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6 MAY 1986

USSR REPORT TRANSPORTATION

CONTENTS

MOTOR VEHICLES AND HIGHWAYS

Device for Making Motor Vehicles, Tractors Amphibious (O. Serdyukov; MOSKOVSKAYA PRAVDA, 22 Jan 86).....	1
Problems in Vehicle Transport of Oversize, Heavy Loads (Yu. Kostinskiy; SOTSIALISTICHESKAYA INDUSTRIYA, 15 Jan 86)...	3
Lagging Technology in Electronic Vehicle Control Devices (D. Murzin; SOTSIALISTICHESKAYA INDUSTRIYA, 4 Jan 86).....	6
Construction of New Dnepr Bridge in Kiev (S. Prokopchuk; TRUD, 29 Jan 86).....	11

RAIL SYSTEMS

Chief on Proposed New North Caucasus Railroad Line (F. Kotlyarenko; EKONOMICHESKAYA GAZETA, No 2, Jan 86).....	13
Condition of Ministry's Lyubertsy Plastics Plant Deployed (D. Dmitriyev; GUDOK, 2 Feb 86).....	15
Car Unloading Problems Plague Tyumen Area Railroads (M. Bulanzhe; GUDOK, 8 Feb 86).....	18
Velikiye Luki Plant To Produce New 75-Ton Hopper Car (K. Vladimirov; GUDOK, 30 Mar 86).....	22
Shcherbinka Test Facility To Host Rail Expo in July (Yu. Zakharyev; GUDOK, 30 Mar 86).....	24
Rail Ferry Suggested for Yamal Peninsula Rail System (K. Korzhavin, et al.; STROITELNAYA GAZETA, 14 Mar 86).....	26

MARITIME AND RIVER FLEETS

Party Official on River Transport Improvements in Ukraine (A. Khomich; VODNYI TRANSPORT, 8 Feb 86).....	28
--	----

INTERSECTOR NETWORK DEVELOPMENT

Disruptions in Central Asia Petroleum Product Shipment (V. Kuleshov; IZVESTIYA, 13 Mar 86).....	32
Institute Urges Coordination in Use of Containers (M. Sitnik; GUDOK, 23 Mar 86).....	35
More on National Reorganization of Transportation Management (G. Pospelov; SOTSIALISTICHESKAYA INDUSTRIYA, 16 Mar 86)...	39

MOTOR VEHICLES AND HIGHWAYS

DEVICE FOR MAKING MOTOR VEHICLES, TRACTORS AMPHIBIOUS

Moscow MOSKOVSKAYA PRAVDA in Russian 22 Jan 86 p 3

[Article by O. Serdyukov, under the heading: "Done for the First time":
"All Vehicles Can Swim"]

[Text] Development has been completed on a new device
which transforms ordinary vehicles into "amphibians".

Very often we find ourselves captives of preconceived ideas, based not on precise calculations but on approximations, or "rule of thumb". Here's an example: everyone knows that you cannot shift a tractor onto an inflatable dinghy--it'll sink. But if one looks into it? Let's take the volume of a tractor, say a "T-130", which is about 30 cubic meters; divide by its weight (11.5 tons); and it becomes clear that the average density of this vehicle is less...than that of dry pine. Well of course--you see, a tractor is not a solid chunk of iron--there's a lot of empty space. And so, decided Moscow inventor, Candidate of Technical Sciences O. Antishin, if a tractor were put inside a waterproof bag, it would readily float in water. Testing with models has confirmed this proposition.

Now imagine a family, which has traveled by car to vacation on the banks of a river. As always, on the far bank the place is far more alluring than on this side--but there is neither a bridge, nor a ferry, nor a place to ford. No problem! The head of the family pulls from the trunk a simple device, for which the State Committee for Inventions and Discoveries has granted patent rights to Antishin. The device is an inflatable rubber raft with an attached elastic hood. All of this is put onto the vehicle from above, is fastened to it (wheels on the outside), and the automobile is driven into the water. And it does not sink because of the floatation and the air trapped under the hood. Locomotion can be provided by oars or by a small outboard motor. And even if the rubber bag is punctured it's no disaster, because a booster pump is provided with the device. There is room on the raft for the driver and passengers.

Antishin calculated that not only motor vehicles and tractors, but any kind of agricultural equipment could be moved across the water. This could be very convenient during spring flooding, when equipment frequently stands idle just because it's impossible to get it to the place where it's needed.

Incidentally, in order to move vehicles across rivers and lakes it is not at all mandatory to have Antishin's raft at hand. The inventor has proven that just a large rubber bag is enough: the air in the bag is altogether sufficient to float the vehicle, and it can be towed with the aid of a motorboat. This is available not only to kolkhozes but to any automobile owner. Thus, the inventor is correct to assert that all vehicles can swim.

9006

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MOTOR VEHICLES AND HIGHWAYS

PROBLEMS IN VEHICLE TRANSPORT OF OVERSIZE, HEAVY LOADS

Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 15 Jan 86, p 2

[Article by Yu. Kostinskiy: "Barriers in the Way: Why Vehicular Transport of Oversize, Heavy Loads is Developing Slowly"]

[Text] What wonders of transportation does one not see in our days! A rail car moves by motor vehicle, and not the other way around. A large vessel travels on wheels behind a tractor from one river to another. And a huge airliner--true, without its wings--rolls on bogies around the Moscow beltway. Chemical towers weighing 400 tons with a 10-meter diameter float down a river behind a tugboat. Special small decks, with masts, lamps and mooring devices, are welded to their butt ends.

All of these unique transfers are accomplished by the Spetstyazhvtotrans [probably Special Heavy Vehicle Transfer] Association of the RSFSR Ministry of Motor Transport--a well-known firm which possesses large motor vehicle enterprises in Leningrad, in the suburbs of Moscow, in Gorkiy, Volgograd, Astrakhan, and Tobolsk. But its headquarters is located in Moscow, in a small building on Danilovskaya Naberezhnaya. SOTSIALISTICHESKAYA INDUSTRIYA has already written of the all the adventures on its trips, and of the master drivers who, it seems, do the impossible. But our conversation with N. Akulinushkin, chief of Spetstyazhvtotrans, concerns much more prosaic things.

"In essence we are the sole nationwide contractor for unique transfers under combined motor vehicle and water transport conditions," relates my interlocutor. "Our task is to deliver to its place plant-manufactured equipment in an assembled state. In so doing we save the national economy from 500-700 rubles for every ton: transshipment costs a lot less than dismantling a completed unit and reassembling it at the installation site. I won't even discuss the quality of this repeat assembly far from the manufacturing plant. Moreover, the time period for putting equipment on-line at a building project completely ready for use is reduced by a factor of five!"

They are proud of their work here: it is necessary, unique, and creative. Yes, creative: 60 percent of all transfers are the only ones of their kind, and a special plan is required for each one. Even the very lightest trip for Spetstyazhvtotrans is difficult enough. And what do you say about the ones that the specialists call difficult! Spetstyazhvtotrans has first-class drivers, and there is practically no cadre turnover: one does not run

away from interesting work. It would seem that all is well; here they have kept the Challenge Red Banner of the ministry and the central committee of the branch trade union four quarters in a row, but...

"We are carrying out only 10 percent of the orders for transport of outsize, heavy equipment," says N. Akulinushkin. "Every year we provide savings of 150 million rubles, but we could provide 1.5 billion. They beg us for deliveries, but we can only spread our hands in helplessness."

Here's an example. The Bryansk machine-building plant produces powerful diesels for ships. After assembly, breaking-in and testing, they are disassembled and shipped to the wharf by railroad, where they are once again assembled, broken-in and tested. In the first place this has an effect on their quality. Secondly, temporary duty trips by installation and testing personnel from Bransk "to the blue sea" has a cumulative effect on the cost of the engines; moreover they would no doubt have found work to do at home. But the main thing is that in order to transport a disassembled 600-ton diesel, with its non-standard dimensions, requires 60 rail flatcars. How many rail flatcars are required each year by the Bransk plant alone, with its vast manufacturing program!

Freight of non-standard dimensions is the scourge of railroaders. It's not merely that only a part of the load-carrying capacity of the flatcar is utilized--it becomes necessary to halt trains coming from the opposite direction, and to change the movement schedule. What is more, the speed of a train with non-standard freight is much less than that of ordinary freight trains. For example, transfer of the body of a reactor to the Armyanskaya AES [Atomic Power Station] required cancellation of 40 freight trains and a number of passenger trains, and for an extended period normal traffic on a 953-km sector from Tikhoretsk to Samur was disrupted. Here is where the railroaders have a reserve--to transfer outsize loads which it cannot "digest" to the motor transport people along with the rivermen and seamen, and by virtue of this increase the flow of ordinary deliveries. But the transport workers are forced to decline: they don't have the necessary means of transport.

"We would be able to deliver those very same Bryansk diesels in an assembled condition on tractor-trailers to the Dnepr, and there load them on ships and barges for the Black Sea wharves," says N. Akulinushkin. "But we do not have enough equipment. The Chelyabinsk tractor-trailer plant envisages manufacturing only one (!) 300-ton trailer per year, right up to 1990. But we need 50."

"There are not enough trailers, nor are there enough powerful motor cranes and tractors. The Odessa Production Association for Heavy Crane Building imeni Yanvarskoye vosstaniye produced its first experimental model of a 100-ton capacity crane. These mechanisms are a long way from serial production, and they are not even talking about more powerful cranes yet."

"But it is not only unique equipment that the association lacks. It cannot even get sufficient quantities of equipment in serial production."

At the association they showed me a fat packet of letters addressed to the union Gosplan, to Gossnab USSR, and to the Federation Council of Ministers. I'll leaf through them: RSFSR Minister of Motor Transport Yu. Sukhin and First Deputy Minister A. Lokhov stress over and over again the urgent necessity to furnish Spetstyazhavtotrans with heavy-load-bearing equipment. And here is a letter from Vice President of the USSR Academy of Sciences, Ye. Velikhov, to the union Gosplan: "I consider that fully supporting the country in shipments of outsize, heavy freight is at the present time a critical area for scientific-technical progress, primarily because the Spetstyazhavtotrans Association has not been furnished the necessary vehicles and mechanisms."

These letters were written last year and a certain number of actions took effect. But--for 1986 Spetstyazhavtotrans has ordered 80 tractors, a like number of trailers, and 22 cranes. It has been allocated, respectively, 10, 15, and 11.

And you see in the 12th Five Year Plan Spetstyazhavtotrans is faced with even greater tasks. In order to carry them out precisely on time and in full volume, as calculated by specialists at the association, it would require 680 powerful tractors, 520 trailers, and 270 motorized heavy-lift cranes. Do they have high expectations of getting them? There is not yet an answer to this question.

Showing me artists' impressions of tractor-trailer trucks with unique loads, P. Myasnikov, deputy chief of the association, said: "You know how many times these pictures have been published. And you have repeatedly written of our successes. But of our problems--not once. It seems as if neither Gosplan nor Gossnab has taken notice of them as well."

9006
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MOTOR VEHICLES AND HIGHWAYS

LAGGING TECHNOLOGY IN ELECTRONIC VEHICLE CONTROL DEVICES

Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 4 Jan 86 p 2

[Article by D. Murzin, special correspondent in Moscow: "Running in Place"]

[Text] It is impossible to introduce new things without disturbing the old. This rule was forgotten at Minavtoprom [Ministry of the Automotive Industry] as they were designing automobiles with electronic controls.

There is a beautifully wrought stand in the office of G. Marshalkin, director, NIIavtopribor [Scientific Research and Experimental Institute for Automotive Electrical Equipment and Automotive Instruments]. On it are electronic systems for automotive control. Here is a Japanese model--a compact box, containing about 15 elements; it is capable of carrying out 21 functions. And to the left is the fruit of five years of cooperation between two ministries--the electronics and the automotive industries. It is fitting to call this thing a box. There is a dazzling array of multi-colored elements crammed into it--without a doubt there are more than a hundred. This system, manufactured at Minelektronprom [Ministry of the Electronics Industry] controls but 2 functions. Nor will the institute's own work stand up to comparison with the foreign model.

A specialist involved in the solution of this problem ought to experience burning shame from the existence of such a stand alone. But it's more than likely, that Minavtoprom would not be inclined to take responsibility for such a flop. All conversations here began with complaints about the poor state of the element base. Well, what about it? Judging by the stand alone, the justice of the reproach to the electronics industry seems obvious. But is it proper to attribute all this merely to this one reason?

"We started to get seriously involved in electronics about a year or a year-and-a-half ago," says NAMI [Central Order of the Labor Red Banner Scientific-Research Automotive and Automobile Engine Institute] Director V. Anufriyev.

The statement by the head of the branch's leading institute is a curious one--especially if one considers that the first orders for introducing electronics were issued about 15 years ago. Is it possible that for all these years the automobile manufacturers did not take the matter seriously?

The reason for such an attitude revolves around the nature of the problems which arose from the new direction. For example, in order to replace an ordinary carburetor system with an electronic one, one must describe all the processes taking place in the engine, translate this description into the language of mathematics, and finally, create a control device under this program. In other words, specialists were required who had mastered the knowledge of three fields of technology.

In the 1970's Minavtoprom did not have such personnel. The engineering and scientific forces of the branch had evolved in a traditional manner on the basis of classical mechanics. And there is probably nothing surprising in the fact that they readily seized on the comfortable idea that everything that concerns automotive electronics would be done by the specialists at Minelektronprom.

"At the end of the 1970's, we were in the process of making the decision to organize production in the branch for producing automotive electronics," relates Ye. Belov, department head at NIIavtopribor. "But then the minister would not sign the order which had been drawn up."

Having become accustomed to a comfortable idea, the automobile manufacturers practically gave up on the project; nor did they provide their partner what was most needed--good algorithms for the controls. The system was created by trial-and-error methods. Hence the breakdown in the timetable, the mutual accusations, and the complete break-up.

In December 1984, Minister V. Polyakov signed a resolution from the ministry's scientific-technical council which admitted that relying on the enterprises of Minelektronprom alone was a mistake. The council resolved to develop and produce through its own efforts electronic control systems and the electronic basis for them, including microprocessors, and large, hybrid integrated circuits. The two branches of industry thus severed relations once and for all.

It is completely natural to assume that the automobile manufacturers, having admitted and comprehended their mistakes, would now set out with seven-league boots to make up for the omissions; however, familiarity with the true state of affairs does not provide grounds for such an optimistic conclusion.

"Although we are a leading institute," says [NAMI] Director V. Anufriyev, "in the field of electronics NIIavtopribor is considered the leading institute. This was defined by the appropriate orders."

Such orders do exist. Apart from this they state that NAMI is responsible for working out the control algorithms, without which it is altogether impossible to speak of computerization of automobiles. Consequently, efforts must be focused precisely in this direction in order to find the key to the problem as a whole. And what is the contingent of the shock forces like?

"Three people," replies S. Kondrashkin, laboratory chief.

"There are no cadres!" supervisors of various ranks exclaim in unison. Truly there are few; although, over a fifteen-year period if the desire were there, it probably would have been possible to provide them. But let us take a look at how they make use of those which they have.

Here one is instantly struck with a situation in which branch managers have displayed a non-traditional, modern approach. After singling out from the complex of problems one of the most important--the creation of automated fuel injection systems capable of providing 10-18 percent savings in gasoline consumption, they organized a special brigade. The members of the brigade include representatives of various branch enterprises and organizations, and even specialists from Minselkhoz mash [Ministry of Tractor and Agricultural Machine Building] and associates from TsNITA [Central Scientific Research and Design Institute for Fuel Apparatuses, Motor Vehicle and Tractor and Stationary Engines].

Combining their forces in one tight group and their work according to a single plan, and placing the brigade directly under Deputy Minister Ye. Bashindzhagyan--all of these things bore fruit. Interesting designs appeared which promised results, and the matter...came to a standstill. The reason is that the specialists' new ideas needed testing, which required introducing modifications to the design of engines and other automotive components--in other words, the time came when many branch enterprises and organizations would have to begin working for the brigade. But their administrators were not anxious to do this.

It was precisely this that finally aroused K. Maskenskov, the brigade supervisor, to write to our newspaper in March, 1983. He wrote then that, "Yu. Sviridov, general director of the TsNITA Scientific-Industrial Association, with a single stroke of the pen transformed the light fuel injection laboratory into a group; dismissed the laboratory chief 'in accordance with reduction of the staff'; and deleted promising designs from the plan. Similar tendencies began to predominate as well in the attitude of NAMI Director V. Anufriyev toward the needs of the complex brigade. With enviable persistence, A. Prosvirnin, chief designer at the Gorkiy Automotive Works, ignored the decision of Minavtoprom on testing and modification of vehicles with electronic controls..."

The editors received formal replies to this letter. The response from Minavtoprom, signed by Ye. Bashindzhagyan, specifically stated that "it was proposed that NAMI take measures," and that "the necessity was pointed out" to Prosvirnin "to carry out the decisions which had been taken."

This, to put it bluntly, was a strange reaction. Especially if one takes into consideration the fact that many of the "decisions taken" were nothing less than orders from the minister, which his subordinates are openly ignoring. And nevertheless we decided not to hurry, to give the workers in the branch an opportunity to look into it themselves. So what has changed?

"Prosvirnin has not yet resolved the question of the use of a finished engine with an electronic fuel-injection system on Volga-type vehicles," relates K. Maskenskov, brigade leader. "All of the deadlines have passed. At NAMI the laboratory for engines with electronic fuel injection has been changed into a sector, financing has been reduced, as have the staff personnel and the experimental base. The subject of fuel injection systems has been closed until 1987. Incidentally, no one talks any more about how Prosvirnin at one time said that, 'While I'm in my position, there will be no electronics on automobiles.'"

Actually, even at GAZ [Gorkiy Automotive Works], they are ready to introduce electronics, but...not right now. In 1985 the deadline ran out for taking up production here of the simplest comprehensive control system on engines for the GAZ-53A truck. This assignment is a special-purpose program from GKNT [State Committee for Science and Technology]. It has been spoiled, and therefore the association is petitioning the deputy minister, A. Butuzov, to extend the deadline to...1989.

Other analogous examples can be cited as well. But is it worth it? What has been stated is sufficient to come to the conclusion that there is a direct logical connection between the former and the current positions of the automobile manufacturers. Formerly it was proposed to solve the problem by passing it off to another ministry; today they are trying to get by with measures which preserve the traditionally-evolved structure and direction of work of branch science and plant design services. The forms of the tactics are changing, but their essence remains the same--one cannot introduce new things without disturbing the old.

The actual correlation of forces convincingly support this. At NAMI about 40 people are working on traditional carburetor engines; on engines with complex electronic fuel injection control systems, there are five. And this is their actual--both in words and deeds--attitude toward a promising trend.

One can comprehend what has taken place, apparently, only if one accepts the reality of the clash between representatives of classical mechanics and electronic thinking. Today one can no longer be a specialist in automobile manufacturing, not knowing and not understanding a vehicle from the point of view of electronics. But you see, the old is not an abstraction. It is the scientific school which has brought forth its leading lights; it is the regalia; the positions; it is one's whole life. Electronics are becoming a threat to the happiness which was won through long and honest labor. It is precisely in defense of its happiness that the old is rising up.

This is in its essence an objective process. It is a complex process, which demands intelligent, delicate, and at the same time firm direction. And how can it be implemented when the chief of the administration of design and experimental work at Minavtoprom, A. Titkov, who has been commissioned to determine the technical policy in the branch, is not capable of controlling the institute--the institute which has been designated the leader in automotive electronics--NII Avtopribor, which is part of the Soyuzavtoelektropribor VPO [possibly All-Union Production Association for Automotive Electronic Instruments], and which is subordinate to its chief. And Titkov does not even have the plan of the subject matter of the institute.

It's impossible to explain such a situation from the point of view of technical progress. But it's not difficult to understand if one wants to: such a dispersal of forces is advantageous to Titkov. He does not--and he openly admits this--understand questions of electronics. Therefore, he readily supports the situation in which the institutes compile plans at their own discretion--"It's more apparent to them there!" This is the incompetence which makes the conflict between the old and the new more acute.

Today NIIavtopribor dictates technical policy in the field of computerization of automobiles. It dictates, without possessing the basis--the laws of administration. And it is completely natural therefore, that policy in this area fluctuates from one extreme to another. Right now they are placing their hopes here on digital systems, and for their sake are tossing out all the previous workups. Today they are placing their stake on strict logic, assuming at the same time that flexible logic will come tomorrow--they are already working on it abroad. And what then--shall we toss out the barely created systems on strict logic? This is chasing after shadows! It is running in place. A speculative process which is divorced from life can in no way be associated with ultimate economic effectiveness.

9006

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MOTOR VEHICLES AND HIGHWAYS

CONSTRUCTION OF NEW DNEPR BRIDGE IN KIEV

Moscow TRUD in Russian 29 Jan 86 p 1

[Article by S. Prokopchuk in Kiev, under the heading: "Reporting from the Front Lines": "Bridge Over the Dnepr"]

[Text] A new bridge over the Dnepr, the eighth, is being being built on the outskirts of the capital of the Soviet Ukraine--the southern river crossing. Installation and construction work was begun in January.

"This is the first suspension bridge in the country with a combined railroad and automobile load," relates A. Malyuga, deputy chief engineer of Bridge-building Detachment No 2, a veteran of the Mostostroy-1 Trust. He already has a number of bridges to his credit, including the latest, the Moskovskiy, on the northern outskirts of Kiev. The light and reliable pylons on which the bridge will "hang" rise to a height of 100 meters.

The construction area of the southern crossing extends for nine kilometers. In 1990 it will link Naddneprianskoye Highway and a large beltway with Kharkov Square via the shortest route. This is one of the most important projects to be put into operation in the capital of the Ukraine in the current five-year plan. It will help relieve the center of the city of the flow of crosstown truck traffic which presently crosses via the Ye.O. Paton bridge and will serve as the crossing for a new metro line, the Pechersko-Syretsk line from the right bank of the Dnepr to the left.

The light blue expresses will overcome the watery barrier in a tunnel corridor. Passengers will be able to admire the Dnepr through the window apertures for its entire 1.5-km length. To the left and the right of the railroad tracks, there will be three-lane roads for automobiles, concealed in chambers of light construction.

"Pedestrians and cyclists have not been forgotten," adds G. Fuks, chief engineer on the project complex. "Special lanes have been planned for them on the "roof" of the tunnel. The Naddneprianskaya Station will be on the right bank, and on the left, just beyond the bridge, the Slavutich Station."

On the Dnepr itself, whose banks will begin to be connected this year by the reinforced-concrete "ribbons" of the bridge spans, construction of the last five supports is going full blast, and those already in the waters of the Dnepr are growing. Working on the fifth, which stands closest to the right bank, is the brigade of Hero of Socialist Labor V. Yagola, a highly experienced specialist.

Five years is a rather compressed period according to bridge-building standards, the moreso if one considers that the construction and installation work alone will come to 70-80 million rubles. But Yagola and the other bridge-builders consider these periods altogether realistic, and are even prepared to reduce them by six months.

9006

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RAIL SYSTEMS

CHIEF ON PROPOSED NEW NORTH CAUCASUS RAILROAD LINE

Moscow EKONOMICHESKAYA GAZETA in Russian No 2, Jan 86 p 15

[Article by F. Kotlyarenko, chief of the North Caucasus Railroad: "A New Mainline"]

[Text] Rostov-na-Donu--A great deal of attention is being devoted in the plan of the Basic Directions to further development of railroad transport. In particular, the task of increasing the carrying and throughput capacity of the railroads has been set. Named among the priority routes in this plan was a route linking the Center with the South in the European part of the country. The extent to which this task is urgent may be judged by our North Caucasus line.

In recent years, the volume of transport has increased significantly here, and it increases especially in the summer and fall period.

For this reason, much attention is being devoted to renovation and construction of so-called unloading bypasses. Two such bypasses have been built in Rostov in different years. Next in turn is one in Bataysk, which will take part of the through freight trains. The availability of subunits of the Ministry of Transport Construction will make it possible to build it in a short period of time.

With relatively small expenditure on construction of the bypasses and development of junctions, we are obtaining substantial economic gain. This point should be taken into account in defining specific measures to develop railroad transport, I think.

One of such measures for the North Caucasus Railroad, in our view, should be construction of the line from the Center to the Caucasus, which we have given the name "Michurin Passage." It will pass through Kalach, Morozovskaya and Svetlograd and will be able to accommodate traffic on remote approaches to the Rostov junction and make work easier on heavily traveled routes.

Individual previously built sections of this line are in operation, but construction of the missing links from Kalach to Morozovskaya, Kuberle to Svetlograd and Blagodarnoye to Budennovsk still has to be carried out. This

will be the shortest rail line from the country center to the Caucasus and in the Transcaucasus. The total length of the mainline is 954 kilometers, of which more than 500 have been built or are in the construction stage.

The point is not only that the existing Voronezh-Rostov-Baku mainline is handling the increasing transport volume with great difficulty. The carrying and throughput capacities of the line have been practically exhausted in a number of sections from Rostov to Mineralnyye Vody. And we can expect increased freight flows in the future, particularly in connection with the commissioning of the Caucasus Transshipment Line.

Construction of the mainline will also resolve another important problem. Accelerating the rates of economic development and increasing the efficiency of the national economy is inseparably linked with the location of productive forces and territorial organization of production. The southern part of the RSFSR--the Northern Caucasus and the Lower Volga Region--hold an important place in solving these problems. These regions have substantial areas of fertile land and favorable natural and climate conditions for different sectors of the agroindustrial complex. However, many of them, especially in Rostov Oblast and Stavropol Kray, are 150-300 kilometers away from the railroad.

The pre-plan justifications cited by the Rostov Institute of Railroad Transport jointly with specialists from our line indicated that, as a result of construction of the new mainline, accelerated development of an agroindustrial zone will be ensured on an area of 17 million hectares with fertile soils and a favorable climate in immediate proximity to industrial regions--the Center, the Volga Region, the Donbass, and the Urals.

More favorable conditions are being created for the formation of large territorial-production complexes in the zone near the mainline--ones such as the Volga-Don TPK [territorial-production complex] (nuclear machine building, chemicals, power engineering), the Budennovsk TPK (gas extraction and processing, chemicals, machine building), and the Salskiy, Morozovskiy, Sovetskiy, Patrovskiy, Ipatovskiy and other agroindustrial associations.

Many other arguments may be cited in favor of the new mainline. In conclusion, I would like to note the following: additional manpower resources will not be required for its construction and to increase the capacities of local construction and installation organizations. It is necessary only to adjust regional investment policy, taking into account the structure of the program and the sequence for commissioning projects.

Taking the national economic importance and high efficiency of the new mainline into consideration, it appears necessary to put the question of including at least the beginning of its construction in the plan for the forthcoming five-year plan before management organs.

8936
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RAIL SYSTEMS

CONDITION OF MINISTRY'S LYUBERTSY PLASTICS PLANT DEPLORED

Moscow GUDOK in Russian 2 Feb 86 p 2

[Article by GUDOK correspondent D. Dmitriyev: "Shortage... According to the Plan"]

[Text] An old gray barracks behind the fence was buried in snow. Two footpaths lead up to it. The porch had rotted through, and the door squeaked. The floor had caved in, and the walls were covered with moss...

"This hut is for us!" N. Kontorshchikov, chief engineer of the Lyubertsy Plastics Plant, said irritably. "Look at the conditions in which persons are working! Our accounts office is here, and the library, the safety procedures office, the engineering office, the legal office..."

This dilapidated structure must be seen to be understood--it is not easy to accommodate all the services mentioned here. Besides, there was still much to surprise us at this plant.

I had come here to write about what was advanced; this was what had been recommended to me at the main plant administration of the enterprise, the collective of which had fulfilled the plan for the 11th Five-Year Plan as long ago as April 1985. But that was a mistake... What the enterprise had considered advanced...

What is an advanced enterprise? Lively automated lines, industrial robots, and persons in smocks at a control panel. And buildings for shops that are light and clean, with ozonized air...

But what is at the Lyubertsy plant? Automatic rotary presses in the shop have literally been put one on top of another. Aisles between them are so small that it is hard for a person to turn around. Although 50 square meters of space were set for each machine unit according to public health standards. The air is polluted with contaminants; this is chemical production, after all. There are enough harmful emissions, but the ventilation is not removing them. Which is noted from year to year by the physicians of the sanepidemstantsiya [medical and epidemiological station], incidentally.

"But what can we do?!" exclaims N. Kontorshchikov. "If we adjust the ventilation as established, a real hurricane will develop. It will twist the machine tools off their foundations."

It will not twist the machine tools off, of course, but we can understand the chief engineer. The production areas of the enterprise are "supersaturated" with equipment. This is the cause of the high level of pollution [zagazovannost] and many other lapses and inconveniences.

So the molding machines (for molding items out of plastic) were set up lengthwise, and not transversely as they should have been. Space is economized in this case, but the manufacturing process is disrupted and labor productivity is dropping. All the sections of the enterprise have been so mixed up and wedged in with each other that it is rather difficult to realize where they are located.

Moreover, some little storerooms and sheds are being built. They proudly show a building addition for the tool shop. We are doing it ourselves, they say--we are expanding... But such "expansion" provides little.

"We have no place to do our thinking," says L. Pupchina, chief of the plant laboratory. "After all, a laboratory in chemical production is a place where new materials and technology should be developed. Both spacious offices and small experiment sections with equipment are needed for this. In other words, the laboratory is the launch pad for the enterprise's future."

But in Lyubertsy it is the last century! Laboratory workers conduct analyses of materials in turn, since only one (one!) exhaust fan is available. Analysis methods utilizing tools should have been introduced, but what is there--there is no place to set up the equipment. At the plant's main administration they proposed that a laboratory complex made in Hungary be acquired. The chemical and railroad workers looked at the bright prospects, sighed and...refused. There was nowhere to put it.

Perhaps the plant's production is not needed? When I was in the office of G. Gnedkov, the plant manager, the telephone rang several times and pleading voices were heard, but Gennadiy Fedorovich responded ominously:

"No...we can't...no..."

The Lyubertsy Plastics Plant is the only enterprise of this type in the MPS [Ministry of Railways] system.

There is no need to tell about the role played by plastics in railroad transport. The chemical workers at Lyubertsy can be helped only one way--by reconstruction of the enterprise. And the main thing is to begin construction of a new shop to make insulating bushings. Discussions on this have been held for more than 20 years already. And during all this time nothing was done except the plan. However, times for beginning operations have been postponed and the plan has been worked over continually. More than 100,000 rubles have been spent on it to date.

And the enterprise managers have already become desperate. There were times when it seemed to them that the matter was just about to move from a standstill. And why shouldn't they hope--everyone is standing by them: both the plant main administration and the ministry. But something always interfered at the last minute.

So there is still no shop today. But it is needed. It is also needed, by the way, for the transport construction workers who were assigned to build it. At many enterprises they have sidings which also need insulating bushings for normal operations. There is also a shortage of bushings for catenary system supports, which the Ministry of Transport Construction requires in quantities of 1 million annually and half of which the Lyubertsy plant does not produce... And no one else is making them.

But the plant does not even fully provide for the requirements of its own ministry, not to mention outside orders. And the gap between requirements and resources is increasing. Many items which have been in short supply for a long time are not being turned out at all. For example, the fiberglass floors of railroad passenger car restrooms. They are still patching them up somehow at repair plants, but soon they will fall apart completely. And plastic linen chests [belyevyye yashchiki] as well. It would seem to be a minor matter, but they have turned into a problem. There are shortages of insulators for the current collectors of electric locomotives, brackets and pins of the brush holders of traction motors, arc blowout chambers of electric locomotives...

New developments are being introduced extremely slowly. It is already high time to utilize plastic window frames when electric units [elektrosektsii] and passenger cars are repaired. And studies of them already have been made in the Lyubertsy PKTB [possibly planning, design and safety engineering] division for railroad cars. But the plant is not in a position to begin producing them. And valuable woods--beech, oak, hornbeam--are used up for frames...

Because of the lack of one single shop progress in transport is being impeded. Cars are now being automatically shunted on gravity yards at many stations. So a casing for a reader (plastic) should be produced at Lyubertsy. It is not being produced... And a casing for the wiring connections of temperature warning gauges for the journal box unit of passenger cars is not being turned out. These are the kinds of minor matters...

At the Gomel Railroad Car Repair Plant they put up with the shortage of plastic parts and didn't put up with it any more... They began themselves to make signal lamp caps, bushings, bell buttons, and terminal boxes. It seems that this is not a way out. The basis of the problem must be resolved.

8936

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RAIL SYSTEMS

CAR UNLOADING PROBLEMS PLAGUE TYUMEN AREA RAILROADS

Moscow GUDOK in Russian 8 Feb 86 p 2

[Article by GUDOK special correspondent M. Bulanzhe: "The Anxieties and Hopes of the Northern Route: GUDOK Visits the Tyumen--Yamburg Line"]

[Text] Novyy Urengoy-Surgut-Tyumen--Addressing a conference of the party and economic aktiv of Tyumen and Tomsk oblasts, M. S. Gorbachev noted that Western Siberia is the principal source of hydrocarbon raw material in our country. In the past five-year plan, two-thirds of the country's oil and over half its gas were extracted from this region.

The party and government have set even more far-reaching objectives for the workers of Western Siberia in further developing the oil and gas industry. Their implementation is linked with a significant increase in the volume and pace of freight transport by railroad, especially on the proving ground of Tyumen-Surgut-Novyy Urengoy and farther to the north. It is enough to say that each meter of depth that is covered in the new deposits must be supported by approximately a ton of freight. And after all, millions of meters of industrial and test holes have to be drilled this year alone.

Much has been done recently to increase the freight flows to the north. But even more needs to be done.

Cars, cars, cars... All eight lines of the Novyy Urengoy station are jammed solid with them. As they say, there is no place for an apple to drop. But after all, the cars contain not only apples and other food products for people who are opening up the Tyumen North. The most valuable freight which is urgently needed by the builders, oil and gas workers, and geologists is here. Large-diameter pipe and reinforced concrete items, equipment for drilling rigs and lubricant... You cannot list everything.

It would seem that people should be standing in line for these goods. But what is amazing is that not hours or days, but even weeks pass before addressees remember their goods.

A tank car with technical oil [tekhnicheskoye maslo] is standing on one of the station tracks. It became covered with 43-degree hoar frost, and its contents thickened, naturally. Before draining the oil, it is necessary to warm it up. But it has three recipients, and each one of them simply will not make up his mind to be the first to start this operation. Moreover, they all fear to be the last, which means to deal with the cleaning of the tank car.

It is possible that at the same instant that the associates are explaining their relationships, the following dialog is taking place in the office of the station chief, I. Ibremkhalilov.

"When will you finally take the routine cars off the platform?" Igor Ramazanovich tries to get a convincing answer from a representative of mekhkolonna [mechanized column] No 37.

"We have no hoisting cranes."

"A mechanized column doesn't have any?" asks the station chief, dumbfounded, and after estimating something, suggests: "Maybe you don't need the cars? Give them to us."

"What are you saying--they are still needed!"

"Well, why have you taken the load apart when you can't take it away? After all, we can't switch on this track now."

Conversations like this take place daily at every station being served by the temporary operations division [otdeleniye vremennoy ekspluatatsii]. Of all of them, the most favorable conditions for freight operations probably exist only at the Farafontyevskaya station. The total length of receiving and sending tracks here is 7 kilometers, and there are 11 kilometers of siding. On scales for the North, the capacities are proper.

But the trouble is that they are utilizing them very poorly. The talk of the town for all railroad workers from Tyumen to Novyy Urengoy has become the regrettably notorious Farafontyevskaya Base for Production and Technical Support and Provision of Complete Sets [komplektatsiya] of the "Urengoygazdobycha" Association. More than 2.2 million rubles in fines have been paid by the enterprise for above-norm layovers of rolling stock in the past year alone. This is slightly more than nine-tenths of the deficits claimed by the station against its clients for unsatisfactory unloading.

Such a spread, it appears, impresses A. Revchuk, manager of the base. It costs him nothing to hold 24 hopper cars with cement on his sidings for a month and a half, not giving any thought at all to the fact that this critical rolling stock is urgently needed in other places. In accordance with his wishes, three tank cars with bitumen have been running for over 6 months between Farafontyevskaya, Novyy Urengoy and Yagelnaya. From the beginning, Aleksandr Ivanovich waited for the late northern summer so that he would not give himself trouble by warming up the product. But autumn replaced summer, and now there's a new winter, and the tank cars are still roaming...

What is some bitumen doing there! In the last half of December last year, four cars with imported equipment arrived at the "Urengoydorstroy" Trust. But it turned out that this machinery was needed not in Farafontyevskaya, but in Nizhnevartovsk. Meanwhile, the recipients took the load apart and departed... to make arrangements with the Surgut Division of the Sverdlovsk Railroad concerning the address change. They came to an agreement, but they are not in a hurry to secure the machinery again. So it is still standing, rusting...

This is the unloading. The situation with it is really hopelessly bad on the entire route from Tyumen to Novyy Urengoy. The main reason is the extremely poor development of both the sidings and station management. A special decision by the Tyumen Oblispolkom in this regard was approved at the beginning of the last five-year plan. But 5 years have passed, and only 106 of the 336 measures approved for implementation in the Tyumen Division of the Sverdlovsk Railroad have been carried out. The urs's [administrations of workers supply] of enterprises of the Mingazprom and Minneftegazstroy [Ministry of the Gas Industry and Ministry of Construction of Petroleum and Gas Industry Enterprises] and many other organizations still do not have their own bases with equipped transport facilities.

A great many freight handling resources are lost in the Tyumen hub because of continued address changes. It is strange but true: the majority of workers supply administrations, not having the conditions to receive foodstuff loads, assign them by order to themselves instead of for direct passage to the North.

The Surgut Division of the line is in an even more disastrous situation. Every day they unload 30 cars less than called for by the technical plan.

Can the Surgut railroad workers somehow help to speed up unloading? This question will surely bring just an ironic smile from them. Because of the sheer lack of stations' development, freight handling work at general-use localities amounts to just 4 percent of the total volume. And general-use points are the end lines [kraynyye puti] of stations, completely unequipped with any special facilities. There is not one container yard in the entire Surgut Division, as in the Tyumen Division, incidentally. Should they be built with the organization's own resources? The funds allocated barely suffice to eliminate the construction flaws permitted when the main line was installed.

In general, to the extent that the freight flows are moving farther and farther to the north, the unloading problem is snowballing. While they are talking in Tyumen about the necessity of establishing a territorial association of industrial rail transport, they simply remain silent in Novyy Urengoy. But after all, the consumer treatment of rolling stock is especially evident right here. Other consignees even have an opinion...that the construction and development of sidings is not expedient.

Time will pass, they say, the boom around the new northern deposits will subside, the oil and gas industries will set up planned capacities, and then the freight flow will become significantly smaller. And such consignees willingly face fines in the millions for car layovers which exceed the norm by

dozens of times as much, firmly bearing in mind at the same time that the money is not out of their own pocket. No one has been made legally answerable yet for the devil-may-care attitude toward state property, that same railroad car. Testimony for that is unnecessary--the excellent attitude of Aleksandr Ivanovich Revchuk which has already been mentioned.

It is still good that there are firm opponents to A. Revchuk's supporters. V. Dulya, deputy chief of a subdivision of the Interdepartmental Territorial Commission on Questions of Development of the West Siberian Oil and Gas Complex attached to the USSR Gosplan, believes that freight consignees should have sidings at their own bases for the arrival of the railroad at Yamburg. Subunits of Glavtyumengazprom and Glavyamburgneftegazstroy should now see to their construction.

Unfortunately, in spite of so authoritative an opinion, clients continue to be stubborn.

"This is the most terrible problem for us," says Lev Borisovich Sakhantsev, chief engineer of the "Urengoytransstroy" Trust. "We intend to open the entire line from Yagelnaya to Yamburg for working traffic as early as this year, but the organizations of the Ministry of the Gas Industry and the Ministry of Construction of Petroleum and Gas Industry Enterprises have not prepared one sheet of sketches and other documentation yet for construction of the sidings and unloading tracks. This means that these projects will not fall within the plan for 1986. We know from the sad experience of the Farafontyevskaya station, where sidings sprung up spontaneously based on so-called self-activated construction [samostroy], what this will lead to. I fear the same fate awaits the large Tundra freight station somewhere in a year.

Can we really talk about efficient unloading at primitive, undeveloped [neobustroyennyye] sidings, devoid of small-scale mechanization and stationary equipment? Delays by freight consignees make the problem even more serious.

Well, what about the transport construction workers themselves? Are they really leaving a little unfinished work which hinders normal freight operations as they proceed farther and farther to the north, toward Yamburg and Nadym? Meanwhile, discussion of construction matters lies ahead.

8936

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RAIL SYSTEMS

VELIKIYE LUKI PLANT TO PRODUCE NEW 75-TON HOPPER CAR

Moscow GUDOK in Russian 30 Mar 86 p 1

[Article by K. Vladimirov (by telephone) under the heading "Equipment of the 12th Five-Year Plan": "Shipped Out for Testing"]

[Text] Batching hopper cars manufactured in the car-building shop at Velikiye Luki Locomotive Repair Plant are in operation throughout the railroad network and at many transport construction sites. Velikiye Luki has more than once filled orders for fellow railroad workers in Mongolia, Bulgaria, Syria and elsewhere, and not once has the collective let a customer down or failed to cope with an assignment.

Therefore, when the designers had developed a new self-unloading [tipping] gondola-type car, it was decided to produce it at the Velikiye Luki plant, which quickly manufactured the necessary tooling and mechanization equipment. Plant designers proof-read and corrected the technical documentation and blueprints.

One point in the socialist obligations for the first year of the 12th Five-Year Plan is to produce a test lot of tipping cars in the first quarter. As compared with those in operation, which are designed for hauling bulk freight, the new model has a number of substantial advantages. When the old gondola-type cars were unloaded, the hatches had to be opened manually. It often took a sledge-hammer and a crowbar, especially in winter. This took a lot of time, and some of the freight didn't flow out, so additional effort had to be wasted cleaning out the rolling stock.

The hatches on the new all-metal car, however, are opened pneumatically. Because of the specially-designed bottom, the freight flows out in a matter of seconds. Carrying capacity of the car is 75 tons, which is 12 tons more than in the usual car. And, especially importantly, the new tipping car is a full two meters shorter than its predecessor. Tracks will not need to be lengthened, even for long, heavy unit trains, as a train consisting of such cars can be processed at any of the junctions.

Manufacture of the first test lot was entrusted to the most highly skilled welders, machine tool operators and fitters. Incidentally, every last worker in the car-building shop is a highly skilled craftsman, and each has mastered to perfection a couple of related specialties. The brigade form of labor

organization with payment under single job authorizations using KTU [not further identified] is firmly subscribed to here. Cost accounting is also being introduced successfully.

Beginning last December, the car-building shop began manufacturing a tipping gondola-type car, along with the batching hopper car. True, whereas the hoppers are on-stream and make extensive use of mechanized equipment, the gondola-type car is thus far being assembled in one place. Nonetheless, the collective has coped successfully with its obligations: the first test lot of 14 gondola-type cars has already been shipped out for testing. One is undergoing full run-in, with scientists observing, at the VNIIZhT [All-Union Scientific Research Institute of Rail Transport] experimental ring in Shcherbinka; the others are ready to go at the Brodovka Donetskoy Station shaft.

In conclusion, let me note that it took only a year for this innovation to move from design bureau to release of the whole lot. The enterprises of the Ministry of Heavy and Transport Machinebuilding undertook to fill the order [with]in the five-year plan.

11052

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RAIL SYSTEMS

SHCHERBINKA TEST FACILITY TO HOST RAIL EXPO IN JULY

Moscow GUDOK in Russian 30 Mar 86 p 3

[Article by Yu. Zakharyev: "A Busy Time At Shcherbinka"]

[Text] The site of the VNIIZhT [All-Union Scientific Research Institute of Rail Transport] experimental ring at Shcherbinka Station in suburban Moscow has since 8 July been transformed into a huge viewing platform. The achievements of Soviet transport science and engineering and the best foreign models will be presented at "Rail Transport-86," the third such international exhibit.

More than a thousand displays will be on 17 traction tracks in six enclosed pavilions. The doors of many of the institute's research laboratories will be open to visitors. There will be trips to the main facilities of the experimental ring.

A little over three months remain until the exhibit opens. Fourteen European countries, Japan and the USA have already applied to participate. Several other states have shown a commercial interest and will be sending representatives. Forty-two well-known foreign companies in the business of producing rail technology and equipment have submitted documentation for 165 displays for the exhibit, and the number will probably grow.

The Soviet section has traditionally been and will be the largest. It will be showing operating and full-scale models, mock-ups and circuits manufactured by industrial enterprises of 12 ministries.

Everyone who comes to Shcherbinka these days will see next to the platform a large blue pavilion, and behind it another. Amid the grey March colors of spring, they seem emissaries of the summer to come, like flowers with delicate petals.

The bulk of the displays will be in four such enclosed pavilions. After the exhibit closes, the 13,500 square meters in these high, spacious pavilions will become the property of the experimental ring and will be used to help provide space needed for VNIIZhT laboratories and equipment.

Assembly of the pavilions is proceeding apace with the help of powerful cranes with long booms. The construction site today is instructions shouted by brigade leaders, builders moving in precise rhythm and the sounds of equipment working.

G. Firer, leader of an operating group from road-building trust No 2 of the Moscow system, the general contractor for the construction project, tells us the work began last summer. About 20 km of outside utility lines have already been run, more than 50,000 cubic meters of earth has been moved, and about 1,200 cubic meters of monolithic reinforced concrete foundations has been laid. Assembly of the pavilion components is now being completed, and they are starting the finishing work and installation of electrical and sanitation equipment.

The assembly of such pavilions is not a simple matter. Their design is new, the parts are being sent from four different plants, and the suppliers for the construction site number more than 20 enterprises.

Since May 1985, this small station in suburban Moscow has received hundreds of thousands of tons of thousands of different items. To do this, additional track and yard equipment had to be installed. All this was done by test facility personnel along with their main, planned jobs.

Erecting the exhibit pavilions has been quite a complex task for road-building trust No 2, a comparatively young association not yet having a full complement of equipment. The construction sites for the future exhibit have occasionally suffered from a shortage of cranes, earthmoving equipment and motor transport.

Specialists from five or six organizations from three ministries -- Ministry of Railways, Ministry of Transport Construction and Ministry of Installation and Special Construction Work -- must "have a hand in" construction of each pavilion before it is fully operational. And in a fixed sequence. The slightest lack of coordination will lead to failure to meet work schedules.

For example, we are not receiving everything we are supposed to from "Stalkonstruksii" fitters. This is delaying the work front for builders in road-building trust No 2, resulting in delay in bringing in workers from the "Tsentrosantekhmontazh," "Promventilyatsiya" and "Transsvyazstroy," who also have a lot of work to do. The result, tension and irritability.

"The pavilions must be released for operation by 15 May," I was told by V. Dushkov, deputy chief of the Ministry of Railways' capital construction main administration. "And the builders are meeting their obligations."

"Although there are still quite a few problems and loose ends," says Moscow system deputy chief A. Tikhonov, backing him up, "we are confident of ultimate success, because we are being helped, essentially, by the whole network of railroads,"

Materials and equipment are being loaded for the "Rail Transport-86" exhibit at dozens of stations; 120 workers from various roads are participating directly in the construction.

One hundred days remain before the exhibit opens.

11052

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RAIL SYSTEMS

RAIL FERRY SUGGESTED FOR YAMAL PENINSULA RAIL SYSTEM

Moscow STROITELNAYA GAZETA in Russian 14 Mar 86 p 2

[Article by Professor K. Korzhavin, Novosibirsk Institute of Rail Transport Engineers, M. Maltsev, rector at Tyumen Construction Engineering Institute, and G. Tomas, instructor at the Tyumen Oblast Council of Scientific-Technical Societies: "Ob Bay Ferry"]

[Text] The Basic Directions for developing the country anticipate work in the 12th Five-Year Plan on setting up gas extraction on Yamal Peninsula.

With all due respect to aviation, water and motor transport, we should like to note that rail transport remains the most reliable for this area. It is precisely because it is reliable, all-weather transport that also predetermines its paramount role in developing our largest peninsula above the Arctic Circle. Neither construction workers nor oil and gas field workers can hope for success on the Yamal without the railroad.

It approaches it now from two sides, from Labytnangi, at the mouth of the Ob, on the southwest, and from Novyy Urengoy on the southeast. The tracks must be extended from there to the Yamburg deposit, with the first freight-hauling train scheduled to reach there this year.

How will the road be continued right to the Yamal? Specialists are studying several variants. The most logical one appears to be to extend the route from Labytnangi to New Port settlement on the southeastern Yamal shore (where a petroleum deposit is to be developed) and from there deep into the peninsula, to its northwestern-most point, Cape Kharasavey. In this variant, the road would bisect the Yamal diagonally and would pass through territory with surveyed deposits.

But it is obvious that all the route variants from Labytnangi would ensure regular traffic between the peninsula and the mainland only if there are second tracks or given additional sidings.

In our opinion, a unique girdle of future routes could help bring closer scheduled intensive, economical deliveries of freight to the Yamal, at least in the initial stage of exploitation.

We have in mind the following: the railroad will soon reach Yamburg from the southeast, as noted above; this is on Tazovskiy Peninsula, which borders the Yamal. The endpoint of this trunk link will be only 70-80 km from the Yamal settlement of New Port (the proposed endpoint of the tracks to come from Labytnangi in the southwest, New Port being at the same latitude as Ob Bay, which separates the Tazovskiy and Yamal peninsulas.

If their coasts are connected, it would create a unique transport ring which would enable a rail consist to make approximate the following run: Vologda - Ukhta - Labytnangi - Yamal - Tazovskiy Peninsula - Urengoy - Surgut - Tyumen - Sverdlovsk - center of the country - back into the northern European portion of the country and on to the Yamal - and back again. Moreover, this would also open up the shortest possible route to the Yamal from the east, Central Asia and Kazakhstan. The advantages of this route would seem to be obvious.

This is precisely the final goal of our proposal that a year-around rail ferry crossing be built on Ob Bay, the long-range decision being based on its potential role in exploiting the Yamal and the Tyumen regions above the Arctic Circle as a whole.

Installation and operation of such a crossing complex will naturally be a very difficult task, possibly one unique in its complexity and scale. This must not be underestimated. However, our experience in this country would also encourage us not to overestimate the possible difficulties.

Similar crossings have been operating for many years now between Baku and Krasnovodsk on the Caspian and across the stormy Gulf of Tatar, linking the Primorye mainland and Sakhalin Island, as well as elsewhere. By using the experience gained in building and operating them, we can set up efficient rail consist traffic across Ob Bay as well.

11052
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MARITIME AND RIVER FLEETS

PARTY OFFICIAL ON RIVER TRANSPORT IMPROVEMENTS IN UKRAINE

Moscow VODNYI TRANSPORT in Russian 8 Feb 86 pp 1-2

[Article by A. Khomich, chief of the Transportation and Communications Department of the Ukrainian Communist Party Central Committee: "On the Republic's River Highways"]

[Excerpts] The river fleet is an important link in the unified transport system of the Ukrainian SSR. Tens of millions of tons of freight, including coal from the Donetsk Basin, iron ore from Krivoy Rog, petroleum, metal, agricultural produce, and various types of construction materials, are transported every year on the republic's rivers to meet the needs of the national economy. River transport workers are doing a great deal to meet the public demand for passenger travel. Those who work on these blue highways are also making a contribution to the development of foreign economic ties by shipping import and export freight between ports on the Dnepr, the Black Sea, the Danube, and the Mediterranean Sea.

The Communist Party and the Soviet government are showing a great deal of concern for the development of the river fleet, and they are outlining ways to make further improvements in river transport and to strengthen its material and technical base.

In order to meet these goals, the collectives of river transport workers in the Ukraine have carried out a number of major measures aimed at stepping up the intensity of the shipping process. First and foremost, they have carried out a qualitative renewal of part of the transport fleet. The introduction of powerful vessels with a large carrying capacity made it possible to reduce the manpower needs both during navigation itself and during technical servicing, and it created the necessary conditions for a higher level of mechanization in materials handling operations.

The organization of the fleet's operations has also been improved. Expansion of shipping using a freighter and a barge in tow has been very effective. More than 25 percent of all cargo is now shipped on large-capacity combined carriers weighing 4000 tons.

The use of combined river and sea vessels is proving to be very efficient, because it is unnecessary to transfer freight at ports at river mouths.

A considerable amount of work is being done in the sector to prolong the navigation season and reduce the negative effects of seasonal shipping. With this goal in mind, the transportation fleet operated during the winter with the help of powerful tugboats with icebreaking equipment. Regular shipments of iron ore raw materials were made from the Poltava Mining and Concentrating Combine to Dneprodzerzhinsk and Zaporozhye, in addition to shipments of crushed stone and gravel products from Zaporozhye to Energodar to meet construction needs at the Zaporozhye Atomic Power Plant.

Operation of the fleet during the winter makes it possible not only to increase the volume of shipments and increase labor productivity, but also to make substantial reductions in the intensity of work performed by a number of railroad lines, which is very important.

Considering that a large volume of freight in the republic (37 percent of all river fleet shipments) is carried on a combination of rail and water transport, special attention has been given to applying the experience of the Odessa and Leningrad transport workers, which has received the approval of the CPSU Central Committee, and to organizing combined socialist competition among workers in related sectors. Eight transport centers are carrying out "standardized technological processes for port, station, and motor transport enterprise operations." Standardized dispatch shifts have been created, and a system for continuous planning of transport center operations has been introduced. This made it possible in the last three years alone to reduce the railcar processing time by 15 percent, and the processing of the river fleet in ports by 13.1 percent.

Business contacts between various types of transport are not interrupted in the winter. For a number of years the Kiev river port, for example, has had an agreement for cooperative work during the winter between the port, the station, and the Kiev Trucking Administration. This makes it possible to utilize to a significant extent the port's freight transfer capacities, warehousing services, and manpower, which are not used much during the winter, to process railcars and service freight trucks.

More attention should be given to this type of cooperation, and it should be utilized elsewhere.

The development of river transport in the republic is being carried out more and more on the basis of accelerated scientific and technical progress. Every year more than 250 measures are carried out, on the basis of plans to develop science and technology, with the aim of creating new types of industrial products, introducing new progressive technological processes and expanding existing ones, mechanizing and automating production, and realizing the goals of scientific and technical programs.

A great deal of work has been done on the construction and reconstruction of freight-handling docks. As a result, there has been a qualitative improvement in their technical equipment, and 90 percent of all the freight facilities meet the standards for domestic port construction. Extensive use has been made here of mechanization and progressive technological processes. The hydromechanical method of loading sand and gravel mixtures onto vessels is being used

everywhere. An automated complex for high-speed loading of mineral construction materials onto railcars and trucks, with a capacity of 8000 tons per hour, has been put into operation at the Dnepropetrovsk port.

A number of important sectors have still not achieved qualitative changes in raising the level of management, and work is being organized with the help of outmoded methods. This has a significant effect on the fulfillment of plan quotas and on production efficiency. The five-year quota for shipbuilding was not met, there have been lags in the construction, expansion, and reconstruction of river ports and shipbuilding and ship repair plants, and in strengthening the production and technical base of construction enterprises. A significant number of ships in the fleet are processed in ports with excessive delays. The quality of passenger services is being improved slowly. There are still frequent cases of violations of labor and technological discipline, which is the primary cause of accidents and defective work, and losses of work time.

The republic's river transport workers are faced with some major tasks in making further improvements in the organization of shipments. In addition to the existing cargo routes, in the 12th Five-Year Plan there are supposed to be expanded shipments of iron ore raw materials from the Poltava Mining and Concentrating Combine for metallurgical plants near the Dnepr and for export, and of import metals from ports at the mouth of the Danube to the Zaporozhye region.

This will require a significant increase in the volume of direct, no-transfer shipments of foreign trade cargo on combined river-sea ships on Romanian, Bulgarian, and Yugoslavian routes, and expanded shipment of large-tonnage containers by the river fleet. A great deal needs to be done for further development of the barge transport and technological system for shipping freight between the Black Sea and Vietnam and Southeast Asia, transporting barges on the Dnepr and Danube.

A great deal of attention should also be given to the development of intra-basin shipments of rock, crushed rock, granulated slag, refractory materials, building structures and parts, and sand and gravel mixtures. There is also an urgent need for an increase in the shipments of petroleum products in liquid form, which are now being held up because of a shortage of tankers. River transport workers should take a more active approach to solving problems involving expanded shipments of agricultural cargo.

Estimates show that industrial and agricultural enterprises that gravitate toward the Dnepr could shift at least 5 million tons of freight to water transport. In order to resolve these issues, there must be greater initiative and persistence, a better knowledge of the economy in the regions served, and the proper port equipment must be set up, including a departmental, specialized fleet.

A great deal of work also needs to be done in the 12th Five-Year Plan to increase the economic efficiency of river shipping and to reduce shipping costs. A great deal here depends on further improvements in operations, and on establishing optimal relations between the self-propelled and towed fleet, and in its structure.

A decisive campaign must be waged against nonproductive fleet layovers. Every fifth vessel is now kept in port longer than the established norms, which in the last year alone resulted in losses of more than 8.7 million tonnage-days. It is very important to ensure regular arrival of vessels at loading and unloading points, strict adherence to traffic schedules, and precise coordination of operations with the railroads.

These issues should be at the center of attention of party, trade union, and Komsomol organizations in all subdivisions of river transport.

As in the past, passenger travel will continue to occupy an important position in the work of the republic's Main River Fleet Administration. The goal is not only to increase the volume of passenger travel, but also to make a significant improvement in the quality of passenger services. The conditions for these changes have already been created. In the past five-year plan 48 modern new vessels were added to the passenger fleet, including 19 high-speed craft. New passenger stations have been built in Chernigov and Kremenchug, along with two passenger complexes--"Spasskiy" and "Metro"--in Kiev, and passenger ports in Cherkassy and Chernigov, and stations are being built in Dnepropetrovsk and Belgorod-Dnestrovskiy.

However, many enterprises and vessels still are not making high enough demands for efficient organization of passenger travel and passenger services. There have been many cases of violations of traffic schedules by high-speed vessels resulting from poor engine repairs, and not all the passenger ports are well-equipped. There are flagrant violations of technical and sanitary standards for ship maintenance, and in the organization of passenger food services.

9967

CSO: 1829/84

INTERSECTOR NETWORK DEVELOPMENT

DISRUPTIONS IN CENTRAL ASIA PETROLEUM PRODUCT SHIPMENT

Moscow IZVESTIYA in Russian 13 Mar 86 p 2

[Article by V. Kuleshov: "When There Is No Agreement"]

[Text] Having failed to meet the state plan for oil products shipments from Baku oil refineries, the collective of the Ashkhabad rail division had a shortfall in deliveries to consumers in Central Asian republics of 614 tank cars of diesel fuel and 249 tank cars of aviation kerosine in January of this year alone. The situation in February with regard to shipping out oil products to industrial and agricultural regions of the region was the same for rail workers in Turkmenistan. What happened?

V. Pomeltsov, chief of the Ashkhabad Division of the Central Asian Railroad: "True, the spring fieldwork has already begun in southern Uzbekistan, and not even half the fuel stock has been created at the farm fuel depots. We are aware that Tashkent airport regularly cancels flights due to a lack of aviation kerosine. We Ashkhabad Railroad workers were to have delivered it to our neighboring republic. I'll explain why we weren't able to.

The shipping administration of the USSR State Committee for Petroleum Products Supply planned for us to ship 125,000 tons of diesel fuel from Krasnovodsk to Uzbekistan in January. The February figure was 110,000 tons. But we didn't have that much fuel in Krasnovodsk, on 'our' side of the Caspian, in either January or February. It turned out that the collective at the Caspian Sea Steamship Line had entirely different shipment plans for fuel from Baku. In January, the seamen were obligated to ship a planned 85,000 tons of diesel fuel, and in February, 60,000 tons. And we did ship that 145,000 tons in our tank cars. But no one even intended to ship the other 90,000 tons urgently needed by our customers in Uzbekistan and other republics across the Caspian.

It's a shame that these problems were created for area farmers due to a lack of coordination of plans between the USSR State Committee for Petroleum Products Supply and the Ministry of the Maritime Fleet."

Yu. Malakhov, deputy chairman of the Turkmen SSR State Committee for Petroleum Products Supply: "You must recognize that we've never had a planning mix-up like this before.

The railroaders are, of course, not to blame for the disruption. The responsibility belongs first of all to leaders of the USSR State Committee for Petroleum Products Supply, who were unable to convince the Ministry of the Maritime Fleet of the necessity of shipping the 125,000 tons of diesel fuel in January and the 110,000 tons in February. The Caspian Steamship Line was fully able to cope with those amounts: last year, it confidently shipped that much fuel per month, carrying out precisely the task set it. But now, the USSR State Committee for Petroleum Products Supply has evidently given the seamen cause for complaint. Citing stormy weather, the decrepitude of its own tanker fleet and the shortage of ships, the Committee adopted a plan for the first months of the year which was very easy to meet, and it naturally overfulfilled it. So the plan was met, but the cargo was not delivered in the quantity needed."

A. Goldobenko, USSR Deputy Minister of the Maritime Fleet: "According to the data available to us, everything is normal in the Caspian Steamship Line: it has met the plan. It is entirely possible that the actual demand for oil products from Baku exceeds the planned shipment volumes. We are considering this. Together with the leadership of the USSR State Committee for Petroleum Products Supply, we are now issuing the Caspian Steamship Line an additional assignment which anticipates increasing cargo shipments, and it must carry out that assignment. As concerns the urgent telegram sent me from the Ashkhabad Division of the Central Asian Railroad, the reference is apparently to the difference between the plans. I repeat, however, that we have met our own plan. Perhaps the railroad has some other plan for hauling oil products, but I wouldn't know about that...."

D. Gashumov, chief of the Caspian Sea Steamship Line: "We are, of course, trying to carry out the assignment to ship additional oil products from Baku to Krasnovodsk. We probably could have shipped those 125,000 tons of diesel fuel planned for shipment to the Ashkhabad railroaders had the task been set us in late December, rather than now. The unfortunate thing is that no one has spoken yet to the question of balanced planning of the work of our seamen and the railroaders of Turkmenia. We work together, generally without a long-range view or precise information on the national economic demand for particular oil products. Lack of coordination in cargo hauling follows."

Yu. Zashlyapin, deputy chief of the shipping administration of the USSR State Committee for Petroleum Products Supply: "I agree that the plan of action for related suppliers must be unified and that, in coordinating it with the seamen, much will depend on us, the leaders of the USSR State Committee for Petroleum Products Supply. But will we always be able to do that? One example. All last year, enterprises of the USSR Ministry of Petrochemical Industry failed to receive from the USSR Ministry of Petroleum Industry and Ministry of Gas Industry coordinated petroleum feedstock delivery plans, even within the 30 days prior to the start of the planning quarter. What is more, beginning in mid-1985, the Ministry of Petrochemical Industry was forced to coordinate with its own suppliers plans for feedstock deliveries after the time for the deliveries had already passed. Everything was delayed, and continues to be delayed. For example, the Ministry of Petroleum Industry and Ministry of Petrochemical Industry agreed on the first-quarter petroleum feedstock delivery plan only on 3 January of this year. In turn, not having an agreed-to feedstock delivery plan on schedule, the USSR Ministry of Petrochemical Industry was unable to provide the USSR State Committee for Petroleum Products Supply with an assignment to produce that fuel."

Thus, there is a chain reaction of failure to agree to plans at the proper time, ending up in a situation in which our committee, representing the Ministry of Railways as a freight shipper, also is unable to provide railroaders with the next quarterly plan for hauling oil products punctually and precisely, broken down by month.

The only way out we can see is for both us, the USSR State Committee for Petroleum Products Supply, and other related suppliers of ours to deliver all basic oil-product output in strict conformity to the needs of our customers and meeting their orders in full.

The picture is depressing: there is fuel, there is adequate equipment to haul it, plans are being met. Only the most important thing is missing, the end result, that for which both the oilfield workers and the petrochemists, the seamen and the railroaders, are essentially working. Departments responsible for seeing to it that the fuel ultimately gets into the gas tanks of the vehicles, departments which have long cooperated with one another, were still unable to coordinate their plans. Interdepartmental barriers [red tape] cost the national economy dearly!

11052

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INTERSECTOR NETWORK DEVELOPMENT

INSTITUTE URGES COORDINATION IN USE OF CONTAINERS

Moscow GUDOK in Russian 23 Mar 86 p 2

[Article by Candidate of Technical Sciences M. Sitnik, sector head at the Institute of Comprehensive Transport Problems attached to the USSR Gosplan, under the heading "Beyond the 'Basic Directions'": "Future of Containerization"]

[Text] The Basic Directions of Economic and Social Development set the task of "making more extensive use of progressive methods of hauling freight, increasing 1.4- to 1.5-fold containerized and palletized shipment volume, significantly raising the level of comprehensive mechanization of loading-unloading and repairs."

The effectiveness and adaptability to streamlined processing of the container transport system (KTS) have made it popular in all types of transport among both shippers and customers. This past year alone, 110 million tons of valuable produce was delivered in multipurpose and specialized containers. This was 1.5-fold more than in 1980. According to averaged data, their calculated national economic effectiveness is approximately 2.2 billion rubles. The impact results from freeing about 55,000 people for other work, saving many millions of cubic meters of crating wood and saving 110,000 tons of metal.

Quite a bit has been done, but specialists at the Institute of Comprehensive Transport Problems (IKTP) attached to the USSR Gosplan calculate that the container system is thus far meeting only half the national economic demand. The existing enormous reserves need to be brought into play more quickly, that is, we confront the task of intensifying all container technology, of improving planning and rate-setting, of coordinating more precisely the operation of all types of transport. Now, let's see what determines containerization strategy and tactics.

Relying on Forecasts. Trade turnover is growing and the trade network is expanding, so shipments in the relatively smaller containers must be ensured accelerated development. It is appropriate to give preference to containers in motor transport in the store-warehouse loop.

Conditions for distributing so-called container-suitable output in the circulation sphere are such that shipment in small lots will be retained into the foreseeable future. We therefore plan to keep a significant number of average-

sized (five-ton) containers in the fleet. About 50 percent of all hauling will be in containers of this size.

The large (20-ton) containers used today primarily in rail and sea transport will be used more widely in river transport as well, as well as in motor transport. The development of a unified container system for CEMA member-nations will facilitate the dynamic growth in shipments in 20-ton containers.

The base for producing such containers will be broadened. Machinebuilders are also supplying cranes for handling them, along with specialized rolling stock and fleets. All this must enable us to increase the volume of shipment in 20-ton containers 3.8-fold in the decade ahead.

To increase their capacity, the height of the 20-tonners is to be increased from 2,438 to 2,591 millimeters. The taller new containers are already in use abroad and will be coming into Soviet transport from abroad. Their use in our country is thus far limited, because we lack the tractor-trailers with lower freight platforms, necessary for clearance under bridges and highway overpasses.

We currently use 60 type-sizes of specialized containers. A majority of them are nonstandard and are scattered among many industrial ministries for use in hauling basically one type or a group of similar types of freight. Therefore, particular attention is being paid to standardizing them and improving their exploitation. The question has also arisen of introducing large, specialized containers based on the existing standard frame. We also need to bring the standards, parameters and designs of the specialized containers into conformity with the production technologies at shipper and customer enterprises, and so on.

Developing the Technical Complex. In connection with the extensive introduction of large containers, the question of mechanizing their loading and unloading has become especially acute. We have begun using fork lifts, but their effective use requires palletization of small items, and today's common, standard pallets are too heavy, so we need to develop lighter components.

The Ministry of Heavy and Transport Construction, Ministry of Automotive Industry and Ministry of Electrical Equipment Industry have been instructed to develop and set up the series production of cranes, gantry container loaders and various truck loaders with automatic grippers and load capacities of 20, 24, and 32 tons. We need traveling gantry cranes and small fork lifts which will permit mechanizing the loading and unloading of 20-ton containers on all types of transport and at industrial enterprises, construction sites, supply warehouses and stores.

We are faced with developing tractor-trailer rigs for hauling large, taller containers and with modifying the designs of flatbed container haulers to make them stronger.

Container junctions must be further developed, as it is here that the most laborious operations are performed and the different types of transport interact. And it is very important to have well-developed freight fronts here, meaning the very latest lift-transport equipment and optimum technology for related suppliers to interact.

In the 12th Five-Year Plan, the total number of container centers handling large containers just for rail transport is to be at least doubled. Many existing large centers at rail stations and at sea and river ports will have to be renovated and equipped with ASU [automated control systems].

This past five-year plan, serious oversights were permitted in the development of container centers and much work was unfinished. The railroads, for example, planned to automate 30 container centers, but they began introducing ASU at only 10. And the construction-installation work was completed at only one, Rostov-on-Don.

Economy, Coordination. The choice of freight for containerization, which is precisely what determines its impact, must be carefully verified and well thought out. It is here that precise coordination of the actions of workers in all types of transport and their clients is important.

Effectiveness must be a consideration even when planning the distribution of shipment volumes by type of transport. However, the methods and regulations developed for this purpose have not been followed by the branch planning agencies in transport or by product suppliers.

Thus, the container main administration of the Ministry of Railways and the corresponding road services are planning and considering container shipments on the basis of gross tonnage. This means the weight of the container itself is added to the weight of the freight, which runs counter to the existing regulation approved by the USSR Gosplan and Gossnab. As a result, the actual volume of shipments in containers is intentionally inflated by 20-25 percent.

Neither has the selection of freight for delivery in containers been properly set up. Any kind of low-value freight is accepted for shipment, including freight in ordinary packaging. Experts place the proportion of such freight at about 20 percent.

The most critical problem is that of coordinating container shipments. Let's remember that containerization yields its greatest impact in the accelerated delivery of output along a continuous technological chain from production facility to point of use, which means container circulation must be accelerated in every way possible, meaning faster loading.

Losses are particularly high at junctions. Due to poor coordination, junctions between various types of transport and between transport and freight shippers and customers have often become stumbling blocks, rather than interfaces.

In the central regions of the country, due to a lack of coordination between railroad workers and river-transport workers, nearly all shipments of containers in direct mixed shipment have been completely stopped. Shipments of this type have become rare in the Far North. River steamship lines return containers to railroaders only after the navigation season is over, and sometimes they don't return them at all. A whole treasure trove of containers has formed on a huge site at the port of Osetrovo on the Lena.

But what losses does this litigiousness between railroad and ocean fleet workers lead to? Railroaders fail to return more than 10,000 containers to their partners in the course of a year. The containers often turn out to be ownerless. They are poorly maintained. As a result, defective containers are supplied for loading. And it does happen that containers are available, but there is no freight. All this has an extremely negative impact on transport service quality.

True, there have been attempts to improve organization and set up proper coordination. Back in 1982, the USSR Gosnab organized an Administration for Interbranch Coordination and Planning of Containerized and Palletized Delivery of Output. However, there is yet to be the necessary coordination either in planning or in organizing shipments or in equipment standardization.

The question of coordination remains critical. It must be engaged in the most serious manner.

11052

CSO: 1829/147

INTERSECTOR NETWORK DEVELOPMENT

MORE ON NATIONAL REORGANIZATION OF TRANSPORTATION MANAGEMENT

Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 16 Mar 86 p 2

[Article by Academician G. Pospelov, member of the USSR Academy of Sciences Council on Overall Problems of Managing Transport Processes: "Onto the Mainline"; for previous article on this topic, see pages S 2-4 of the USSR National Affairs DAILY REPORT SOV-86-015 of 23 January 1986]

[Text] The party views restructuring the economic mechanism as one of the basic levers of socioeconomic acceleration. The Political Report of the CPSU Central Committee to the 27th Congress set the task of imparting modern organizational structures to management, with consideration of trends in production concentration, specialization and consolidation. The reference is to creating complexes of interconnected branches, scientific-technical interbranch centers, and a variety of forms of economic associations and territorial-production structures.

In this connection, the concept of creating an all-union transport complex management center takes on increasing urgency. I refer to the article by Academician A. Voronov and Doctor of Technical Sciences S. Rezer which was published in SOTSIALISTICHESKAYA INDUSTRIYA on 18 January of this year. They offered well-founded proposals on creating such a center, which would concentrate the planning and management of all transport work in the country.

The organization of such a center flows organically from the tasks outlined in the Basic Directions of Economic and Social Development: create management agencies for groups of interconnected branches and improve coordination of the operation of all types of transport. In order for this agency to work effectively and not be converted into another layer of management duplicating the specialized branches, we need a well thought out, efficient structure, a precise division of labor among them which ensures that the links in this technological system operate as a unified whole.

Such precision is thus far lacking. When we speak of the transport complex, we generally have in mind mainline transport, forgetting a very important connecting link between the mainlines and the consumer, industrial transport. Not everyone even understands what this system is. At the same time, it is enormous, comprising 150,000 kilometers of railroad sidings, or as much as the main lines in the Ministry of Railways network; it also includes hundreds of river wharves, many hundreds of thousands of square meters of truck-loader yards and tens of thousands of pieces of transport and loading equipment.

These figures will give an idea of the scale of the work on enterprise sidings: upwards of 180,000 cars are loaded and more than 160,000 cars are unloaded on them daily. All types of industrial transport, including motor, water and others, haul about 35 billion tons of freight per year. In the future, this will approach 40 billion tons. And this huge system has essentially been outside the shipment conveyor.

Take industrial rail transport, for example. It has quite a lot of structural confusion: several transport organizations, each serving its "own" enterprise, "sit" at the very same mainline stations, sometimes at the very same sidings. You don't have to look far for examples. Moscow-Butyrskaya Station is at the sidings of "Stankolit," "Borets" and four other enterprises, each of which has its own transport system. And neighboring Beskudnikovo Station is at the tracks of a number of other enterprises served by the interbranch industrial rail transport organization. The logic of efficient management would urge the transfer of all loading-transport operations to a single firm, permitting a significant reduction in the amount of equipment and number of workers and administrators and improvement in labor productivity and work quality and efficiency. But this is hampered by the scattered bureaucracy.

A similar situation has evolved in many regions of the country. The principle is, in effect, that organizations of two industrial transport systems, the interbranch and the departmental, which are affiliated with different enterprises are contiguous with the exact same stations. Hence, the astonishing distance between economic indicators for work by essentially identical systems. Thus, labor productivity at small transport shops of enterprises having a couple of locomotives and perhaps neglected sidings is four or five times lower than on average for industrial rail transport.

At attempt was made 25 years ago to eliminate departmental lack of coordination by centralizing transport services. It was assumed that specialized organizations would assume all freight shipping and delivery concerns. Some small, underdeveloped transport shops at enterprises, their sidings, locomotives and loading-unloading equipment were merged into an industrial rail transport interbranch enterprise. They demonstrated their viability and effectiveness. Labor productivity was considerably higher and the net cost of their operation was lower than before. The customers saw the merits of this progressive form of organization. More and more each year wanted to switch over to it.

Why, then, have these interbranch organizations had only one-twentieth of the sidings at industrial enterprises and refused to accept many desiring comprehensive transport services for the more than quarter century of their existence?

Because the restructuring was not completed, but stopped half-way. Instead of seriously improving their structure, the administrations began changing their departmental affiliations. At first, organizations of the industrial rail transport system were assigned to the RSFSR Ministry of Motor Transport; then they jumped to the Ministry of Railways. There, too, however, they remained "strangers among their own," immediately becoming outcast stepchildren. And, whereas previously the USSR Gosplan had allocated the industrial rail transport system material-technical resources and administrative staff for specific purposes, now everything was allocated to the ministry. And within the ministry,

the requirements of the Glavpromzheldortrans [main administration for industrial rail transport] by no means always came first. The subbranch was chronically short of loading-unloading equipment, spare parts and units and subassemblies, and it had practically no maintenance base. Due to their inadequate size and lack of equipment, the interbranch organizations of the industrial rail transport system have been unable to take on meeting the needs of transport shops at small enterprises. At the same time, the larger enterprises, which have strong transport systems, have preferred to get along on their own.

But this is only one aspect. Another is the poorly thought-out economic mechanism. Departmental affiliation also dictated a unique economic strategy. Industrial transport wore the blinders of departmental indicators -- tons hauled and unloaded -- and began working for themselves, striving to perform preferably those operations which would enable them to meet the plan more easily. The "tonnage" pressure turned out to be stronger than common sense. A progressive concept came to a dead end.

This is why we did not agree with Ministry of Railways leaders who proposed uniting mainline and industrial rail transport and transferring the transport-expediting service to the Ministry of Railways. That would have done little to improve the situation. In fact, the current defects in the work of interbranch organizations of the industrial rail transport system were born largely of their subordination to the Ministry of Railways.

Tonnage pressure has also dominated other types of industrial transport -- water and motor vehicle. The vices of departmental fragmentation are even more evident in industrial transport than in mainline transport. Their concrete expression is a scattering of capital investment, absence of a unified technical policy, and enormous nonproductive expenditures of labor and resources. According to the most conservative estimates, the operating expenses of industrial transport exceed 30 billion rubles per year.

The Basic Directions of Socioeconomic Development anticipate ensuring comprehensive, proportional development of industrial transport. Half-measures won't do in this area.

How, then, can things be improved? The way out is apparently to remove transport from departmental subordination. The practical effect of this will be the creation of a union-republic interbranch agency, within the framework of an all-union transport complex management center, which will exercise combined leadership of all service transport -- rail, motor, water, and eventually container and pneumatic container.

This agency must work out the general directions of development for all industrial transport, conduct unified planning and investment policy, and decide questions of scientific-technical progress, personnel training, and interaction with mainline transport. Concentrated leadership of this kind will permit maximally effective subbranch retooling.

Fundamental restructuring of work locally will naturally be required as well. Every prerequisite for this exists. Many regions already have industrial rail transport interbranch enterprises combining the systems of ministries and

departments, loading-unloading and expediting agencies in motor transport and the railroads. Their merging into large regional forms to provide comprehensive transport services to all enterprises of an industrial center is an effective way of doing this. The question then is one of a fundamentally new regional economic entity performing a complete cycle of transport servicing and bearing responsibility for the protection of freight and for delivering it promptly to warehouses, and in the case of technological shipments, for delivering it to production units.

It would obviously be best to set up such firms based on large industrial transport enterprises, regardless of departmental subordination, so that they can be the basis for future interbranch associations. It is important to single out leaders possessing strong scientific-technical potential. They should be given priority status, and enterprises operating less effectively should be made subordinate to them. They can be combined in an organized manner under the aegis of the kray- and oblispolkoms. Experience in this is available.

Let us remember that when the harvest campaign begins and motor transport is sent to agricultural rayons from all over the country, headquarters and centers for directing shipments are created under the ispolkoms to set up the operation of the vehicles, harvesting and loading equipment enlisted on hourly schedules and to communicate with mainline transport and agricultural produce receiving centers. Transferring leadership of a regional firm to the ispolkoms would simultaneously strengthen the responsibility of local agencies for comprehensive transport services to customers within their areas, as well as responsibility for keeping order in the freight flows.

We will unquestionably first have to create as well a new economic mechanism which will confirm the authority of production workers. It would seem appropriate to build relations among the partners as follows: the customer orders freight, indicating what must be delivered where and when. The rest should be the concern of a fully-empowered, responsible firm.

Given such an arrangement, industrial transport would become what it should be, a connecting link in a single, unbroken technological "mainline transport -- production" chain.

11052
CSO: 1829/147

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