JPRS L/10550

28 May 1982

# USSR Report

## TRANSPORTATION

(FOUO 3/82)

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APPROVED FOR RELEASE: 2007/02/09: CIA-RDP82-00850R000500060063-1

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RAILROAD

OVERVIEW OF RAILROAD SYSTEMS' DEVELOPMENT, PROBLEMS

Moscow DRUZHBA NARODOV in Russian No 11, 1981 pp 178-192

[Article by Vasiliy Selyunin: "The Nerve Center of the Economic System"]

[Text] The Very Same

Our railroad transport is truly the living nerve center of the national economy. Today the railroad workers can be criticized and blamed for many, if not all, of our individual economic failures. According to the experts, the loss resulting from unsatisfied demand for transport in industry alone has reached more than 6.5 billion rubles a year. Agriculture's losses from the same cause are more than 4 billion rubles. And in general there is now hardly an economic functionary who does not have complaints against transport. And the criticism is justified. And yet....

Along with you we are justifiably proud when our country reaches the level of the United States or surpasses it in respect to any important indicators. So it is when our railroads are ahead of the Americans in their development during an entire era. I think that the railroad workers of the United States scarcely ever attain our parameters. Per kilometer of track we transport more than six times the amount of freight the Americans do. The total extent of the mainlines in our country is only 5/12 as much but the freight turnover is 2.8 times as much. With only 11 percent of all the world's steel tracks at their disposal our railroad personnel carry out more than 50 percent of the world's freight turnover. Insofar as these astronomical figures on shipments are legitimate then in this case the complaints can be directed not against transport but its customers.

Our railroad transport is miraculous in one more respect. It is incredibly economical from the standpoint of capital outlays. It is these outlays which conceal the profound reasons for the very high rates of increase of shipments and are at the root of the current difficulties.

Although freight ransport legitimately refers to the realm of physical production it clearly does not create any new output. Therefore, during any period the economics of any country is considered the more effective the lesser the proportion of expenditures for transport and there is a corresponding increase in the assets directed into the construction of plants, factories and

housing and into agriculture. Of course, this rule holds true only until the shipments begin to deter the development of the whole economy.

What assets has the country invested in this key sector? In the prewar five-year plans from 10.2 to 10.7 percent of all the capital investments went for the development of the railroads. In the 1946-1950 period this proportion fell to 7.7 percent; in the next, the fifth five-year plan, it was 4.9; in the sixth 3.4; in the seventh 3.2; in the eighth 2.7; in the ninth 2.6; and in the 10th 2.7. It is something to think about that of every thousand rubles released for the development of the economy only 26-27 rubles go to the railroads.

Whereas before the war the investments were approximately equal to the investments in all of agriculture, now the railroads obtain only a fraction of the funds that the rural areas get. In the 34 postwar years the railroads absorbed 57.3 billion rubles--agriculture spent approximately the same amount in the last 2 years.

It would be hard to even describe the state our economics would be in if the railroads always "devoured" the prewar proportion of the investments. As we know, in the 1976-1980 period 634.1 billion rubles were invested in construction. On the basis of the prewar norm about 67 billion rubles of this amount would accrue to the railroads but in actuality they obtained approximately 17 billion. The saving amounts to about 50 billion. I would point out by way of comparison that this is approximately the amount of the state outlays in 1975-1979 for all the housing construction. We will therefore be correct in saying that it is to a considerable extent due to the fact that the railroad workers made do with modest funds that 80 percent of the urban population will now live in separate apartments.

However, under these conditions the traditional methods of development of transport were hardly acceptable for us. After all, throughout the world a simple method predominated: construction of ever newer railroads. Well, what about us? It may appear paradoxical but 100 years ago there were more railroads built in our country than there are now. Here are the figures. In the 1866-1876 period the average yearly growth of the railroad network was 2,740 kilometers and from 1976-1980 the increase, also in yearly average, was 700 kilometers. In the last 8 years of last century (1893-1900) the length of the railroads increased by 2,740 kilometers yearly. This record has never been surpassed. In our most recent history we see a rather constant decline of railroad construction from average yearly figures of 1,593 kilometers in the 1919-1945 period to 829 kilometers in the 1946-1979 period. The rates of construction showed an especially sharp decline in the postwar period. We have already ascertained with you the reason for this: it was precisely in this period that the proportion of the total volume of investments assigned to railroad transport fell off rapidly.

I would like to unequivocally caution against a superficial view of the comparisons cited. It was precisely in the period of decline of railroad construction that there were achieved fantastic increases in the productive work of railroad transport; whereas in 1950 the freight turnover of the railroads

amounted to 602 billion ton-kilometers, in 1980 it was 3 trillion, 435 billion. A 5.7-fold increase!

An essentially new solution was found which made possible a manifold increase in shipments with minimum costs. I am referring to the general plan for converting the railroads to electric and diesel locomotive traction in place of the steam locomotive traction. We have already discussed the colossal saving in capital investments. But as far as transport costs are concerned, our railroads can safely be considered the world's most efficient. Thus, the savings in operational expenditures in the 1955-1975 period amounted to 80 billion rubles.

However, sooner or later the easily accessible reserve for the increase of transport had to come to an end. We approached this point in the 10th Five-Year Plan, although, to be perfectly frank, the program for the replenishment of transport could have been carried out more energetically than was the case. In the last five-year plans the planners almost made it a rule not to satisfy the urgent needs for the national economy in this sector: from year to year they eliminated funds not just for the construction of railroads but for the relatively inexpensive program for the development of transport.

Whereas in the seventh five-year plan 11,000 kilometers of railroads were electrified, in the eighth five-year plan it was 9,000 kilometers, in the ninth 5,000, and in the 10th 4,800 kilometers. Don't think that the need for them fell off. As it is, less than one-third of the tracks were electrified and, if we count only the overloaded lines, only about 50 percent of them anyway. There was also a gradual decline in the rates of replenishment of rolling stock. Production of diesel locomotives fell from 1,485 sections in 1965 to 1378 in 1980 and production of electric locomotives from 641 to 429 respectively. In 1973 there were 71,800 freight cars made; in 1980 the number was 63,000.

The results did not keep us waiting. In the Ninth Five-Year Plan the freight turnover of the railroads increased by almost 30 percent and in the 10th Five-Year Plan by only a little over 6 percent. In the 1979-1980 period we saw a direct regression: we shipped less freight than in 1978. Transport began to retard the whole national economy. I believe that it would not be an exaggeration to say that it is today the country's No 1 problem.

Even if we choose the correct course of action, the situation can by no means be normalized sooner than after two five-year plans. Some other solutions are needed--quick and definitive ones. What specifically are they?

We are trying to approach the problem from another angle--how to reduce the very need for the movement of freight without doing damage to the national economy.

Our railroads transport more than the entire rest of the world and nearly three times as much as the United States. Is this good or bad? I daresay that it is a superiority we need not be proud of. You do not smear all the ton-kilometers on bread instead of butter and you do not use them in place of

metal in the production of equipment. In principle, it is desirable to reduce the shipments to a minimum. Is this possible?

In this area it is first necessary to destroy some existing myths. There is, for example, an opinion such as the following. It is not surprising that in the United States the amount of railroad transport is somewhat less than ours—they have developed motor vehicle transport to an extraordinary extent and this will assume the excess load. Is this so? I added up the freight turnover for the two types of transport (according to the 1978 data). In the United States the railroads and motor vehicles handled about 2.3 trillion ton-kilometers and ours more than 3.8 trillion. I may add this: pipeline transport is better developed in the USSR and that, of course, relieves the railroads of some of the load.

Another plausible myth is that the territories of our country are, they say, enormous and freight has to be hauled for distances which are inconceivable in the United States. Let us again consult the statistical handbooks. In 1977, the average distance of railroad shipments in the USSR reached 895 kilometers; in the United States it was 906 kilometers. We are now trying to compare not the ton-kilometers but simply the tons of freight transported, no matter for what distance.

According to this statistic, in 1950 the railroads in the USSR transported 834.3 million tons and those in the United States 1320 million. That's how it was. By 1977 the picture had changed radically. Our figures were 3.7 billion tons and the United States 1.38 billion. We had 2.7 times as much. If we take into account the fact that our gross national product is still less than the American, then it comes out that for every unit of output produced we have to have many times greater volume of transport than the United States. And not just the United States.

On the basis of the statistical handbooks it is easy to compute the yearly volume of transport per capita. The picture is this: in the USSR--14.4 tons, in the United States--6.3 tons, in the countries of the European Economic Community--3.6 tons, which includes England--3.1 tons, France 4.4, and the FRG--5.7 tons. Why is it we are always transporting and transporting and are unable to call a halt.

And the point is this. Although recent years have seen the beginning of a marked turn of the economic system toward effectiveness, there are being generated definite changes for the better in the use of the resources which can be felt with the hands, so to speak--raw materials, materials, manpower. For transport resources, however, the savings are still not tangible ones. The attitude of the operational workers toward transport resources is still indifferent in respect to something almost gratuitous like the air. This kind of psychology developed over the decades and the conditions which reinforce it continue today. This phenomenon merits a fundamental examination.

A simple example. In the United States the cost of coal doubles when it is transported 600 kilometers. Before applying to a distant supplier, the customer correctly considers, not whether to buy the fuel at a greater cost, but

at a nearer source. With us the cost of the coal doubles when it is transported 4,000 kilometers. The payment for the transport is essentially figurative: the rate is 1/6-1/7 of the American rate. And the result, for example, is that the electric power stations find it more advantageous to bring in Siberian coal from the Donets Basin than to consume local coal. And they bring it in.

Some consumers suggest a temptingly simple solution: it is necessary to raise the rates and to incorporate in the economic mechanism the rule expressed by the adage: "Beyond the sea a heifer is a quarter kopeck, but a ruble for transport." Doing this involves no labor at all. After all, in the planning operation the cost of goods and services is determined, not by the market--it is generated, according to Marx, by the state. I am sure, however, that whatever the price for the transport, the planners did not assign it and the consumer is not disturbed by it. The increased costs will be incorporated in the consumer's plan. His profit will obviously be lower but so be it, the plan for profit will reinstate it to include the new transport costs. In short, the enterprise is completely indifferent as to the size of the outlays for transporting the materials and finished products to be consumed.

Very well, but how about the state? It is not a matter of indifference to it! However, what does the state represent in its capacity as a user of the railroads? To plan millions and millions of shipments from above is as realistic as to establish in a single economic organ a products list for all the output produced in the country, a list which numbers 12 million types of products. Nor has a task like that gotten to be suitable for transport. But in that case the real directors of the transport resource are the departments. In this instance the manager of any of these can rightly say "The state is I."

Unjust Communications

Our administration of the economy is structured in the form of a vertical hierarchy: enterprise--industrial association--ministry. The top links issue the orders, the lower ones carry them out. The command function is only conceivable within one's unit; in the "foreign" ones there are other commanders. There are no dependable methods of influencing the partners of a "foreign" eparchy. Each department therefore tries as much as possible to lock the economic relationships within its own ranks and to eliminate or at least to limit the contacts beyond the confines of the system. A plant in Vladivastok would rather conclude a contract for the delivery of cast material, for example, not with a neighbor who is just an enclosure away but with a Minsk enterprise of its own ministry. It is safer this way--in which case one can complain to the ministry but one can't expect anything from a neighbor. In perhaps no other sector of the national economy can bureaucratism inflict as much harm as this does on transport.

Let us consider the shipments--well, at least prefabricated ferroconcrete. The enterprises of 200 departments manufacture it, each for itself with deliveries organized according to the rule: "From a particular supplier to his own consumer."

The outcome of this I determined from the reports of the Sverdlovsk Railroad. Construction materials occupy first place among the products shipped. More than 2,000 cars with prefabricated ferroconcrete go forth from there every month to all the krays and oblasts of the country. Does the Central Ural perhaps have surplus capacities for this output? No. In turn, the customers who use the services of the Sverdlovsk Railroad obtain more than 3,000 cars of reinforced concrete a month. From where? From all the country's regions--from the Amur to the Kuban' and from Arkhangel'sk to Central Asia, that is, precisely from the areas to which prefabricated structures are shipped from the Central Ural. In one year the average distance of the shipments of reinforced concrete increased from 720 to 906 kilometers. And for the entire network of railroads it increased during the five-year plan period from 597 to 756 kilometers.

Attached to Gosplan USSR is an interdepartmental commission for the rationalization of shipments. For 10 years the associates of the commission advised the manufacturers of prefabricated ferroconcrete to exchange the output with their neighbors and not drag it through the whole country. But it was a voice crying in the wilderness. In May 1980 the commission shifted from persuasion to action: it forbade the shipment of reinforced concrete for a distance more than 800 kilometers. You would not by any means call this limitation harsh. If, let us say, one department ships floor slabs from Moscow to Leningrad and another department ships precisely the same slabs in the opposite direction from Leningrad to Moscow, then under this rule these actions do not come under the control.

However, see what has been started here! In the transport department of Gosplan, I got hold of a batch of protests. They were literally cries from the department souls. The management of the Glavtyumenneftegaz [Main Administration of the Tyumen' Oil and Gas Industry] telegraphed as follows: "All the associations of the main administration are located more than 800 kilometers distant from the suppliers of reinforced concrete." All! This is the substance of the communications. And they went on with threats: Don't rescind your decision, they say; it would disrupt the construction program in the most important oil region. There are scores of protests like these. Listen, for example, to V. Gusev, the deputy minister of industrial construction of the Ukraine. He tells how the world will collapse if there is a halt to the transport of prefabricated structures from the Ukraine to the Far East and the zone of the BAM [Baykal-Amur Mainline].

And we are after all not talking about some unusual products. No, but about the most common or specific structures and authorization was given in advance to ship them any distances. The deputy minister of the coal industry, Ye. Krol', took advantage of this clause in the new regulations. He did not dispute the limitation set up. The deputy minister simply included it in the list of exceptions, that is, structures which you do not exchange at the neighbors--all the most important products which are now being shipped on the command of the Ministry of the Coal Industry--crosspieces, railroad slabs and foundation blocks for forest marshlands and platforms.

On the ministry's command they transport prefabricated structures from Vorkuta--to whereever do you think?--even to the southeastern part of Yakutiya.

I happened to be in the final points of the itinerary. The raw material for the production of reinforced concrete is in general inexpensive; it is the labor which is mainly the basis on which it is rated. And in polar Vorkuta the labor is exclusively the labor of the railroads--they have set up there a regional coefficient for wages and northern additions. ehis means that structures become "golden" even before they are shipped.

Let us now take a look at the station of destination. In southern Yakutiya the Minugleprom [Ministry of the Coal Industry] is building a high-productivity coal pit and the new city of Neryungri. According to the recent plan, the project entails approximately 3 billion rubles, including nearly 2 billion assigned to construction and installation work. You don't have to be a specialist to understand that setting up such a colossal complex in an uninhabited distant land is inconceivable without a solid construction industry base. As it is, I found in the archives of the Minlegprom two surprising documents. In March 1974 Deputy Minister V. Belyy approved an agreement which prescribed the investment of 80.5 million rubles in a production base for the future construction project. Apparently this amount seemed excessive and in June 1974 when the same V. Belyy signed the assignment for the planning of the base he ordered the planners to limit the amount to 65 million rubles. To what extent were these crucial decisions justified? You do not deceive life; it has always arranged things according to their places. According to the current plans, the cost of the base will reach nearly .5 billion rubles. I asked the deputy minister to explain this miscalculation.

"We did not intend to set up a base for the entire volume of work," was Vladimir Vasil'yevich's confident reply. "Otherwise the construction people would have fussed with it and there would have been no time left for the basic projects. To save time, it is better to supply the materials from other regions."

As you see, they are supplying them.

And shortly thereafter, opposite the flow of structures proceeding to Yakutiya precisely the same products began going in the opposite direction. I learned about this from the article by V. Kamenev, the chief of the Neryungri GRES Construction Administration, in the local newspaper INDUSTRIYA SEVERA. This administration is subordinate to the Minenergo [Ministry of Electric Power] and along with the Yakutuglestroy [Yakut Coal Construction Administration], it is taking part in the development of the Southern Yakutsk complex and is building precisely this large electric power station. It is taking part in this all right but, as can be seen from the article, it does not want to know the neighbor nor equally the common interests of the region.

The regional electric power station is being built 13 kilometers from the future Neryungri. However, the power engineers do not plan to live in it and they are expediting the construction of the temporary settlement of Serebryanyy Bor close by the GRES. "Without our own base," writes V. Kamenev, "it will be difficult for us to develop large-panel home construction, which offers the most effective solution for the housing problem. Minenergo is now

"reviewing the matter of constructing in the settlement of Serebryanyy Bor a home construction plant to be put into operation in 1981."

And this despite the fact that Yakutsk party obkom first secretary G. Chiryayev several times argued in the central press that there is no need for the coal people and the electric power people to erect two home construction combines side by side; they need to set up one large combine in parts. It is as if everything was decided and bureaucratism turned up and climbed over the same gates.

At the time of my meeting with him personally, the chief of Neryungrigresstroy, the author of the article which took me by outright surprise, explained the position of his department to me. According to him, the electric power people did not in general oppose cooperation. At the outset of the construction in a joint agreement the deputy ministers of the coal industry and of electric power engineering declared their intention to set up a common production base and they stipulated shared participation in the expenses and the sharing of the future output. But the time limits passed and nothing was done--the coal people did not build anything. And the combine had to install its own home construction unit.

So that the position is an uncoordinated one. It is not difficult, however, to predict the future course of events: the power engineering builders will finish the electric power station and will depart for another place. They will, of course, not yield the production base to anyone else and they will begin to ship parts from Neryungri to somewhere at the other end of the earth.

As we see, the timid attempt of the planners to bring efficiency to one of the most massive-scale freight transport operations encountered--let us call things by their names--the obstruction of the departments. Do not therefore be in any hurry to rejoice over the figures on the increase of shipments as shown in the summaries of the TsSU [Central Statistical Administration]--they indicate payment for bureaucratism rather than success in the economy program. Let us look now at the shipments of another large-volume freight--timber. I will again begin with a history in which I was a witness and to some degree a participant.

Timber and the MPS or the Tactics of the Ostrich Wings

As many as 353,000 cubic meters of wood are going to waste in Chunskiy Rayon, Irkutskaya Oblast. For the most part this is the best timber in the world--the celebrated Angara pine. It has been written off as wood and is now rotting, poisoning the natural environment. Back in 1976 the newspaper SOTSIALISTICHESKAYA INDUSTRIYA, where I work, twice wrote about the barbaric destruction of timber in the Chuna basin. At the site the then Minister of the Timber Industry N. Timofeyev was visited by responsible workers of Gosplan and Gossnab USSR. The minister issued several orders and assumed personal control of the matter. And whereas, despite this, nothing was done to alleviate the trouble, the events therefore ceased to be under his control.

Why did the wood become superfluous? For whom was it really earmarked? But, of course. The former minister attached a large woodworking combine to Lesogorsk and assigned a group of timber organizations to it as suppliers. But putting the timber procurement capacities into operation was now not so difficult. Building a modern enterprise for processing the wood was a more difficult matter. And it turned out that the starting of the basic shops was delayed for 6 years and during all these years the procurement workers duly felled timber.

The combine was finally put into operation. There were new capacities for the production of shavings: the latest cutting machines, conveyers, automatic machines. All this in addition to the output. Because what kind of output will there be if the shavings valued at 16.58 rubles per cubic meter go entirely into the boiler furnaces?

"There is no other solution," V. Moldavchuk, the general director of the combine explained. "According to the plan, the stoking must be done with sawdust and there is not enough of it."

In the meantime the combine is literally swamped with mountains of sawdust. I stayed for a while at one dump. Dump trucks kept coming and throwing off the amber-colored freight and the bulldozer efficiently punches out new approaches. And two combines can be heated by this product!

However, it is apparently simpler for the combine to feed the valuable shavings to the furnaces and, although it is as light as fluff, the output will scarcely yield more energy than is expended for the production of it. In general the combine remembers well the celebrated tugboat on which all the steam went into the horn. Actually, only the production of shavings is even in operation. Of the four woodworking shops one is in operation. An eight-frame plant has been started up but there has been no increase in output. The reason is the same--there are not enough people. Take note that the suppliers of the conbine--the timber organizations of the Lesogorskles timber association--are speeding up procurement precisely so as not to lose the lumberjack personnel. But there is no one to remind them and the Irkutsk timber association Irkutsklesprom has not found any better way to reduce the plan for the combine. The enterprise requires just half of the wood procured for it.

In short, the knot around the Chuna center is being drawn ever tighter.

One other example. In Ust'-Ilimsk the Minlesbumprom [Ministry of Timber and Paper Industry] USSR is setting up a timber industry complex. The first capacities have gone into operation. Years and years have gone by and the account for reprocessed wood is mounting to millions of cubic meters. In the meantime the ministry 5 years ago developed timber felling units here for the supporting complex--nine timber organizations procure yearly about 3 million cubic meters of output. The upper and lower warehouses, the roadsteads, and the transshipment bases are clogged with old wood and hundreds of thousands of cubic meters of timber are lying along the Ust' Ilimsk--Bratsk routes.

The timber is rotting and the number of new procurement projects is increasing: according to the plan the Ilimskles [Ilimsk Timber Association] is supposed to increase the procurement to 3.05 million cubic meters; of these 2 million cubic meters have not been distributed either formally or on paper--no consumers have been found for them. In short, the Ust'-Ilimsk center has now been added to the Chuna group.

Why the procurement of wood which is definitely superfluous? Or to ask in another way: what method is being employed to coordinate the plans for the felling and consumption of timber?

Let us say we are planners with you and we are faced with the following allotment: The Irkutsk timber organization Irkutsklesprom in 1980 was obliged to deliver to the consumers 21.5 million cubic meters of timber and by the beginning of the year the above-norm reserves there reached 4 million cubic meters. This output should be shipped out without fail; otherwise it will rot. How much new wood must be procured? Very simply, the difference between the deliveries and the balances, that is 17.5 million cubic meters, isn't that so? No. This means that about 4 million cubic meters will be procured beforehand to no purpose. The Irkutskles association is now unable to prevent this absurdity. V. Filippov, the chief of the planning division, says sadly:

"I was visited by Leontiy Yevtushok, the general director if Ilimskles. He asked that we reduce the plan for felling. This timber is rotting and soon we will be converting into firewood there 200,000 cubic meters of select saw logs. And I explain to him that this is our plan for the year and I am obliged to divide it precisely to a T. Let's say I reduce your assignment. Whose do I increase? The Chuna basin? Thus the situation there is no better than yours.

From 1976 on the executives of the industry began sending every year to Gosplan of the Union requests to reduce the procurement amounts. In October 1979 then First Deputy Minister G. Stupnev suggested that the timber felling in Irkutskaya Oblast and for the ministry as a whole be reduced by 1.5 million cubic meters. The request was a modest one--as we determined with you, it necessitated in this regard reducing the felling by precisely 4 million cubic meters. G. Stupnev's suggestion was all the more sensible in that no one would suffer: the industry as a whole was obliged to fulfill the plan for deliveries to consumers by shipping wood which has accumulated on the Chuna and at Ust'-Ilimsk.

The letter got to the timber industry division of Gosplan USSR. And, as V. Shabatura, a responsible worker of this division, informed me, they even rejoiced there: it seems that in Irkutskaya Oblast there are reserves of wood which have not been counted in the plan. Very good! Let's include them in the plan of deliveries and we will not begin to reduce the volume of new cutting; on the whole, we will have more resources and after all, the national economy does not have enough of this very timber. To put it more simply, we added another 1.5 million cubic meters to the plan for the shipment of wood from the Chuna and Ust'-Ilimsk without making it unrealistic. And with the best intentions.

The distribution and deliveries of wood are being managed by the Soyuzglavles [Main Administration for Interrepublic Deliveries of Timber]--a subdivision of Gossnab USSR. I visited P. Reutov, the chief engineer of this main administration. We dropped hints to each other and Pavel Grigor'yevich himself made a visit to the Chuna. In short, the conversation took place in a friendly, warm atmosphere and yet I made no mistake as I showed him a Zerox copy of the wood balance sheet for Irkutsklesprom. It was apparent from this document that the 3.7 million cubic meters of timber which are to be procured have in general not been distributed; there are no consumers for them and this output can be removed from the felling plan without causing any pain.

The speaker's eyes glittered with greed.

"Give me your paper. So -o, it was signed by Belkin, the deputy chief of Irkutsklesprom. An official document. Thank you. We will look for the resources; there are millions of cubic meters of undistributed timber there. Now we will get them into the record."

"For heaven's sake," I tried to reason with the chief engineer, who was dialing the telephone vigorously. "Sure, it's easy to distribute the resources on paper. But after all, the wood will have to be shipped on the railroad. Over the year you will be able to ship less than 4 million cubic meters from here. Not a progressive assignment. What sort of miracle are you counting on?"

"The timber is needed. We will write it into the plan for the railroad people. Let them fulfill it. One must have faith in the plan," the speaker snapped out.

Faith is from the field of religion. And the plan would do better based on judicious calculations. But let's get back to the Chuna business. When the story of the spoilage of the timber came to light, the ministry found a solution of sorts: since the local combine is not able to process the wood we will send it to the west by railroad. We have set up for this purpose a special office in the Lesogorskles timber association and over it the association Chunales. But throughout the years the railroad has supplied at best 80 percent of the planned railroad cars. Since the plans for procurement of timber are being fulfilled more accurately, the reserves of wood are continuing to increase in volume.

The failure at the Chuna is not an exception. In front of me is a batch of letters which came in to the ministry. It is distressing to read them. "Irkutskaya Oblast is clogged with timber, which is becoming wholly unsuitable. On the Iya River in places the sunken logs are lying four deep. It is essential to stop procurement until the perishing goods have been shipped out." So writes Irkutsk resident B. Tsvetkov. "The timber procured is being made into firewood. Why should I push it if they are sawing the timber, floating it and unloading it at the coast, and here it's rotting." This is written by 20 lumberjacks from the Yenisey timber transshipment base. "The timber which has grown for more than 100 years has been cut by us, divided up and thrown into the scrap heap." This is reported to the ministry by 32 workers of the timber point Splavnoy in Arkhangel'skaya Oblast.

The reason is the same everywhere--no cars.

I got hold of the data for the period beginning in 1970: not once were the railroad people able to carry out the plan for shipments. Whereas in 1975 the amount transported comprised 142.5 million tons of output which were distributed via Soyuzglavles, in 1979 the amount was only 110 million tons.

And how is the transport division of the Union Gosplan handling the matter under these circumstances? In 1980 it approved an assignment for the shipment of timber with an outright increase of 30 percent as against the preceding year. What does this mean and how do you account for the miracle there?

"No," Yu. Polyanskiy, a specialist of the division which supervises the shipments of timber, explained to me. "The executives of MPS have actually been pressing for a reduced plan but we showed them that the carrying and traffic capacity of the roads will enable us to fulfill the stepped-up variant of the assignment.

"We argued," V. Zubarev, the chief of the transport planning administration of MPS declares dejectedly. "The plan is realistic if we are diverted from the actual situation. We will not transport a single log but the requirements for other freight are also increasing. Moreover, the plan is realistic if the locomotives don't break down, if the customers stop delaying the cars above the norm, and if there are no disruptions in the repair of the tracks.

And the speaker went on listing "ifs" for several minutes more. Of course, life changed everything to suit itself: for Soyuzglavles there was even less freight transported in 1980 than in unsuccessful 1979. Let's trace further the position of the transport division of the Union Gosplan. In 1981 for the shipment of timber it established an assignment with a 34 percent increase over the preceding year. According to the appraisals of the MPS planners, they will actually only be able to transport to the customers of Soyuzglavles, not 140, but only 110 million tons. The draft plan for 1982 again calls for the transport of 140 million tons. I believe it is evident that as in the past the spoilage of output is predetermined. The woodman's ax has still not been concerned with the trunk and the wood is still stretched out to the sun by the treetop, but the tree is already doomed to perish without any benefit to the people. And the better the procurement workers begin to fulfill the plan the greater the proportion of the output that will rot.

No, I repeat: the figures, dreadful as they are, do not make much of an impression. You have to see it with your own eyes. I traveled by railroad from Irkutsk to Tayshet and from Tayshet to Bratsk. On each siding where there is a point for separating the switches from the window of the car the heaped up millions which somehow lose their reality in the summaries of the reports. For kilometers on both sides of the dividing point there stretch the stacks of wood. Near the point the wood is black and rotted--even 10 and more years ago they could not ship it because there was already no place for it nearby. The further away from the point, the fresher the abandoned wood. The

Novochunka siding. The gigantic piles of abandoned goods. As far as the eyes can see there are stumps. Among the stumps the fence of a transformer substation.

In the settlement of Veseloye not far from Lesogorsk I met with lumberjack brigade leader Viktor Tkachev. A aremarkable figure of a man--at that time (the winter of 1980) the timber industry had only six brigades which fulfilled their five-year plan and one of them was his, Tkachev's. You do not say anything; he had achieved his fame by his own efforts. We talked when he had just come in from his shift (and the shift meant time on the road, 12 hours in all, no less. Near Lesogorsk the timber had already been cut and they had to carry out procurement 200 kilometers from the railroad line). Completely fatigued, the brigade leader nodded with sleep and surely must have thought: When will this damned correspondent leave me alone. But I put one more unusual question to him and, let's face it, not a good one. Why was he in a hurry to fulfill the five-year plan. He had cut more timber than all the rest; was he now going to undertake to procure even more, and why? He cannot answer and he does not see what they see and talk about in every household: this felling is unnecessary; the goods will sell just the same.

The conversation produced no results. Viktor had other concerns--he was preparing a triumphant report for the newspaper. Moreover, Takchev sensibly advised that I meet with driver Nikolay Gorelov; he, he said, will send the reports on the spoilage of national goods to all quarters. I looked for Gorelov at the meeting of the settlement soviet (he is a deputy). When the deputies learned what it was about they interrupted the meeting to talk with the roving correspondent--he would suddenly come to their aid. But what could I do to help? They told me that at Razdol'noye settlement the floated timber had accumulated in a boom and the logs could not be floated further to the loading place on the railroad--the lower warehouses were clogged with wood and there was no place to unload any new product. The timber in the boom rots within the hour--the stench remains even though the lichen has been removed. From time to time they open the water gate and discharge the rot into the water to let it float somewhere. And so for him, Gorelov, there was the memory of the floated timber rotting three times and being replaced here and this is no trifling matter--the storehouse holds about 100,000 cubic meters of wood. Gorelov is one of the natives. He remembers that the depth of the Chuna River goes to 5 meters. Now there is not even half a meter--the silt-covered logs are lying there in several rows. How about the fish? Better not ask.

The reader may object: but is there narrow administrative authority there? Yes and, not having from year to year obtained the wood earmarked for them by the plan, the consumers begin to cut it themselves and to haul the timber for themselves. In the Chuna region, where the sawed Angara pine is rotting, the so-called self-procurement workers practice their trade. The rural construction workers of Kazakhstan maintain three timber organizations; the Crimean and Poltava organizations send logs to the Ukraine, Mintransstroy [Ministry of Transport Construction], Bratskenergostroy [Bratsk Electric Power Construction], Rossel'khoztekhnika [All-Russian Association for the Sale of Agricultural Equipment], etc., have their own procurement

organizations. Every year they stock as much as a million cubic meters, which is comparable with the program of the specialized association Lesogorskles. This is one region. And on the basis of the map of Irkutskaya Oblast as a whole one can study the geography of the country--there is hardly any oblast, kray or republic which is not represented in the Baykal region by its own procurement organizations.

As a rule these organizations operate in a wasteful manner. On the same Chuna the cost of production of a cubic meter of wood goes up to 45 rubles among the self-procurement people while it is 8 rubles less at the enterprises of Lesogorskles. Their production is one-third that of the enterprises. But the wages there are much higher and understandably the lumberjacks flock to them from the subdivisions of the specialized ministry. One-third of the apartments of the Lesogorsk woodworking combine are occupied by residents who have gone over to work for the "competitors."

It is hard to imagine a more preposterous picture: all over Irkutskaya Oblast there are stacks of timber which they have not been able to ship. So why are the self-procurement workers cutting more? Why not give them the finished product? The timber people have made this suggestion for many years in a row but it gets stuck in the supply links. Who is putting the spoke in the wheel?

"I am opposed to this," Soyuzglavles chief engineer P. Reutov bravely confessed in his conversation with me," and you can so record it. Last year the consumers received two-thirds of the amount due them on the funds. And no one here will raise a hand to deliver the finished wood over and above the funds when the legitimate consumers have not been satisfied."

As the ancients said, the world may crumble but the law must prevail. A million cubic meters of Chuna timber have already been reduced to rot and the next million will take its turn. The customers who have funds will not care about these resources--they cannot be transported. Similarly, the supply people will not in general look out for the consumers but for their own peace of mind. In truth, if no one takes the responsibility, who will be to blame for disruptions of deliveries? The railroad. It is not fulfilling the shipment plan and you should inquire of it. And if the timber is sold locally? Then the output is not getting to the legitimate customers through the fault of the supply people--they have "squandered" the resources.

Objectivity prompts us to note that in the Chuna region the self-procurement people nevertheless once sold more than 300,000 cubic meters of wood. But which wood? That which had been lying there not less than 2 years.

"It is not suitable as timber," explains one of the purchasers, chief engineer of the Yesil' sector A. Oshkin. "Still we shipped it to Kazakhstan; perhaps they can use it for fence boards. Of course, they did not reduce the procurement for themselves."

What happens is interesting: some years they are unable to transport excellent timber and other years they have been shipped rotted timber. How did they manage this? Did they drag the goods by the neck?

"For us this is no problem," Oshikin reassured me. "Every self-procurement organization is a rich proprietor. We, for example, belong to the Turgay oblast agricultural administration. It has its own railroad car quota--I get as many as I need. They will refuse someone else and give them to me; you cannot manage without timber."

It's easy to understand how all this self-activity disorganizes the transport work. Soyuzglavles does its best with the transport of the wood procured by the timber industry. It may have its flaws but it tries to introduce rational routing schemes and to prevent cross hauls. But, in addition, approximately 60 departments procure about 100 million cubic meters of output for themselves and they sometimes transfer it according to the most absurd, irrational transport schemes. These shipments are alien to Soyuzglavles; it takes no part in them.

Let us try to get the generalized data. Let's look at the monthly plan for the delivery of railroad cars for timber. Sverdlovsk Railroad sends timber freight to all the other railroads of the country; this includes 72 cars which go out every month to the Urals and all the way to the Far East. In turn Sverdlovsk Railroad receives 15 cars of timber a day from Siberia. In the course of a day 633 cars with timber arrive at Moscow Railroad but this railroad itself sends more than 150 cars with similar freight to areas outside its confines, including even the BAM. And so it is for each railroad. Of course, no two types of timber are alike and some grades also have to be shipped in the direction of the flow. However, tell me, if you please, what kind of eucalyptus-boxtrees grow in the Moscow forests that you can't get more of anywhere else. With this kind of arrangement there will always be an insufficient number of cars.

The only true solution of the problem lies in elimination of unnecessary shipments whenever transport is unable to keep up with the deliveries. In the meantime the timber shipment plan evolves spontaneously--with minor corrections it absorbs the suggestions of a hundred departments each of which is preoccupied with its own interests. The planning principle is manifested only in the fact that the interdepartmental commission for the rationalization of transport, by antedating, tries to eliminate obvious absurdities. Practically nothing comes of this--the plan has taken shape and how do you bring order into deliberate anarchy? And who will listen to the commission? In 1980 its timid assignments for curtailing unnecessary shipments were 40.2 percent fulfilled. Commission Chairman V. Biryukov recently frankly acknowledged in the press: "The experience of the USSR Gosplan's commission for the rationalization of freight shipments indicates that in the yearly planning there has been relatively little curtailment of irrational shipments." Why? It's very simple--the departments are stronger than the commission.

Is it Necessary to Transport Coal to the Donbass?

The situation on the railroads is complicated by another circumstance: in the economic system there are needs that are so compelling that satisfying

them requires that we dissipate the already scarce transport resources. In this regard we have to scrutinize the transport of another mass-scale freight—coal.

From the supply plans and from the shipment reports I extracted dozens of routings which, from a common sense standpoint are impossible to explain. In 1980, for example, 16.7 million tons of Kuznetsk, Pechora and Karaganda coal were brought in to the Ukraine and at the same time 13.9 million tons of Donetsk coal were shipped out to other republics. Fuel from the Kuzbass is being brought into Arkhangel'skaya Oblast and Pechora and Inta coal extracted nearby is being sent to the southern part of the country. Coal from Ekibastuz is delivered to the Serov GRES in Sverdlovskaya Oblast and fuel extracted 43 kilometers from the GRES in the Bogoslovskiy deposit is shipped to Tyumen', Tambov and Kirov. In 1980 they shipped 4 million tons of coal from the basin near Moscow to various points along the way to the Donetsk Basin and instead Karaganda, Ekibastuz and Kuznetsk coal was shipped to the center of the country. Tailings from the concentration of Pechora coal are shipped from Cherepovets to the Kurakhovo GRES (near Donetsk)--opposite the direction of the flow of the Donetsk fuel. I could continue with other examples like these.

I recorded only the shipments which are officially deemed inadmissible; for the most part they are even forbidden by this same interdepartmental commission attached to Gosplan USSR. However, those forbidden by one subdivision of Gosplan are authorized by another link of it, namely the division of fuel balances and distribution plans. In the distribution of allocations this division indicates every year precisely what coal is to be shipped where. Why is this? Ya. Gamlitskiy, the chief specialist of this division, began the conversation with a question almost philosophical in nature.

"What are these irrational shipments? Take note that they are shipments which one could dispense with under these specific circumstances."

And he went on to make the simple point even more simple. Is it possible today to eliminate the delivery of Donetsk coal--well, let's say to the Center, the Igumnovskiy GRES opposite the flow of Siberian coal going to the Donetsk Basin? Not in any case! Kuznetsk coal is lumpy and there are no crushers at the electric power station. Neither the Donetsk nor the Kuznetsk coal can be sold for everyday needs--the first is too fine and the chunks of the second are excessively large. At the same time the Moscow area produces coal; it is transported to the European regions and in its place they of course have to bring another fuel to the Moscow area basin. And so in each case without fail there are found reasons why nothing can be changed under "these specific circumstances" and the irrational automatically becomes rational.

In line with the routings formally banned, the division of balance sheets in 1980 authorized anew transport for neither much nor little but for 95 million tons of coal or one-seventh of the total. In 1981 the picture was the same. Authorization was in the form of an exception, as stated in the documents. But what kind of exception is this if it is repeated 10 years running and the rule is not observed even once?

"Yes, you will ultimately grasp the fact," Ya. Gamlitskiy explains, "that in supply they proceed from the real situation. One can and should ask the power engineers why they did not receive the crushers at this Igumnovskiy GRES although a decision to this effect was taken back in 1965 and why they disrupted many other assignments for curtailment of unnecessary shipments. However, it is a necessity today to provide the enterprises with the fuel which they are capable of consuming the most economically. We are the division of balances. And in the balance sheets the receipts and expenditures must jibe not simply with respect to the number of tons but also as to the types of coal."

I understand. How can one help understanding? But then we will pose another question: are the balance sheets being adhered to? Not by any means. In 1980 underdeliveries to the consumers comprised 16 million tons of coal. Isn't this because transport, already overloaded, is dragging 95 million tons of a certain coal on the forbidden routes?

This would be good even though the consumer obtains the fuel he wants. But after all this is not the way it happens. A recent survey by the specialists of the Energoset'proyekt [All-Union State Planning and Scientific Research Institute of Electric Power Networks] produced the following statement: "Only a negligible number of coal electric power stations regularly burn the planned fuel." It went on to give examples: The Zaporozh'ye GRES uses 17 types of coal, the Partizansk GRES 19 types from 12 deposits, the Kurakhovo GRES 26 types from all the basins, etc. Indeed, the operating schedule would have to be changed daily. And the cause is again to be found in transport: it does not have to wait till the station is on the verge of a shutdown to be meticulous in this regard.

Well, the balance sheets are for you too!

A long time ago Gosplan and Gossnab USSR became aware of the anomoly pertaining to the shipments. Three years ago in a joint order they directed that a schedule be drawn up for a normal freight flow for coal to replace the hopelessly outmoded one which is bogged down by innumerable exceptions. Since that time the Soyuzglavugol [Main Administration for Interrepublic Deliveries of Coal], the organization responsible for fulfillment (this supply main administration plans the delivery of practically all of the coal in the country) has already suggested three variants for such a document but the quality of these variants leaves something to be desired. The draft of the schedule, for example, fails to count the average distance of the shipments.

It is not surprising that the last, the third, variant was also turned down by the MPS. Professor Ye. Nesterov, the head of a sector of the NIIMS [Scientific Research Institute for Communications] checked the plan against the orders of Gosplan and found that the scheme for rational freight flows included all the forbidden routes. The specialist also wrote about this in his report. The official in charge of the preparation of the plan, chief engineer A. Soldatenkov, took offense. In the complaint he addressed to Gossnab he writes: "The remarks are set forth in an insulting tone which is inadmissible for business correspondence. In unjustifiably derogating the

"intensive work of the collective of Soyuzglavugol' on the freight flow schemes T. Nesterov uses such expressions as 'they ship where they want to,' 'the ink was not even dry,' 'for 3 years in a row Soyuzglavugol' has continued its inferior preparation of schemes for normal freight flows,' etc."

This is the truth. The old professor has the unpleasant habit of calling things by their names, as for example calling bureaucratism red tape and not a profound study of the issue, as it is referred to in the rules of refined philology. In short, the stylistic complaints of the chief engineer of Soyuzglavugol' are justified. As for any slanderous criticism of the main administration collective's intensive work on the freight flow schedules, they are definitely not true. In general, no work like this has been done by either this busy collective or any other renowned collective of Soyuzglavugol'. Consequently, there was noone to blame.

My conversation with A. Soldatenkov took place in June when expenditure of fuel is of course not as great as in the winter. Aleksandr Petrovich opened the amber book with the daily record of reserves at the major consumers. The Barnaul TETs had a fuel reserve for 12 hours and the Tolyatti TETs for 18 hours. Nearly all the electric power stations of the Center had reserves, not for days, but for hours of operation. The electric power stations and coke-chemical plants of the Ukraine have been operating "from wheels." And what if the train with coal does not arrive on time? Today the enterprises will shut down. And what about the extinguishing of the coke furnace batteries? Tomorrow the metallurgical plants will be next.

Fortunately, Soyuzglavugol' has not allowed anything like this. But at what price? Without regard for the distances they transported coal for the current needs and for the reserve. All summer, until the time came for shipping the harvest, cars for coal were shipped out of turn while neglecting the delivery of many other national economic goods. There was simply no other solution--if they do not establish winter reserves of fuel in the warm months, then there will not be any before then. And nonetheless they will not fully succeed in the undertaking. Does this mean that the railroad people have blundered again? No. Simply that while there are unnecessary shipments there will always be a shortage of cars. After all, coal constitutes one-fifth of the number of tons of freight transported on the railroads.

The Institute of Complex Transportation Problems under Gosplan USSR compiled a broad program for the rationalization of shipments of coal and many of the suggestions can be implemented without substantial costs. The scientists of the NIIMS worked out their own draft schedules: with deliveries of 523 million tons--this is the bulk of the coal extracted in the country in a year--the average distance for the shipments may be reduced by 108 kilometers, that is one-seventh of the current figure. Some forward-looking ideas were advanced by the specialists of MPS. And there are some other plans. But all the practical suggestions were turned down by Soyuzglavugol'. In the official document the chief of this main administration, I. Ul'yanov, explains his position in this way: "The various avenues for the use of coal and the diversity of quality and assortment generate the need for transport even in the

"context of the difficulties connected with transportation. Heating capacity cannot be a criterion for the interchangeability of coal products."

Undoubtedly the consumers (and specifically some electric power stations, because the controversy mainly concerns them) would have to have some new type of fuel devised for them although after all, even today they obtain any fuel they like, only not that prescribed in the plan. But the system, which is oriented for lessening the distance of the shipments, would have made the consumers toe the mark--they probably would not have dragged out for 15 years the futile talks about the installation of crushers at the Igumnovsk GRES. The variant suggested by Soyuzglavugol' definitely relieves the customers of such cares.

After examining the draft of the scheme, the interdepartmental commission eliminated some of the irrational routes. But only some of them. The final variant retained many dozens of nevertheless rather wasteful coal routes. In them, as in the song, train after train will go off.

What Day Lies Ahead

We have reviewed the shipments of the three busiest types of freight--building materials, timber and coal. We can still analyze the routes involving ore, pig iron, steel billets and oil. The conclusion will be the same. As many case of wasteful use of transport resources as we took the reason is either bureaucratism or favoritism and anything more.

I think that, as a first step, the following measure would be useful: the central planning organs would establish transport quotas for the departments and the latter in turn for the enterprises. Indeed it is hard to understand why the planning organization, on the basis of harsh allocations, distributes electricity and metal under shorter limits and employs no measure or norm only for the transport resource, which is most in short supply at the present time. It would be better to set the quotas off against bureaucratism than against the current bans on irrational routings and the yearly plans for rationalization of the shipments. Let's say Minugleprom [Ministry of the Coal Industry] wants to deliver to Yakutiya structures from Vorkuta--for health purposes but it then has to economize on other shipments because it must stay strictly within the limit: the transport resources have been distributed and there is no place to get the additional amounts. It is wonderful that the movement for economy of the transport resource has already begun and has begun from below, so to speak, with the customers themselves: the CPSU Central Committee recently approved the L'vov system for effective utilization of railroad cars. The work of the L'vov enterprises would get universal support if quotas were established for shipments.

A year ago the idea of this kind of limiting was also expressed by many other letters written to the newspaper SOTSIALISTICHESKAYA INDUSTRIYA. We here received some sharp criticisms and, as is not strange, not from the ministry workers, but from the planners. The director of the Planning Institute for Complex Transportation Problems (IKTP), B. Kozin, considered our idea wrong: the result, he said, will be that the plans of the industry sectors will be

subordinated to the potentialities of the railroads whenever it is necessary to develop transport to an extent calculated for full satisfaction of the requirements of the national economy. This opinion was expressed in a letter to the editors sent by A. Zotov, the director of the Gosplan transport division.

It would not be bad, of course, to also increase the shipments in the forthcoming period but after all there was practically no increase all through the 10th Five-Year Plan period. Can it be that the specialists have a plan which would change the situation for the better?

Yes, they do. This document in front of me is the plan for development of railroad transport in the 11th Five-Year Plan (1981-1985). In due course the MPS board approved the plan worked out.

Among the great number of measures the one that can be considered the key one in the plan is the construction of second tracks and two-track additions on the mainlines with heavy freight loads. It would have been wrong to attribute this strategy to the MPS management as a whole. No, this is the predominant direction of the minds at work in the transport subdivisions of Gosplan of the Union and in science. The IKTP is functioning as the ideologist there--Director B. Kozin and his deputy A. Mitaishvili wrote as follows in the journal PLANOVOYE KHOZYAYSTVO (No 5 dated 1979): "The operation of the major portion of the shipments in the future requires the building of new lines and second tracks." This idea the MPS board also developed as part of the draft for the five-year plan.

So, this business as outlined is correct and reliable. The second tracks are increasing the traffic capacity of the road three-fold and even more. The new lines are so much better. However, what does all this come to? It reveals in this regard the coordinated character of the planned program. The development of railroad transport in accordance with the 11th Five-Year Plan requires 40.5 billion rubles even if we do not count the outlays for the BAM and the metros. We will say outright that this amount is unrealistic. If such funds were assigned to other industries they would hardly be able to put them in operation: there would not be sufficient either construction capacities or equipment. Actually approximately half of the MPS requisition has been satisfied in the 11th Five-Year Plan. And to go about this correctly it is not necessary to clutter the plan with assignments which will absolutely not be fulfilled.

But let us assume for a minute that the original MPS intentions have been realized. Will the transport situation then be radically improved? Let us consider this. According to the data of the MPS, 80,000 kilometers of the network are now being used with an increased permissible load level. And according to this ministry's plan, 10,000 kilometers of second tracks are slated to be built. Of the 80,000 kilometers 10,000 are urgently needed! If they adhere to this strategy, the transport situation will be normalized in eight five-year plans. If we consider that they will actually be able to lay only 5,000 kilometers of second tracks in the 1981-1985 period, then it comes out that the entire program will be realized sometime in the middle of the 21st century.

Such historical periods will not serve us. As far as the building of new lines is concerned, they will after all be laid primarily in the form of sidings with an exit for the existing overloaded mainlines. The new railroads will not only fail to relieve the existing network but will actually complicate its operation even more.

Where, however, lies the solution? I suggest that we listen to the opinion of the distinguished specialist who has studied the problems of transport for many years, the previously mentioned Professor Ye. Nesterov, a doctor of economic sciences. In 1976 we published with Nesterov an article entitled "Transportnoye Obespecheniye Pyatiletki [Transport Provisions for the Five-Year Plan]." In all honesty, my personal participation was modest--but the meticulous professor felt that it involved more than simple proofreading and he placed two signatures under the published article. The article predicted difficulties in the fulfillment of the 10th Five-Year Plan because it was based on an unsatisfactory estimate of the transport factor. Nesterov's prediction proved to be correctly oriented in that it confirmed an important decree on transport already adopted in the course of the five-year plan--this key economic sector received additional resources.

On the threshold of the 11th Five-Year Plan I briefed Professor Nesterov on the MPS plan and expressed my doubts about the effectiveness and practicability of the proposed program. The specialist confirmed my misgivings but in his opinion the situation is by no means hopeless. Nesterov proposes his own variant for a solution of the problem. Here is the crux of it, briefly stated.

Transport can be increased either by running more trains on the mainline or by increasing the weight of each train. In the aforementioned article from PLANOVOYE KHOZYAYSTVO IKTP executives B. Kozin and A. Mitaishvili declare: "At the present time on the railroads there are limited reserves for increasing the traffic capacities of the railway network through increased weight of the trains." The MPS is in full agreement with this opinion: the ministry has projected for the next five-year plan an increase of only 60 tons in the average weight of a train.

This does not amount to anything. The average train weight is now hardly more than 2,800 tons. By world standards this indicator is unsatisfactory. Moreover, even in our country back in 1935 the Kurgan branch line ran a train weighing 11,400 tons and successful tests were carried out on other railroads. Quite recently two locomotives brought a "ten thousander" from Ryazan to the capital and in the last few months the movement of such trains on the Moscow Railroad has become more or less regular. This work was approved by the party Central Committee.

And yet this initiative has not obtained the desired proliferation among us. The conditions are not suitable for it. A weight of 6-7,000 tons requires a station track 1,700 meters long and a weight of 9-10,500 tons a length of 2,550 meters. And the station track length we have adopted is 850 and 1,050 meters. Obviously, the "heavyweight" will not fit into any one station; its head and tail occupy the main track and consequently no train, be it freight

or passenger, can pass it. The operation of every "heavyweight" requires exceptional efforts on the part of all the traffic services. When there is hooking or unhooking of cars on such a train at the stations of dispatch and arrival they have to use the main track so that the losses of time for switching operations may eat up all the profit. If a breakdown occurs en route all the lines will be clogged.

The difficulties can be eliminated if we lengthen the station tracks to 1700 meters to adapt them for the operation of double trains and to 2,550 meters when we run triple trains. It is in this and in the development of the entire station operation that we will find the chief transport reserve. Let us consider this again briefly. We will assume that the next five-year plan will, as the MPS contemplates, encompasses the building of 10,000 kilometers of line but not in the form of second tracks but rather in the form of lengthening of the station tracks and augmenting of the number of them. Then, by virtue primarily of a sharp increase in the weight of the trains we will be able to eliminate the excessive load from the yards of the railroads with an overall extent of 80-100,000 kilometers. In other words, we would evolve a normal situation on all the currently overloaded mainlines. Not on one-eighth of them, as would ensue from the MPS variant, but on all of them.

Of course, 10,000 kilometers of lines in the five-year plan constitute an unrealistic amount both in this and in the other variant. But half of this can and should be attained. If that is done, the situation will be normalized on 40-50,000 kilometers of mainlines out of the 80,000 now operating with overloads. This means that a fundamental improvement in transport will be achieved in a maximum of two five-year plans and not over many five-year plans as would be the case if we depend on the construction of second tracks.

There is a relationship between the overall length of the station tracks and the traffic capacity of the road. Stemming from this relationship is a strict mathematical correlation. The more cars applicable per kilometer of station track the lower the sector speed of the trains on the road and the less the average run of the locomotives. And, what is more disagreeable, the greater the saturation of the stations with cars the more marked the reduction of the speed and run. Thus, in the 10th Five-Year Plan the sector speed showed a decline of 2.8 kilometers per hour and the run of the locomotives a decline of 40.2 kilometers a day. On the roads with electric traction these indicators fell off even more drastically. At a certain point of this saturation we see the onset of the so-called paralysis of the road--the stations become clogged, they are unable to either receive or dispatch trains, and shipments cease.

This is by no means hypothetical. The scientific figures are confirmed by experience. In 1979 a critical level of congestion was reached on a number of roads—14.5 cars per kilometer of station track. The amounts of traffic began to fall off rapidly there. They succeeded in remedying the situation when they removed the unnecessary cars from the overloaded roads and brought the stations' saturation with them to a permissible level. However, we all know the consequences of the congestion from the summary compiled by the TsSU [Central Statistical Administration] USSR: in 1979 shipments on the railroads declined.

What guarantee is there that something like this will not be repeated? Indeed, from 1970 to 1979 the congestion of the station tracks increased by 35 percent. If this rate is maintained then in 10 years it will reach 14.5 cars per kilometer, that is, the amount which led to the 1979 paralysis of the overloaded roads. This is an average for the railroad network. But the congestion is not distributed evenly. The transport bottleneck may arise in less than 10 years. It is quite plain that if the key lines are clogged, the others will of course not ship.

Nesterov correctly predicted the transport difficulties in the 10th Five-Year Plan. I'm afraid that he is also correct now in his current alarming prognosis. It looks like the stoppages on the railroads, which made their first appearance in 1979, will become a chronic thing. We said above that in the 1980-81 fall-winter season the consumers obtained far less coal than usual. Where did the fuel go? Part of it was "on wheels": against a norm of 10.8 million tons for train trips, in September of last year the consumption came to 18.3 million. If you consider that the daily delivery comprises about 2 million tons, then it's easy to arrive at the fact that the freight was en route an average of 9 days instead of 5. In other words, the cars and locomotives required a year ago for the transport of fuel were already 1.7 times the amount called for by the norm.

Let us compare the average daily loading of cars in the country during the last years. In January 1980 the number of cars loaded was 5,000 less than in January 1978, in February the decline reached 7,500, in March 9,600, in April 5,700, in May 7,300, in June 9,500 and in July 8,900 cars. These are the dynamics for 2 years. But the negative processes operate so rapidly that they are now in evidence in shorter periods. For example, in July of last year (1980) the daily average shipment was 7,700 cars less than in February. Abundant July proved to be less successful than snow-plagued February!

Nesterov's idea is clear: discontinue construction of second tracks (except for sectors with large slopes) and employ the manpower and means made available for the lengthening of station tracks and for development of the stations. This variant is patently not one of the easy ones. In many cases the stations are located within the confines of a city and there is no room to expand them. This means that they will have to be dismantled and relocated. However, there is at any rate no alternative solution.

The strategy suggested by the Ministry of Railways does not prevent these troubles and for this reason alone cannot be adopted.

The idea of first-priority development of the station operation received direct and vigorous support at the 26th Party Congress. In the review report of the Central Committee L. I. Brezhnev declared with special emphasis: "It is important to concentrate on the development of the station tracks--they provide an economical and rapid means of increasing the traffic capacity of the railroads."

This solution is, I believe, a crucial one for the next five-year plan. But the matter is of course not limited to this one measure. In accordance with L. I. Brezhnev's suggestion we have begun the preparation of a long-term comprehensive program for the development of transport. Even before this program was approved by the CPSU Central Committee a decree was adopted on "Measures for improving the work and for the full development of railroad transport in the 1981-1985 period." The ongoing five-year plan provides--among other fundamental measures--for a rational distribution of the productive forces, the introduction of optimum schemes of freight traffic flows and the elimination of crosshauls. The increase in average distance of freight transport is to be brought to a halt.

The transport problem must be resolved and undoubtedly will be resolved. It is already evident that we are on the right track in this regard.



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CSO: 1829/86-A

RAILROAD

BOOK DISCUSSES LOCOMOTIVES, ROLLING STOCK

Moscow LOKOMOTIVY I MOTORVAGONNYY PODVIZHNOY SOSTAV ZHELEZNYKH DOROG SOVETSKOGO SOYUZA 1966-1975 in Russian 1979 (signed to press 28 Nov 79) pp 2-4, 212-214

[Annotation and table of contents from book "Locomotives and Motor Coach Rolling Stock of the Soviet Union's Railroads, 1966-1975" by Vitaliy Aleksandrovich Rakov, Izdatel'stvo "Transport", 8,000 copies, 213 pages, with tables and illustrations]

[Text] UDC 629.42(47+57)

This book describes the design peculiarities and characteristics of direct and alternating current electric locomotives, diesel engines used with electric and diesel motor coach trains, plus wide-gage railway motor cars, built by domestic and foreign plants from 1966 through 1975. This book can be considered to be a continuation (part three) of the previously published (in 1955 and 1966) books LOKOMOTIVY ZHELEZNYKH DOROG SOVETSKOGO SOYUZA and LOKOMOTIVY I MOTORVAGONNYY PODVIZHNOY SOSTAV ZHELEZNYKH DOROG SOVETSKOGO SOYUZA.

This book is intended for engineers and technicians involved in operating, building and improving locomotives, as well as for readers interested in the history of railroad technology.

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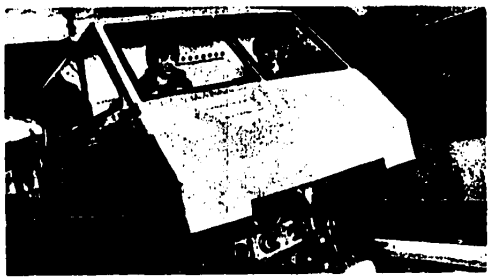
9887
CSO: 1829/196

RAILROAD

PHOTOGRAPH OF MAGNETIC-FIELD-DRIVEN DEVICE PUBLISHED

Moscow SOVIET UNION in English No 4, 1982 p 44

[Text]



[Caption] Work has continued in the USSR on the development of a means of transport driven by a magnetic field. In the photograph: a pilot model of the magnetoplane designed at the USSR Research, Development and Technological Institute of Electric Locomotive Building in the town of Novocherkassk. The designers will continue work on the project and hope to make a 500 kph inter-urban ground service available on this basis.



CSO: 1812/84

END