of the achievements of foreign railroads, and we must not restrict ourselves to the invention of our own "bicycle."

G.M. Fadeyev, USSR first deputy minister of Railways, opened the conference. In his speech he substantiated the need to begin construction of a VSM in our country as soon as possible. Soviet railroads transport over 4 billion passengers yearly. According to the predictions of scientists, it is expected that passenger flows in future service will grow by almost one-third by the year 2005. This is not the limit. The trend of growing mobility of the population will be maintained in the future as well. The railroads should be ready to fulfill this social demand.

Meanwhile, on the main routes of the network, fulfillment of the throughput of the lines has reached 90%, and on a number of sections it is utilized fully. The unsatisfied demand for transport exceeds 20%. Sizable capital investments are needed for rebuilding and new construction. They are inevitable, and therefore must be spent in the most efficient way, in consideration of the future.

As world experience shows, organizing high-speed traffic makes it possible not only to raise the quality of passenger service considerably and to increase transport volume, but also to take the load from other types of transport. In Japan and France, for example, after the new mainlines were put into operation, a considerable number of passengers who had formerly used air service switched to trains traveling at speeds of up to 300 km/hr.

Under the conditions of our country, VSM will transport passengers, without increasing the overall time taken for the trip, by day trains for a distance of up to 800 km, and by night trains—up to 2,000-2,500 km. Air transport will take on the service on more distant routes.

The material aspect of the matter is so far unresolved. It goes without saying that large funds are needed to construct the entire mainline and develop new rolling stock. It must be borne in mind, however, that construction will be carried out in stages. The first stage is the construction of the Leningrad-Moscow line in the course of eight years time. The yearly expenditures will be approximately 250 million rubles [R]. As a comparison: the loss suffered by the national economy because of lack of provision with transport will reach R10 billion a year, and the expenditures of railroad workers to maintain the track installation—R3 billion a year.

There is no doubt that the capital investments will be repaid through the profits that we will receive from operating the VSM. Cutting the time of the trip between Leningrad and Moscow from six to 2.5 hours will contribute to a substantial improvement in the transport links between Russia's two largest cities, the total population of which exceeds 14 million persons. Hundreds of passenger cars and locomotives will be released for other routes.

Other advantages that can be mentioned are the considerable increase in transport safety and the reduction in the ecological effect on the environment. Separating freight and passenger traffic will make possible high-speed delivery of freight from the southern regions of the country, which will ensure its better preservation.

Also very important is the fact that developing means of transport, new in principle, for the VSM will ensure the transition of all railroad transport to a qualitatively new degree of technical development, not only of railroad transport, but also of other very important sectors—machine building, control devices and construction. After all, developing a VSM requires locomotives, railcars, rails, track and construction machinery, automation devices, etc. that are new in principle.

Another question: where can we get the funds to build the mainline? The main part of the expenditures should, of course, be provided from centralized sources, from funds which somehow or other will be allotted to develop the sector. Other, nontraditional ways must be sought, however. For example, the funds of the union republics, foreign firms, commercial banks and joint-stock holding companies can be drawn in.

Along with the detailed studies of the Leningrad-Moscow mainline, the problem of developing high-speed service on the Moscow-Brest route, and farther on to Warsaw, Berlin and Paris is now being discussed. Creating this line will make it possible for our country to hook up with a Unified European High-Speed Railroad Network. Construction of lines with the European gauge width of 1,435 mm would be realistic on this route. The possibility of trains of the TGV and ICE type passing across the border without stopping would therefore be ensured.

Ye.A. Sotnikov, general designer of the VSM Center-South project, and deputy director of the VNIIZhT [All-Union Scientific Research Institute of Railroad Transport], spoke to the participants about the problems of developing high-speed traffic on USSR sections. Today, the concept of the mainline has already been worked out, a preliminary choice of route has been made, and its location justified. The operational and technical parameters of domestic high-speed rolling stock, a highly stable railroad track with anti-noise and vibration-prevention features, the devices for STsB [signaling, centralization and blocking] and communications, a set of technical devices to control and ensure train traffic safety, systems for operation and repair of railroad devices and the required electric power supply have been determined.

The economic effectiveness of building the mainline has been considered on the basis of the norms and parameters worked out. Studies have shown that building it and putting it into operation will make it possible to ensure a substantial savings in capital investments for the development of the lines and ordinary rolling stock being operated, added to which an additional effect will be

obtained through raising the transport safety level, reducing the expenditures to prevent and compensate for the adverse effect of air pollution and saving socially useful time for the population.

Developing high-speed railroad service in the USSR requires that a number of major problems be solved. The development of high-speed rolling stock must be accelerated, drawing in enterprises of the defense complex for this purpose, and the head manufacturing plant must be determined. Work is to be intensified on developing a number of new, highly productive machines for construction and technical service of the track and contact-wire network, as well as special technical devices for the systems controlling train traffic, electric power supply and communications.

The most efficient system of building a VSM network in the USSR is to put it into operation by stages. It would therefore be expedient to start planning and building the main Leningrad-Moscow section as early as 1991. It can be put into operation in 1998.

The speech made by S.S. Zhabrov, deputy general designer of the Center-South project, was of great interest to the participants and guests at the conference. As we know, increasing the speeds of passenger trains on the lines now in operation can be achieved only by adhering to certain conditions. Among them are the favorable plan and profile of the track, the absence of speed restriction warnings, a sufficient amount of rolling stock designed for high speeds, etc.

In most cases, however, these conditions are not being fulfilled. A particularly serious obstacle is the lack of sufficient throughput, as well as the unsatisfactory state of the track. Studies have shown that increasing the throughput, combined with modernizing and rebuilding the lines being operated, is commensurate in expenditure to building new specialized passenger mainlines with parameters permitting travel at speeds of 300-350 km/hr.

Funds spent in real terms to increase the throughput capacity, modernize and rebuild the lines will make it possible to increase the route speed of a limited number of passenger trains to the level of 75-77 km/hr. The estimated cost of one minute of acceleration without reconstructing the plan was determined as R0.5 million, and with reconstruction—R3 million.

Even if the entire amount of work needed for modernization and reconstruction is carried out, the results achieved will not remain stable with time. Because of the combination of freight and passenger traffic on the same tracks, an endless cycle arises of restoring the parameters of the plan and profile of the track, deformed by heavy freight trains. Only the construction of specialized high-speed mainlines is an optimal solution to these problems.

At present, along with creating the route for the Leningrad-Moscow VSM, preplanning and scientific research

work is being completed to determine the most promising version of the Moscow-Brest (1,100 km) and the Moscow-Kiev-Chop (1,765 km) VSM. Of the other international services, the most promising is running high-speed trains into Finland along the Moscow-Leningrad-Vyborg-Helsinki route. This route does not require shifting bogies, since the gauge in both countries is identical—1,520 mm.

The question of a gauge width of the USSR high-speed service network corresponding to the Western European network remains debatable, as does that of the clearances of the high-speed rolling stock of the Soviet railroads.

In the foreseeable future, the development of VSM is specified on the Moscow-Kiev, Moscow-Gorkiy, Moscow-Urals route, and further along the route to Vladivostok.

V.M. Savvov, chief engineer of the October Railroad, showed that he is an ardent adherent of high-speed traffic. He convincingly proved the urgency of building a VSM, precisely on the Leningrad-Moscow section. History shaped things so that the Saint Petersburg-Moscow route became the test polygon for realization of high-speed traffic. History did not make this choice by chance, since a great deal of attention has always been paid to improving the transport link between the two Russian capitals. About 200 million persons a year are transported here today.

The Moscow-Leningrad line is one of the most high-intensity lines in the country, where, in addition to passenger, local, suburban and freight transport, high speed transport has already been realized. Since 1965, the Avrora train, with a speed of 160 km/hr, has been shuttling back and forth here, and in March 1984 the ER200 express began to run, with a speed of up to 200 km/hr on some sections. The road has carried out a special program of modernizing the equipment, funds have been allotted, and the personnel have received the retraining necessary for high-speed traffic.

Experience in operating the ER200 showed the great popularity of this train. It has steadily been filled 99.8%. It would appear that the number of these trains must be increased. If one counts the fact, however, that on some sections the ER200 beats the schedule of 12 to 14 pairs of trains, it is impossible to develop high-speed traffic on such a high-intensity line further without great loss. If one counts the fact that on the Moscow-Leningrad line there are sections where over 260 pairs of trains operate a day, it will be even easier to understand the urgency of the problem of constructing a special high-speed track.

L.N. Danilchik, director of Lengiprottrans, reported that the technical-economic indicators on the Moscow-Leningrad VSM section had been worked out by the Institute of Lengiprottrans, in conjunction with LIIZhT [Leningrad Institute of Railroad Transport Engineers], GiprottransTEI and other organizations, in 1989. The use of the Moscow terminal in Leningrad and the Leningrad terminal in Moscow as the end points of the route

was substantiated. Five versions of the VSM route were considered, three of which are competitive: Western, Combined and Novgorod. According to the Western and Combined versions, the train goes directly to Novgorod (using the Chudovo-Novgorod line), and according to the Novgorod route it passes 30 km away from Novgorod and the passengers are delivered to the train by motorbuses or high-speed trolleybuses.

The construction length of the line is 645 km, including 56.7 km on roadbed combined with the existing sections. The required amount of capital investments in the VSM and rolling stock is R2.6 billion, and in the external power supply an additional R0.6 billion.

It is stipulated that electric rolling stock be used, calculated for two types of power supply and a capacity of 912 spaces in the seating variant. The designed speed on alternating current sections is 350 km/hr, and on direct current sections—200 km/hr. Train traffic is scheduled from 0600 to 2400 hours. The time en route without stops is 2.5 hours, and with all the stops—up to 4 hours. The work on technical service of the line and repair will be done in the six-hour window from 0000 to 0600 hours.

The institute is now working out preliminary considerations for construction of a Leningrad-Finland VSM (to the Luzhayka border station). This VSM can be built in 4-5 years.

N.N. Gorin, director of the Rolling Stock Group, head scientific associate of VNIIZhT, talked about the basic results of the scientific research and experimental design work done to create domestic high-speed rolling stock. The technical requirements are oriented toward a locomotive type of electric train with dual power supply, capable of operating on alternating current of 25 kV, 50 Hz and a direct current of 3 kV. At the same time the possibility of using a motorized car variant, as well as single-system 25 kV electrical equipment is provided. The final choice will be carried over to the stage of technical planning, as soon as the head developer and manufacturing plant are determined.

The basic technical specifications of the electric train are: maximum speed during testing—350 km/hr, during operation—300 km/hr and schedule speed—250 km/hr. The axle load of the locomotive section on the rails is 18 tf, of a double-deck trailer car—17 tf. The total continuous rating of the train is 17,600 kW. The average acceleration at the platform is 0.5 m/sec, and the average slowing with normal brake application is 0.7 m/sec. The length of the locomotive sections is: 21 m main and 20 m—intermediate. The length of the four-axle passenger cars with a T clearance is not over 27 m.

In 1991 the workers were faced with the task of making the transition from calculations and mathematical model study to making and testing mock-ups of individual units and systems. A high-speed train can be

developed in a short time only with the participation of the best foreign firms, which have experience in building these trains.

The transport machine builders had to borrow from the experience of the aviation industry when working out the structures of the cars, the layout and finishing of the parlor cars, the choice of the electrical supply, air conditioning, fire extinguishing systems, etc. A.I. Gurtova, chief of the Scientific Research Complex of the OKB [experimental design bureau] imeni A.S. Yakovlev, gave an interesting report on using aviation technology when designing rolling stock for the VSM.

The OKB specialists suggest using modern panel methods of calculating the aerodynamics to optimize the aerodynamic shape of the nose of the train. It is recommended that the body be a wholly supporting, welded structure made of aluminum alloys, heat-vibration- and sound-insulated and airtight, excluding the possibility of jolting during emergency braking.

The proposed engineer's cab resembles a pilot's cockpit. The power control elements are removed from the console, airplane seats are used, and complete displays, airplane light signal indicators, and anti-glare glass over the instruments are employed. Airplane air conditioning and electric power supply systems, lighting equipment, fire extinguishers and lavatory equipment are provided for the parlor cars.

The radio link provides the transmission of control information, on-line communication of the engineers with the dispatchers and the train chief, and commercial telephone communication.

The studies made by the airmen provide a basis for drawing the conclusion that using the experience of domestic railcar building and the scientific-technical potential of aircraft building will help to develop competitive high-speed rolling stock.

In the three days work of the 2d All-Union Conference on High-Speed Traffic, its participants and guests listened to 33 very interesting reports by Soviet and foreign specialists. Representatives of locomotive building firms from France, Germany, Japan and other countries brought with them for the exhibit and left as a keepsake a number of excellent mock-ups of high-speed rolling stock, track and building machines and automation devices, as well as stands, charts and colored display boards. The excellent organization of the conference by its hosts—the railroad workers of the October Railroad—is worthy of mention.

In concluding the conference, G.M. Fadeyev, deputy minister of Railways, said that the office period of preparing for the construction of the VSM had ended and that it was time to pass on to practical work. Our industries, in particular, should be hurried up.

In the matter of developing new locomotives, railcars, track and construction equipment and other machine



building devices, our country today considerably lags behind other countries where commercial operation of high-speed lines is already in progress. It is simply shameful to enter the 21st century with the present type of transport.

In the intervals between the sessions, Soviet specialists had many meetings with representatives of foreign firms. They all declared the doors to be open to cooperation in any areas that are of interest to our country. Suggestions were made at these meetings that specific groups be created for cooperation on questions of interest to the Soviet side.

As has already been mentioned, however, the reality of financing our project is of concern to everyone. Today there are other standards of financing, and we no longer have to look into the bottomless pocket of the State. There are various ways to solve this problem, and they should be utilized. In order to sit down to negotiations at the round table, though, we should first have the firm word of our government. So far, however, this word has not been spoken. We can find out the government's decision only after the work of the expert commission of USSR Gosplan has been completed, and this is dragging out unjustifiably.

The conference recommended that the creation of specialized high-speed lines, new in principle, which would contribute to the efficient distribution of transport between the high-speed railroads, air and motor vehicle transport, be considered the strategic task of developing passenger transport, and that carrying out the program be considered one of the most important all-state tasks to achieve a radical improvement in transport service for the population, a rise in other very important sectors of the country's economy to a higher degree of scientific-technical development and a healthier state of the ecological situation in the European part of the USSR.

The participants in the conference appealed to the State and government organs of the USSR and RSFSR with a request to support the project under discussion and to ensure the allotment of the necessary financial and other types of resources to continue scientific research, experimental-design, planning and construction work.

It was recommended that the USSR Ministry of Railways, USSR GKNT [State Committee of the USSR Council of Ministers for Science and Technology] and USSR Gosplan [State Planning Committee] go to the government with a draft of the resolution on building the lead section of the Leningrad-Moscow high-speed line and setting up a construction base, beginning in 1991.

Well, the conference on high-speed traffic is over. The answer to the question—on what train will we enter the 21st century—remains open.

[Box, p 3]

### Facts and Figures

High-speed transport is one of the most ecologically pure forms of transport. As a comparison: a jet airplane consumes 15 tons of fuel an hour. In its combustion, 47 tons of carbon dioxide, 18 tons of water vapor, 635 kg each of carbon monoxide gas and nitric oxide and 15 kg of sulfur oxide are expelled into the environment.

Last year 4.5 million persons were transported between Moscow and Leningrad. By the year 2010, the passenger flow volume will grow to 9.9 million persons. Without the development of the railroad, a new airport for 300 airplanes, making the flight in any weather, at 10-minute intervals, would have to be built to transport this flow.

Some 72 passenger trains and 53 freight trains a day shuttle back and forth on the Leningrad-Moscow section, and in summer, up to 160 electric trains. Every fifth potential passenger who wants to leave on long distance service is refused a ticket, postpones his trip or cancels it completely.

A unified European high-speed network, which includes 14 Western European states, is being created under the aegis of the European Economic Community.

In the United States, nine high-speed line projects are being drawn up. The organization of high-speed traffic is specified in Australia, South Korea, Brazil, Czechoslovakia, China and a number of other countries.

While about 2,800 km of high-speed lines are in operation in the world today, by the year 2000 they will extend for 9,000-12,000 km.

In the 25 years of high-speed railroad operation, there has been not a single accident or wreck, and not a single passenger has suffered. Not one other type of transport has achieved this result.

A Skorost Association has been created at the MPS and VNIIZhT. One of its tasks is to give all-round assistance in planning and accelerating the start of construction of the new Moscow-Leningrad VSM. All those wishing to become members of this association will be able to do so in the near future.

The Directorate of the Finnish Railroads supports the idea of building a VSM in the USSR, in the hope of connecting Helsinki with Europe, through Leningrad and Moscow. This will attract a flow of foreign tourists, who could travel through Finland to the Soviet Union and other countries.

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### **Railroad Chief on Local Consequences of Chernobyl Incident**

914H0189A Moscow GUDOK in Russian 6 Jun 91 p 3

[Interview with Marat Nikiforovich Grabskiy, Lvov Railroad chief, by I. Antonyuk, GUDOK correspondent "Wing of Chernobyl"]

[Text] Lvov—Chernobyl's wings have embraced the Sarny railroad hub. How are the inhabitants here overcoming the misfortune that has fallen upon them? How are they eliminating the accident's consequences? What is their daily life and work like? M. Grabskiy, the chief of the Lvov Railroad, answers these questions.

[Antonyuk] Marat Nikiforovich, five years have already passed since that fateful day. What has changed in the contaminated rayons of the Sarny hub during that time?

[Grabskiy] Six northern rayons in Rovno Oblast were exposed to radioactive contamination as a result of the accident. More than 20 of the mainline's stations are located on their territory. More than 20,000 railroad workers and their family members came to grief. Our collective mobilized all its forces and resources to help them. First of all, we worked out measures to protect the railroad workers' health. We signed a contract with specialists to conduct gamma spectroscopic inspections of the zone. We acquired a radiometer equipment set in Hungary for foreign currency in order to investigate radioactive nuclei in a person's body, the water, soil, and products. This equipment was installed in the hub's hospital where medical workers are conducting a thorough check-up of the railroad workers and the members of their families. Teams of doctors from Lvov have constantly worked here since April of last year using the watch method. To date, everyone has had a check-up. The doctors pay special attention to children and pregnant women. Unfortunately, almost 3,000 sick children have already been detected.

I can say without exaggeration that we are now sending the most advanced medical equipment, the best medical specialists and the required preparations to Sarny. The railroad's hospitals have reserved 200 places for the year-round curing and treatment of children (with their parents) who were victims of the accident. All departmental guest houses, holiday homes, sanatoriums, preventive clinics, and special hospital departments are accepting railroad workers without unnecessary delays.

[Antonyuk] I have had occasion to visit the contaminated rayons. It is terrible that an individual cannot gather the harvest from his kitchen-garden or keep livestock on a subsidiary small-holding. Deprived of such help, many railroad workers have completely shifted to store provisions. What is being done on the railroad so that the Sarny hub's workers will have clean products?

[Grabskiy] A radiological group is conducting radiological monitoring of food products and the water. Approximately 1,000 of these investigations have already been conducted since April of last year and dozens of cases of the radiological nuclei content exceeding the maximum permissible levels have been detected. Food products arrive absolutely clean from the worker supply section and those from private individuals are monitored very strictly. Water from all water supply sources is "X-rayed" once a quarter.

A special service of the medical epidemiology station has conducted a number of measurements of water from mineshafts and of the soil from the routes, track centers and spreader strips. The results of the investigations have not exceeded maximum permissible levels. All-Union Railroad Transport Scientific Research Institute specialists have conducted personnel monitoring of Sarny hub workers since October 1991 and they acquaint the collectives of those subunits, where the examination was conducted, with the results quarterly. A total of 100 individuals have undergone personnel monitoring.

[Antonyuk] You see, however, with the best will in the world, it is impossible to do anything with those sections where the radiation level exceeds maximum permissible norms. People also live there.

[Grabskiy] Yes, such sections exist and we must resettle approximately three dozen families from them. A 40-apartment building is being built this year in Sarny for this purpose. We will soon close the station of Snovidovichi where a hotspot of heavy radiation has been detected.

[Antonyuk] The increased radiation background has left a noticeable mark on the work of railroad workers. Are there any difficulties from a purely technical perspective?

[Grabskiy] Before answering that question, I want to say a few words about material help to the Chernobyl accident victims. The Ministry of Railways has allocated approximately 1.5 million rubles for this purpose. All workers, and those who went on well-earned rest from the Sarny hub's enterprises, have been given material help totaling 250 rubles each. We are thinking of also expanding this privilege to women on maternity leave. Since the middle of last year, we have been paying higher salaries to those working and living in population centers with increased contamination and we are retaining 75 percent of earnings for the main work place for those traveling on business to the radioactively contaminated rayons.

Now, concerning technical measures. The plans for repairing the routes and replacing switches and rails are being strictly carried out at the hub. In order to reduce the stay-time of train technical servicing point workers, we have introduced consist remote enclosures at crossings during maintenance. PONAB instruments have been installed for diagnostic purposes at the station of Sarny, the railcar preparation points at the station of

Klesov and on the approaches to Sarny from all four directions. The question of financing the construction of secondary lines on the Sarny-Luninets section is being solved. This will provide an opportunity for reducing the stop-time of trains in the contaminated zone.

Work is being performed to establish the appropriate medical living conditions. Special clothing and footwear are being issued in two sets and cleaned and decontaminated in a timely fashion. However, there are clearly not enough suits, jackets, cloaks, and even footwear.

[Antonyuk] What problems now disturb the railroad's leadership, most of all in connection with eliminating the effects of the accident at the nuclear power station?

[Grabskiy] There are quite a few of them. However, the main one is that the Ukraine has not yet approved a republic program for getting out of the situation that has taken shape. Most likely, that is why we cannot solve even the problem of constructing production, social, cultural, and consumer projects in the contaminated zone. More than six million rubles have been allocated this year for this purpose. It is necessary to build a medical and consumer services prefabricated building unit, cleansing units at several stations, a hospital with a polyclinic, a kindergarten, and a number of other installations. In Sarny, the railroad trust's Rovenskoye Construction Administration will be able to cope with the program only after three years. We have turned for help to the Ministry of Transport Construction and the Yugo-zaptransstroy Trust; however, as they say, we were turned away at the gates. Next, we requested the appropriate Ministry of Railways services to put at our disposal bridge train No 473, which was destined to be eliminated after reconstructing the Sarnenskiy Bridge Technological Design Plant, and we received a rejection from V. Alekseyev, the USSR deputy minister of transport construction. Evidently, the interdepartmental barrier, which quite frequently lets itself be known, played its role.

### Ufa Railroad Tragedy Investigation Concluded

914H0196A KOMSOMOLSKAYA PRAVDA in Russian  
31 May 91 p 3

[Article by Ye. Nichkova and G. Agisheva: "Catastrophe As a Way of Life: The Investigation of the Causes of the Railroad Accident Near Ufa Has Been Completed"]

[Text] Ufa—A total of 575 people were burned alive over the course of several hours in Ulu-Telyak on the night of 3-4 June 1989.

The accident's technical cause was mechanical damage to the liquefied gas product lines on the Chelyabinsk-Ufa railroad section. A leak of ShFLU [long light hydrocarbon distillate] began. The word "light" should not mislead one—this gas is heavier than air. That is why it flowed down and accumulated in a low swampy place.

The Novosibirsk-Adler and Adler-Novosibirsk trains should have met each other approximately 30 kilometers from the site of the tragedy, if they had traveled according to schedule.

The investigation has been completed—the loss to the state has been calculated to the kopek: 12,318,975.99 rubles (!). This pedantic accuracy chills the soul because, besides the loss of material things, this total includes both the "price" of the lives of those who died and the "cost" of the burns, injuries and disabilities of another 623 who were hurt.

Seven sat in the dock: V. Kurochkin, chief of the Nefteprovodmontazh Trust's SMU-1 [Construction and Assembly Administration-1]; R. Urazin, chief engineer of the trust's PMK-1 [Mobile Mechanized Column-1]; I. Kalachev, SMU-1 work superintendent; F. Kashapov, PMK-1 senior work superintendent; R. Rafikov, chief engineer of the Almet'yevskoye mainline product conductor administration; A. Kurbatov, chief of the Cherkassy line engineer technological service of the Almet'yevskoye administration of production enterprises; and A. Makarov, shift chief in this service. They are charged under Article 215 (Part 2) of the RSFSR Criminal Code—violating construction rules which led to serious consequences—and Article 173—official negligence which caused substantial damage to state interests and citizens.

Salavat Karimov, an investigator for especially important matters in the Belorussian SSR procurator's office, is convinced that this list is far from complete.

Whereas the encounter of the trains that were late was a deadly fortuitous incident, the accident at the product line was simply inevitable.

The investigation's conclusion was made as a result of a great number of commissions of experts—legal-medical, legal-technical, criminalistic, engineer-geological, and engineer-construction. The conclusion has one meaning: the cause of the accident was the primordial defects in construction. That is why A. Maksimov, Nefteprovodmontazh Trust director; A. Smirnov, Soyuzneftegaspere-rabotka VPO [paramilitary firefighting section] deputy chief and chairman of the state commission; and A. Gayazetdinov, Almet'yevskoye UMP [local industry administration] chief and member of the state commission, should also be sitting in the dock. However, a criminal case regarding them was stopped on the basis of Point 4 of Article 5 in the RSFSR Criminal Judicial Procedures Code—"Due to the Act of Amnesty." The 18 June 1987 Ukase of the USSR Supreme Soviet Presidium on amnesty in connection with the 70th anniversary of the Great October Socialist Revolution releases from punishment those convicted people who have been awarded decorations and medals. Their criminal activities occurred in 1985.

One can discuss the morality of our laws and the ukases springing up on anniversary dates—however, nothing more. A law, as is known, has no retroactive force.

Investigator S. Karimov, however, is categorically opposed to this since it goes against the "switchmen" version.

By letting ourselves be hypnotized by the thought that the three directors, who will avoid punishment, are the main ones guilty of the accident, we stray from justice, he thinks. Everything comes from the defects in our consciousness which the System has formed. With us, no one is specifically responsible for his work and that is why no one is ever guilty. According to our everyday logic, a worker is always less guilty than a work superintendent—the work superintendent has ordered; he forced one. A chief has ordered the work superintendent; a manager—the chief; the party fist—the manager.

Yes, the system is deathly ill and the tragic sequence of catastrophes during recent times is illuminating the mechanism through which it is decisively destroying itself. The system is deathly ill but it is still alive in the other hand-created environment surrounding us. You see, literally everything around us was built "even then." God alone knows "what, where and when" the next socialist hack-work will explode, collapse or sink. Who said that today's construction projects, when no one is at the wheel and market regulators simply do not exist yet, are less dangerous?

Catastrophes are programmed in our corrupt souls since we still do not know how it is possible to live and work differently. The system is doomed but how many will it still drag off with it?!

### **Railway Passenger Service Changes, Pricing Policy Examined**

914H0194A Moscow IZVESTIYA in Russian 11 Jun 91  
Union Edition p 8

[Interview with Valeriy Nikolayevich Shatayev, Passenger Main Administration chief, by I. Taburyanskaya: "Passenger Summer: By Train to All Points"]

[Text] The summer travel schedule for trains was introduced on the country's railroads on 1 June. What new awaits passengers? V. Shatayev, chief of the Passenger Main Administration, answers this and other questions.

[Taburyanskaya] Valeriy Nikolayevich, usually with the arrival of summer we start talking about an increase in passenger traffic and peak loads on transport. What are the forecasts for this year?

[Shatayev] Up to July of last year, we noted a steady increase in the number of passengers carried. However, a slump, which continues to this time, arrived in July. The reasons, I think, are clear to all. First of all, there is the tense situation in the Baltic, Central Asia and Transcaucasus. Approximately 15 pairs of trains have been canceled on these avenues and many consists travel on shortened routes. The general instability in the country also does not contribute to a desire to make trips. Tourist traffic has fallen by 70 percent.

Nevertheless, there are regions where new routes have been introduced. These are the Kharkov-Tynda, Kishinev-Adler and Moscow-Chernovtsy. New routes will also appear on international lines. Additional trains and direct railcars are set for the Moscow-Belgrade, Moscow-Cologne, Kiev-Munich, Leningrad-Cologne, Chernovtsy-Sofia, Novosibirsk-Beijing, and Chita-Beijing routes. The number of long (20-24 cars) passenger trains is being increased: 240 pairs will run daily.

[Taburyanskaya] Will there be changes for the better in passenger services?

[Shatayev] Conditions for a radical improvement in the quality of transport in the near future do not exist because quality is an economic category. Already, 75 percent of the passengers would now prefer to travel under more comfortable (even if at a higher price) conditions. What can we offer them? Old railcars, worn-out bed linen, broken glass, air conditioners that do not work,... They submit demands for all this to us; however, you see, railroad workers produce none of this. The branches of industry must deliver all this to transport. Throughout the country, hundreds of repair plants and depots are now not working at full capacity because there is no wood, metal and glass and no storage batteries and detergents. There is nothing with which to repair railcars, and thousands of them have literally been withdrawn from service. As before, the shortage in the railcar pool, which has reached 14,000, remains critical. The country has only a single plant for the production of railcars with numbered reserved seats—in Tver. Railcars with compartments, restaurant cars and sleeping cars are being purchased abroad. Can the 1,022 compartment cars, which will arrive this year from Germany, solve the problem? Of course not. It is necessary to expand our domestic railcar building. In February, the USSR Cabinet of Ministers prepared for the task of establishing a native railcar building capability. However, there have still been no decisions.

[Taburyanskaya] Now, about tariffs. Ticket prices have jumped appreciably. We know that the government approved them, considering the opinion of the Ministry of Railways. How do you personally regard this and the "declaration of the ten" which, besides other things, talks about the need to reduce tariffs?

[Shatayev] I think that this point in the declaration is correct. I recall that ticket prices on long-distance trains grew by 1.7-fold on the average and on local trains—by twofold-fourfold. Many do not share my opinion but I think that one should not have allowed tariffs to be unchanged for 43 years (since 1948) and then raise them so sharply. It was necessary to do it differently as in many foreign countries. The setting of tariffs on local routes should take place with the active participation of all those enterprises and organizations whose employees constantly use the railroad park for traveling to and from work. They should purchase season tickets for their employees from a railroad in a centralized manner and at full cost. How they are distributed—free or with a

discount—is the affair of the enterprise itself. This, however, would permit other categories of citizens, who are socially not protected and of moderate means, to acquire reduced season tickets. According to the estimates of specialists, local tariffs would grow approximately 1.5-fold in this case.

[Taburyanskaya] Will existing privileges be retained?

[Shatayev] Yes, all privileges will be retained for this year. They are enjoyed by 15 categories of citizens numbering approximately seven million people.

### Railroad Freight Traffic With China to Resume

914H0194B Moscow *RABOCHAYA TRIBUNA*  
in Russian 8 Jun 91 p 4

[Interview with Aleksandr Semenovich Golubchenko, first deputy chief of the Alma-Ata Railroad, by Yuriy Kirinitsyanov, *RABOCHAYA TRIBUNA* correspondent: "A Bridge to the Future"]

[Text] Kazakh SSR—The first freight train from Kazakhstan to China will travel through the station of Druzhba in the middle of June after a 30-year break. In another six months, the route will operate with new strength: a decision has been adopted about transporting freight in containers over the "transcontinental bridge"—this is what the railroad workers of both countries call the steel mainline. A. Golubchenko, first deputy chief of the Alma-Ata Railroad, talks about the significance of this event:

[Kirinitsyanov] Aleksandr Semenovich, what is the expected effect from putting the mainline into operation?

[Golubchenko] Judge for yourself: an express travels 13,000 kilometers from the shores of the Pacific Ocean to the station of Chop on the western border of the USSR—this happens if it avails itself of the traditional route through the station of Zabaykalsk. It is 2,000 kilometers shorter through Druzhba. The transport of each container using this route will cost 600 dollars less. Now, think: from 10,000 to 20,000 of these containers will be transported annually from 1992 to 1995. The "bridge" is profitable not only for both our countries. Our partners maintain that other countries will not hold back in availing themselves of it, especially, Japan, Korea, Singapore and Thailand—and, of course, the Western European states.

[Kirinitsyanov] Well, let us be happy for the owners. Honestly speaking, however, another question disturbs me more: What will this railroad provide to Kazakhstan's inhabitants? A report has flashed by in the newspapers: the Chinese will receive mineral fertilizer, iron ore, rolled metal, and rubber items with the first trains. The inhabitants of Kazakhstan expect potatoes, onions, sugar, and meat. Concerning sugar, it is understandable: it is rationed even in the republic's capital.

However, is the republic not really capable of supplying itself with normal Kazakhstan potatoes, onions and even meat?

[Golubchenko] We, the railroad workers, only fulfill orders. Although potatoes from China—this is, of course, ... In 1991, we will "transfer" the first million tons of freight. For the present, this will basically be freight of—so to speak—local importance. When the railroad is opened, so to say, the full reel, consists will travel from the entire Soviet Union.

[Kirinitsyanov] You are convinced that you can compete with the maritime fleet?

[Golubchenko] Without a doubt. You see, sailors cannot always guarantee accurate delivery times. The elements rule over them more than over us. And yes, the delivery of an enormous batch of containers by one steamship immediately creates certain inconveniences for the recipient of the freight. We have considerably fewer of these batches; they arrive according to a schedule—of course, if politics does not interfere with the railroad schedule: if someone again takes it into his head to strike or proclaim the usual sovereignty of local significance. This circumstance, incidentally, disturbs our partners very much.

[Kirinitsyanov] Dreams are a good thing. However, the station of Druzhba still is, for example, waiting for oil circuit breakers for the substation. Your messengers, having traveled to Sverdlovsk Oblast to the Karpinskiy Machine Building Plant for circuit breakers, returned with nothing. More accurately, with a very remarkable document. The machine builders demand meat, canned stew meat, manufactured feed concentrates, grain—worth all told 200,000—in return for three circuit breakers having a total value of 30,000 rubles. The local press, when it reported this—if one may call it that—barter, expressed the thought: "Horizontal contracts," especially between Kazakhstan and Russia, have not turned out to be as effective as everyone hoped.

[Golubchenko] I would not begin to draw such hasty conclusions. Yes, it is difficult for all of us today and some people, themselves being far from rich, would like to make good at the expense of their neighbor who is just as poor. I think, it will work, that one only has to open borders more boldly and strike up mutually beneficial ties, including ones with other foreign firms through the Chinese.

Construction at Druzhba is estimated at 72 months. What will be done there? It is necessary to lay more than an additional 130 kilometers of track, construct six trans-shipment complexes, commission more than 40,000 square meters of housing.... It is proposed that more than 200 million rubles be assimilated during the first phase of reconstruction and, considering the increase in prices, this figure should be much more. The station of Druzhba will have the most modern complex for trans-shipments. Containers, dry cargo, grain, and chemical fertilizer will not sit there too long.

### **Railway Medical Service Highlighted**

914H0199A GUDOK in Russian 14 Jun 91 p 3

[Interview with Viktor Mikhaylovich Sibilev, Ministry of Railways Medical and Sanitation Main Administration Chief, by Yu. Vereshchagin, GUDOK correspondent]

[Text]

[Vereshchagin] Viktor Mikhaylovich, what kind of organization is rail transport's Medical and Sanitation Main Administration now?

[Sibilev] The Ministry of Railways medical establishment system is a rather powerful and far-flung organization. Based on its potential, it is comparable to the health services of such countries as Czechoslovakia or the former GDR. The Ministry of Railways medical and sanitation service occupies fourth place among the departmental agencies protecting the health of our country's citizens. Under this, one must understand the personnel potential, bed assets and polyclinic service capabilities.

[Vereshchagin] At different times, both the Center and the regional organs of authority have attempted to withdraw the railroad workers' medical establishments from departmental guardianship. What have you to say about this?

[Sibilev] You are correct; there were plans to subordinate rail transport's medical and sanitation service to territorial health-care agencies—whether it was the republic, kray or oblast. One had to prove the irrationality of such an idea with, as they say, facts in hand.

The specific nature of our work is such that belonging to the transport department permits railroad medicine to bring much greater benefit both to transport workers themselves and to the millions of citizens who are passengers from time to time. Judge for yourself: a passenger train covers a thousand kilometers in a day. If some misfortune befalls one of the passengers, it is necessary to observe him and, when necessary, put him off the train along the route and deliver him to a clinic or bring him to the last station. A doctor may be on any train and accompany the sick person to the destination point. We have organized a special duty system of doctors and nurses for this purpose in railroad and division clinics.

[Vereshchagin] How do railroad medical personnel act under extreme conditions?

[Sibilev] Let us say that there is a crash. As a rule, railroad workers, local enterprises and military units participate in eliminating its after-effects. Who is interested in the fate of the passengers, who left the accident site, at that time? Primarily, railroad doctors and nurses come to help them. You see, these people need medical observation. They are in a stress condition and the illnesses of many are: high blood pressure and ulcers,

become aggravated, and heart irregularities appear. At times, we put three-four teams of doctors on trains who pass that train on like a baton from, let us assume, Murmansk to Adler or from Sverdlovsk to Vladivostok. What other organization can do this? Both special communications and a supply base are required. On the network, we have several medical establishments that service two-three oblasts and approximately 100-200 stations. Add to this the numerous rail transport enterprises that are located within the limits of stations and stopping points.

[Vereshchagin] Transport is an object of increased danger. What are your workers doing to reduce the degree of risk?

[Sibilev] We are providing pre-trip examinations of workers involved in train traffic safety. There are 45 million medical examinations a year. Engineers, their assistants, dispatchers, communications personnel, power supply specialists, and, sometimes, even switchmen regularly undergo a medical examination before going on watch. The Medical and Sanitation Main Administration maintains a special service for this purpose. More than 9,000 people are employed in it. They have been supplied with special equipment and medicines.

In all our work, incidentally, we help the territorial health care services and, in turn, enjoy their help. Access to our clinics and hospitals is open; any citizen with an injury or indisposition can turn to a polyclinic, medical point or out-patient clinic and receive the full volume of medical assistance.

[Vereshchagin] Viktor Mikhaylovich, is the medical and sanitation unit's renewal taking place during our difficult times when one hears: "deficit," "shortage,"...?

[Sibilev] Of course, we are trying to keep our polyclinics, hospitals and preventive clinics up to standard. For example, the Ministry of Railways allocated more than three million foreign exchange rubles during the last two years to acquire the latest equipment. We equipped the central railroad clinics in Moscow, Kharkov and Lvov and all railroad hospitals with it. The hospitals on the railroads and several divisions have received new endoscopic equipment and ultrasound sets. Last year, we purchased equipment which was valued at almost 800,000 dollars and which was required for examining railroad workers in the Chernobyl zone.

This is an interesting item. I was not at all surprised at one figure when 1990 ended. Approximately 20 million rubles a year are allocated to us from the budget to acquire medical equipment. This is for all hospitals, polyclinics, medical schools, and pharmacies. However, as was pointed out, equipment worth 100 million rubles more was acquired. The railroads found these assets and helped to purchase equipment for our establishments.

[Vereshchagin] They say that the Medical and Sanitation Main Administration receives keys to new installations on the railroad network from time to time?

[Sibilev] Yes, one must give what is necessary to those who realize our plans. Almost 100 Ministry of Transport Construction trusts, 34 railroad trusts and 500 civilian installation divisions continuously help us maintain the hospitals, polyclinics, out-patient clinics, and pharmacies. For example, we annually commission approximately 2,000 beds. This is the rate of two small republics. Each year, we open or restore polyclinics capable of 5,000-7,000 visits per shift.

In the BAM [Baykal-Amur Mainline] area, wooden hospitals, outpatient clinics and health points have existed for almost 13 years. Now, everything planned has been built, is being built or is in the completion stage. At the same time, we have built rural obstetric points there and we are continuing to erect them on the line.

A number of roads have been extremely successful in carrying out the plans for building medical installations. These are the Northern, Alma-Ata, South Urals, Krasnoyarsk, Far Eastern, Belorussian, and several others. However, the desire to build a clinic is often impossible to carry out because of the absence of a real builder. For this reason, the construction of a division hospital at the October Railroad's Bologoye station has still not been begun. The old hospital there is a very bad one. There is also a long drawn-out construction project in Novgorod. Try as they might, they cannot begin the construction of the railroad sanitation and epidemiological station in Kiev. They are building poorly on the Southeastern and Volga. Unfortunately, half of the roads still do not have their own medical schools.

[Vereshchagin] I would now like to go on to the personnel problem.

[Sibilev] More than 230,000 people, including more than 44,000 doctors and pharmacists and 116,000 mid-level specialists are working today in the Ministry of Railways health-care system. Four thousand doctors and candidates of medical sciences are working for us and 164 departments in medical institutes are operating on the base of our hospitals. The main administration is preparing nurses and pharmacists in seven specialties in 20 medical schools. Alas, the keeping of personnel is a constant problem for us—especially in the rayons of the Urals, Siberia and Far East. The reason is the unsettled state of the people's living conditions. Imagine, more than 1,600 doctors and 4,000 medical workers live in dormitories on the railroad network and 1,200 people—in private apartments. Besides that, 10,000-11,000 of our workers have been waiting for years to improve their housing conditions.

[Vereshchagin] Viktor Mikhaylovich, it is known that medical people in our country are in the low-paid specialist category. Has the material well-being of medical personnel working in the Ministry of Railways system been improved recently?

[Sibilev] The pay of medical workers was increased this year to 315 rubles through the budget. Beginning in April, the average monthly pay of doctors has been 332 rubles; that of mid-level medical personnel—266 rubles; and that of junior personnel—200 rubles. In connection with inflation and the unrestrained price increases in the country, however, this increase was insignificant. In our view, the ministry leadership and the railroads must look for a way to further increase the pay of medical workers and attending staff both through the budget and through the railroads' incomes.

[Vereshchagin] What can you say about the level of infectious diseases among railroad workers?

[Sibilev] Basically, we have recently been very active in resisting infectious diseases of any type. The sickness rate on the railroad network is twofold lower than that of territorial health-care agencies. We have not had an outbreak of infections in Pioneer camps for two years. You see, our medical personnel monitor the relaxation of almost 300,000 children. You will agree that this is difficult work. Considering the difficulties with food products and their poor quality storage and processing, one can expect an outbreak of disease any day. That is why we are on the alert; an operations section functions around-the-clock in the main administration. A similar watch has been organized at all railroad sanitation and epidemiological stations.

[Vereshchagin] How is the shortage of medicine in the country affecting the effectiveness of your work?

[Sibilev] Yes, that is our pain. The railroad workers' requirement for medicine is being satisfied by only 71-75 percent. This is for domestic preparations; however, for imported ones, it is only being satisfied by 35-45 percent, all told.

[Vereshchagin] What would you like to wish the medical workers on the eve of their holiday?

[Sibilev] I wish all network medical establishment workers success in work, a great deal of personal happiness and optimism. I am confident that the country will get out of the web of disorders and raise our citizens' living standards. In its turn, the main administration will endeavor to see to it that medical personnel do not remain socially unprotected during the critical period of perestroyka. Happiness to you, dear colleagues!

## MARITIME AND RIVER FLEETS

### Shipyard Activity Reported

914H0190A Leningrad SUDOSTROYENIYE  
in Russian No 1, Jan 91 pp 47-49

[Reports prepared by A.N. Khaustov: "At the Shipyards"]

[Text]

### Kherson Shipbuilding Production Association imeni 60th Anniversary of the Lenin Komsomol

After almost four years of operation, the first ship of the "Arctic Supply" series, the Vitus Bering, returned to Kherson last March, to the yard where it was built. During these years, it traveled about 130,000 miles, delivering over 96,100,000 tons of cargo to consumers. The ship visited ports in Japan, Finland, Turkey, Bulgaria, Egypt, China, the FRG and the Netherlands, and also visited Antarctica with a group of scientists. The installation of lifting cranes with a greater hoisting capacity was particularly specified during its 40-day repair period at KhSPO.

A new all-purpose supply ship for the Arctic, the Ivan Papanin, launched in July (the keel was laid on 23 February 1988), is also a prototype. It differs from earlier supply ships mainly through its large dimensions (they were forced to widen the building berth by 4 m and shift the cranes), the use of a low-speed diesel as the main source of power (instead of diesel-electric), and the installation of a screw propeller with an extension. At the time of launching, 25-ton cranes (on the earlier ships, the hoisting capacity was 12.5 tons), hydraulic winches and some of the hatch covers were installed on the ship. A single-layer iceproof coating was applied to the underwater part of the hull. This required preliminary shot-blasting of the surface to a metallic luster and construction of a special heavy canvas cover around the hull.

### Yaroslavl Shipyard

In July of last year the yard marked its 70th anniversary. Here are the main landmarks of its career.

On 13 November 1919, the Extraordinary Plenipotentiary of the republic's Council of Defense for the Supply of the Red Army and the Fleet signed Order No 211 on setting up a motorized shipbuilding berth in Yaroslavl (the Northern Front needed high-speed launches to combat the White Guards and interventionists).

July 1920—Trials were run and the first five launches were turned over. There were 129 persons on the staff of the building berth.

1929—The shipbuilding berth becomes an enterprise of Union significance.

1931—The building of the first ship at the yard with an all-welded hull.

1933—The start of rebuilding the berth. By this time 45 types of wooden and metal ships had already been produced—tugs, fireboats, skimmers, tankers, launches for border guards, etc.

1936-1939—The construction of passenger river boats estimated for 250 passengers.

1939—The Yaroslavl Shipbuilding Berth was renamed the Yaroslavl Shipyard.

1942. The construction of a large series of launches armed with "katyusha" rocket launchers.

1950—The start of radical production restructuring.

1961—Preparation for building maritime ships, construction of a new launching device, a machine shop and a building-berth wing.

1963—The prototype fishing trawler Valentina Tereshkova was launched.

1975—The building of the prototype salvage and rescue tug Dmitriy Dudchenko for Caspian oil workers. The seiner-trawler Severo-Kurilsk was shown at the Inryb-prom-75 International Exhibition in Leningrad.

1978—Construction of the SPTU-21 [secondary vocational-technical school] for 720 students—future building berth workers.

In the last ten years, the delivery of various types of ships has continued. At the same time, widescale production restructuring is being carried out. A new triple-bay hull assembly shop, a consumer goods shop, a mooring wall, etc. were built. In addition, housing construction is in progress—one or two high-rise apartment buildings are completed every year. Beginning in 1989 the yard made the transition to cost accounting principles.

### Leningrad Admiralty Association

For almost 25 years, since the construction of Sofiya type tankers ended, the LAO has had no orders for this type of ship. Then, within the framework of conversion last year, the Admiralty workers started to build a new series of tankers for the domestic maritime fleet and for export. Their basic specifications are: greatest length 178.86, width 25.3, depth 15 m, displacement 39,670 tons, cargo capacity 28,400 tons, power of diesel-electric units 7,350 kW. Special features of the hull design of these ships are the double bottom and sides, which substantially increases ecological safety in case of accidental damage. Four types of cargo can be transported in the 16 tanks, and each one has its own pumping system. Several fire safety systems have been installed—water, sprinkler, steam-smothering and foam fire-fighting extinguishers, carbon dioxide and fire-smothering chemical extinguishers. The superstructure has comfortable cabins accommodating 42 persons, separated by fire-resistant heat-insulation and equipped with heating, ventilation and air-conditioning systems. The prototype tanker is scheduled for turnover to the purchaser in 1992.



### Vympel Shipbuilding Production Association

Technical retooling of the production facilities and labor safety—that was the theme of the sectorial conference held in the Association in June 1990. Chief engineers and chiefs of the labor safety practice departments of the related enterprises of a number of cities in the country attended it. Quite sizable funds are spent every year on carrying out labor safety measures. For example, in 1989, the appropriate measures of collective labor contracts and a comprehensive plan to improve the work conditions for a shipyard entering the association cost approximately 160,000 rubles [R]. Hydraulic chambers were introduced to carry out acceptance tests of motor launches in the ship fitting shop, the removal of the spent shot from shotblast units was mechanized, ventilation was installed on the painting lines of the launches, a safety device was made for the VChG units to protect workers from the action of an electromagnetic field, etc. For a sharp reduction in injury and occupational illness, however, a transition had to be made from the traditional poster appeals, "Do Not Violate Labor Safety Practices," to economic measures, without losing sight of the problems of engineering insurance of labor safety. There should be a Law on Labor Safety. S.I. Ustimenko, chief of the Department of Labor Safety, expressed this opinion in an interview given to the correspondent of the yard's newspaper "For Labor Prowess."

### Navashino Oka Shipyard

The next diesel-powered ship, Volzhskiy-34, was passed to the Moscow River Shipping Company on the eve of Workers of the Maritime and River Fleet Day. The yard received a letter from V.A. Belov, captain of the diesel ship Volzhskiy-26, in which he reported that in its first navigation period in 1989 this ship had transported 157,379 tons of cargo, giving the shipping company revenues of R439,368, and the net profit was R175,079. There had been no serious breakdowns or failures in the operation of the machinery.

In 1991, the plant was slated to build eight diesel-powered ships of the Volzhskiy type, and in the following year, four more. Then it is to develop a new ship of the Nizhegorodets type for combined "river-sea" sailing, from a plan of the Vympel Central Design Bureau. Its basic specifications are: length 102.7, width 16.4, depth 6.1, river/sea draft 3.75/4.05 m, cargo capacity 2,500/3,000 tons, power of the main high-speed diesels 2 X 700 kW (working on a propeller through reverse reducing gear), electric plant—three diesel-generators of 160 kW each, speed about 12 knots, cruising capacity 20 days.

In parallel, the Vympel Central Design Bureau is developing a similar design for the Rybin Shipyard. The main difference is a 13.4 m reduction in the width of the ship, which will make it possible for it to pass through the White Sea-Baltic Canal.

### The Baltic Yantar Shipyard

The Inter-Shipyard School for Exchange of Advanced Experience, held at the yard in May 1990, was devoted to the complex of scaffoldings to maintain the hulls of ships being built and repaired. Representatives of 13 sectorial enterprises of the Baltic area participated in it. E.I. Nezhelskiy, one of the inventors of the structure of metal scaffoldings (protected by copyright) introduced at the Yantar Plant, familiarized the school's participants with the experience in using them to form a ship hull and do painting, outfitting and repair work. These scaffolds make possible a sharp reduction in the outlay of wood—the yearly economic effect was R54,000. The participants in the inter-yard school recommended that the yard's experience be disseminated to other enterprises. Specifically, the question was brought up of the expedience of sectorial centralized manufacture of the decking panels and propping elements of pipe scaffoldings (key-stones, wedges), with the appropriate funds allotted for AMg alloys and sheet steel for their manufacture.

### Pella Yard

Series construction of pilot boats from a design of the LTsPKB MMF [Leningrad Central Planning-Design Bureau of the USSR Ministry of the Maritime Fleet] has been in progress at the yard since the 1970's. Over 100 units of them have been supplied to various ports in the country, as well as in Cuba and Bulgaria. The individual specifications of these ships, naturally, no longer conform to today's requirements. Therefore, the construction of modernized pilot boats, the planning documentation for which was developed by the TsNIIMF [Central Scientific Research Institute of the Maritime Fleet], began in 1990. They feature increased speed, improved habitability conditions, reduced noise levels, use of a more economical power unit and an efficient control system. The boat is 23.33 m long (21.46 along the loadline), 5.5 m wide (5.08 along the loadline), depth 2.8 m, draft along the loadline 1.75 m, displacement 84 tons, deadweight 12 tons, power of the diesels 2 X 220 kW, speed 12.5 knots, crew—3 persons, and number of spaces for pilots—6. Turnover of the prototype pilot boat is planned for the second quarter of 1991.

### Azimut Scientific Production Association

The joint venture Azkonsilium was set up by the Azimut NPO and the Swedish firm Konsilium Marine. After the appropriate contract was signed on 28 November 1989 in Leningrad, specific work on developing the production of the SAL-Imcor, SAL-84 and SAL-865 logs was begun. The special completing sluice valves were tested and substitute materials conforming to Swedish and Soviet standards were selected. Particular attention is being paid to the quality of the product. The first delivery of sluice valves to Sweden was planned for July 1990. These types of logs received Certificates of the USSR Registry. Azkonsilium plans to supply them for Soviet ships built abroad, to shipbuilding yards and



shipping companies in the country and to other purchasers. Organization of technical service by the firm was specified.

#### **Okean Shipyard**

The sale of ships for export now opens up great prospects for the yard to establish mutually profitable business relations with foreign firms. Some 35% of the currency from the value of a ship can now be used to acquire equipment and consumer goods abroad (with compensation to the Foreign Economic Bank in ruble equivalents). The first contracts have been concluded for supply by the Swedish firm ESAB of motorized welders, by the Indian firm Termax—turning lathes and milling machines, excavator-loaders and storage batteries, the French Citroen—minibuses, and the Austrian Warenhandel—magnetic disks and tapes for computers. Diagnostic equipment and stomatological equipment have been purchased for the medical-sanitation section from the Iskra firm (Japan) and Ivoklar and Siemens (FRG). The plant is obtaining a pipe-cutting machine with a programming center from the Messer Grisheim firm (FRG), and the Rank Xerox firm (Great Britain) is supplying copier equipment. Purchase of individual safety devices for workers, ventilation equipment, painting equipment, woodworking machine tools, automated thermoplastic machine tools, etc. is specified. A five-year contract has been signed with the YuAK firm to open a store at the plant to sell imported goods for Soviet rubles. These are just the first steps taken by Okean on the world market.

#### **Yard imeni 61 Kommunara**

In the first six months of 1990, 443 yard workers turned in 435 efficiency suggestions, 192 of which were used in production. The savings obtained was almost a half-million rubles. From introducing technical approaches that they have worked out, the most active innovators are providing the yard with a saving which is many times greater than their wages. For example, during their work time at the yard, the effect from the efficiency suggestions of Yu.N. Rebyakin, chief technologist, was R834,000, from N.M. Borodin, deputy chief construction worker—R790,000, A.S. Kravtsov, deputy shop chief—R308,000, V.G. Vasilenko, deputy chief of the PEO [planning-economic department]—R293,000, V.V. Yakovenko, chief construction worker—R268,000, and I.K. Gorkov, designer—R204,000. V.D. Kim, D.S. Skorobogatskiy, L.P. Suslova, B.N. Antonyuk, A.A. Novikov and O.A. Glove have over 100,000 to their credit. Under the conditions of the true economic independence of the enterprise, the importance of the innovators' activity will undoubtedly increase.

#### **Ritm Scientific Production Association**

One of the consequences of the constant increase in the amount of synthetic materials used in the national economy is the problem of destroying or burying their wastes, which is related to protecting the environment

from pollution. Because of this, a standard line with a yearly capacity of 400 tons has been designed to process (utilize) the wastes of rubber and rubber-glass-reinforced plastic. The technical process incorporates an all-purpose method of pulverizing solid wastes (including polymeric materials), which includes the once-only action of pressure and shear forces. In this case, the initial material is first precrushed on rollers and blade crushers to dimensions of not over 30 X 30 mm, and is then pulverized to the consistency of powder. The advantages of the method developed are: absence of the need for deep cooling of rubber and polymer wastes to give them brittleness, higher efficiency than traditional methods of crushing, and a low level of noise and dust. The powders obtained can be used to manufacture composition materials and items for building purposes.

#### **Baltic Yard Production Association**

Sociologists took a poll of the workers in a number of the association's shops to find out their attitude toward the introduction of leasing. To begin with, the inadequate knowledge of this form of production relations was discovered. Only 15% of those polled noted that they were very familiar with the Law on Leasing; 43.3%—"in general outline"; 41.7%—indicated a complete lack of information on this law. Some 46.7% of the workers who took part in the poll avoided giving a direct answer to the question of the need to introduce leasing in the association, and 20% had a negative reaction to it. One of the possible consequences of introducing leasing is a reduction in the number of workers. Some 45% of those polled categorically ruled out this possibility for themselves, 40% considered their own dismissal to be a very real prospect and 15% answered evasively.

#### **Vyborg Shipyard**

The councils of the work collectives of the yard and the Matrosovo Sovkhoz voted to create a joint agro-industrial association, Agroverf. The purpose is to join forces to strengthen the material-technical base of the sovkhoz and solve the food problems for both the yard workers and the agricultural workers. In this case the shipbuilders help the sovkhoz to acquire, for the currency available to them, modern agricultural machines and processing equipment and contribute to the development of the social sphere, and in exchange obtain meat, milk and vegetables at State prices. Moreover, the products will be sent directly to yard dining halls, kindergartens, dispensaries and also for free sale. The new form of cooperation, with a mutually advantageous economic basis, is to all appearances more promising than the endless, and mainly futile, "sponsorship aid" for the rural community.

#### **Perm Kama Shipyard**

Unproductive expenditures for the first four months of 1990 cost the yard over R100,000. What comprised this sum, deducted, naturally, from the profit obtained? It consisted of fines for the idle times of railcars—R22,929,

for late return of containers—R9,551, for nonfulfillment of the transport plan—R3,055, for late introduction of capital construction projects—R6,609, for late turnover of ships to construction electricians—R28,820, and for paying penalties—R30,434. It appears impossible to make up for these losses by asking the specific guilty parties for the money (the total sum of reimbursement resulting from taking away bonuses was only R1,464), especially since there is a practice of reducing the material incentive fund for the entire subdivision for the corresponding amount of the fine—it would ostensibly be shared by everyone. There is, however, another “source”. During this time, the yard received about R80,000 from remiss suppliers. Therefore, the total losses are not so large, but this compensation, obviously, should not suit assiduous economic planners.

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### **Maritime Fleet Composition Detailed**

*914H0190B Leningrad SUDOSTROYENIYE  
in Russian No 1, Jan 91 pp 49-51*

[Article: “Data on the Composition of the USSR Maritime Fleet”]

[Text] According to the situation on 1 July 1990, the maritime fleet of the Soviet Union on the USSR Register consisted of 8,195 self-powered ships (gross tonnage 100 reg. tons and over), with a total gross tonnage of 27,300,937 reg. tons and a deadweight of 30,748,625 tons.

Of the total number of ships, the most sizable group—1,577 units (19.2%) is from 15-19 years old. Then follow ships from 5-9 years old—1,481 units (18.1%), 10-14 years—1,441 units (17.6%), 20-25 years—1,430 units (17.4%), up to 4 years—1,262 units (15.4%), 25-29 years—579 units (7.1%), and 30 years and older—425 units (5.2%).

The largest number of ships have diesel and diesel-electric power units—7,554 and 556; 57, 12, 8, 7 and 1 ships, respectively, have steam piston, steam turbine, gas turbine, nuclear and steam-turbine electric units. The composition of the fleet by types of ships and age is given in the table.

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TRANSPORTATION

Composition of Fleet by Types of Ships and Age

Type of Ship	Up to 4 yrs			5 - 9 yrs			10 - 14 yrs			15 - 19 yrs		
	Number	Gross tonnage, reg. t	Dead-weight t	No.	Gross tonnage, reg. t	Dead-weight t	No.	Gross tonnage, reg. t	Dead-weight t	No.	Gross tonnage, reg. t	Dead-weight t
Oil tankers	57	628 403	958 244	69	794 444	1 262 733	95	1 516 340	2 378 915	57	419 623	614 467
Oil tanker/chemical carriers	0	0	0	2	27 078	45 230	0	0	0	0	0	0
Chemical carriers	2	1 994	1 414	1	5 513	10 079	1	5 512	10 079	0	0	0
Liquid gas carriers	2	23 645	23 300	0	0	0	9	179 657	196 710	0	0	0
Other tankers	0	0	0	1	647	561	0	0	0	2	6 230	6 640
Bulk oil and oil/ore carriers	5	13 405	14 355	22	305 251	492 206	17	459 855	808 066	13	205 647	335 095
Ore carriers and bulkers	21	523 924	851 209	53	997 941	1 572 237	57	983 388	1 611 138	26	450 343	1 012 771
General cargo ships: single deck	99	363 248	426 336	98	276 359	327 751	131	435 285	550 753	156	540 460	690 102
multi-deck	46	577 956	522 877	64	801 691	849 437	79	549 092	683 683	208	1 352 468	1 823 271
Cargo-passenger ships	9	72 376	18 989	12	105 634	30 381	8	39 251	10 148	15	95 681	20 581
Container ships, barge carriers, dockers	11	216 042	190 204	23	370 180	368 075	19	266 398	281 006	13	88 915	98 411
Fish factories, fish transport ships	106	310 863	180 048	58	339 113	298 634	43	278 328	282 301	67	575 730	549 511
Fishing boats	471	637 773	275 691	568	749 025	376 437	546	757 519	450 489	626	732 808	411 491
Passenger ships (incl. those without berths)	60	56 046	8 590	69	17 642	2 844	54	48 772	11 508	20	27 891	7 002
Support ships, service ships	26	66 413	34 892	39	88 967	51 183	18	12 713	9 228	14	9 508	5 232
Tugs	71	27 337	9 163	97	54 952	28 883	77	55 431	28 378	120	31 859	10 864
Dredgers	12	40 072	29 822	14	34 605	23 250	13	23 199	19 519	13	19 873	10 968
Ice-breakers	2	41 582	7 100	5	48 773	14 005	8	69 833	26 274	5	47 080	21 449
Scientific research	54	126 434	48 109	69	104 857	40 820	48	35 857	14 516	41	80 489	58 523
Others	208	260 094	230 264	217	243 368	193 611	218	134 893	128 578	181	147 832	157 134
Total:	1262	3 987 607	3 830 607	1481	5 366 040	5 988 387	1441	5 851 323	7 501 289	1577	4 832 437	5 833 512

## TRANSPORTATION

JPRS-UEA-91-030  
10 July 1991

Type of Ship	20 - 25 yrs			25 - 29 yrs			30 yrs and older			Total	
	No.	Gross tonnage, reg. t	Dead-weight t	No.	Gross tonnage, reg. t	Dead-weight t	No.	Gross tonnage reg. t	Dead-weight t	Gross tonnage reg. t	Dead-weight t
Oil tankers	62	455 730	661 373	23	190 128	286 446	9	27 437	38 842	4 032 105	6 201 020
Oil tanker/chemical carriers	0	0	0	0	0	0	0	0	0	27 078	45 230
Chemical carriers	0	0	0	0	0	0	0	0	0	13 019	21 572
Liquid gas carriers	0	0	0	0	0	0	0	0	0	203 302	220 010
Other tankers	3	10 051	13 396	0	0	0	0	0	0	16 928	20 597
Bulk oil and oil/ore carriers	0	0	0	0	0	0	0	0	0	984 158	1 649 722
Ore carriers and bulkers	10	167 471	258 387	5	27 601	40 605	0	0	0	3 150 668	5 346 347
General cargo ships: single deck	250	699 783	886 182	118	308 248	386 726	19	33 231	38 821	2 656 614	3 206 671
multi-deck	175	1 396 230	1 939 504	57	404 328	554 091	8	29 671	39 067	5 111 436	6 411 930
Cargo-passenger ships	8	20 080	5 846	1	8 840	2 510	9	8 411	4 175	350 273	92 630
Container ships, barge carriers, dockers	3	36 840	42 423	0	0	0	0	0	0	978 375	980 119
Fish factories, fish transport ships	141	837 383	734 719	125	590 322	509 383	65	150 700	132 688	3 082 439	2 687 284
Fishing boats	448	772 623	435 984	56	116 500	67 330	32	26 739	15 423	3 792 987	2 032 845
Passenger ships (incl. those without berths)	31	73 125	18 618	22	87 540	20 415	11	68 054	19 178	379 070	88 155
Support ships, service ships	11	6 660	3 624	4	5 735	2 096	24	11 835	5 849	201 831	112 104
Tugs	120	27 905	8 778	58	19 608	8 309	111	40 460	16 470	257 552	110 815
Dredgers	7	12 855	8 253	9	18 594	15 100	6	3 886	1 689	153 084	108 001
Ice-breakers	4	23 356	13 235	7	30 374	17 534	6	36 020	14 302	297 016	113 899
Scientific research	40	143 869	59 240	14	20 008	9 261	24	21 075	12 731	535 589	243 200
Others	117	135 496	117 046	80	52 005	48 221	101	103 723	80 950	1 077 411	965 844
Total:	1430	4 819 457	5 206 608	579	1 879 831	1 968 027	425	564 242	420 225	27 300 937	30 748 625

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