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USSR Report

TRANSPORTATION

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CONTENTS

RAILWAYS MINISTER RESPONDS TO POLITBURO'S CONCERN OVER BAM

Moscow SOVETSKAYA ROSSIYA in Russian 10 Oct 84 p 2

[Article by Minister of Railways N. S. Konarev under the heading "Reviewed in the CPSU Central Committee Politburo": "BAM -- Work Continues"]

> [Text] The routine CPSU Central Committee Politburo meeting held recently reviewed the question of finishing laying the main railroad track ahead of schedule and opening the Baykal-Amur Mainline to working train traffic. An enormous amount of work has been done on the route over the last 10 years. Upwards of 570 million cubic meters of earth has been removed for the roadbed, about 4,200 bridge have been built, and more than 5,000 km of primary and station track has been laid. A total of more than 570,000 square meters of housing and a large number of other social and personal-services facilities costing a total of more than 400 million rubles have been put into operation. At the same time, those at the meeting spoke of the necessity of accelerating completion of all work on the mainline and releasing it for full-time operation. What new tasks were set construction and railroad workers in this connection? (V. Avdevich)

This past summer, as part of the USSR Council of Ministers BAM Commission, I has occasion to travel the mainline under construction from Ust-Kut to Komsomolsk-on-Amur. Reality, rather than figures, convinced me of the enormous amount of work done this past 10 years. I will not cite report indicators, as they are common knowledge. Let me note the qualitative aspect, people's attitude towards their work. We could have built dozens of stations as alike as peas in a pod, but the BAM workers had different ideas. Union republic sponsoring collectives erected facilities which couldn't be called anything but works of architecture. Their labor has been evaluated on its merits. The collective of the Gruzbamstroy [Georgian BAM construction administration], for example, was awarded a USSR Council of Ministers prize for the Niye terminal. Terminals in Khorogoch, Tayur, Kireng, Kunerma and elsewhere are also original and unique. Builders have also put their hearts into housing, commercial and public complexes, hospitals and kindergartens, and so on. Just visiting Tynda, you see how much the appearance of this once-unknown settlement has changed during the years Muscovites have been sponsoring it.

True, it would be hard to overestimate the contribution of the union republics, krays and oblasts to the BAM construction. It was for precisely this reason that the decree adopted at the CPSU Central Committee Politburo meeting includes a special section which states the necessity of continuing sponsorship assistance to the BAM. This important document approves the initiative by construction organizations of the Moldavian, Georgian and Azerbaijan SSR's, which have assumed these additional obligations: to build settlement housing and terminal complexes with utilities on the Baykal-Amur Rail Mainline. Moreover, it is recommended that party and soviet organizations of Novosibirsk, Saratov, Sverdlovsk and Penza oblasts continue sponsorship assistance in 1986-1990 in installing settlement housing and terminal complexes at Olekma, Tungala, Meunchik and Fedkin Klyuch stations.

A week ago, as our readers know, the last, "golden" link of the Baykal-Amur Mainline was laid. This event marks the beginning of working train traffic on those sections of the route which had not yet been accepted for temporary or full-time operation. Conditions have thus appeared for the accelerated delivery of equipment and parts for the track superstructure, complex components, equipment and other freight to construction workers. But a large number of technical and operating projects necessary to normal railroad operation must still be put up before the entire length of the mainline can be accepted for full-time operation. Unfortunately, the state of affairs on this construction sector is a cause for justified alarm.

As was noted at the CPSU Central Committee Politburo meeting, we are currently observing a lag in overall construction tempo at Tynda, Lena, Fevralsk and Urgal stations, as well as in building locomotive and car depots, utilities facilities, trade, social, cultural and personal-services projects. In the aggregate, we still neet to utilize upwards of 40 percent of the BAM construction capital investment allocations anticipated in the technical plans. Whereas laying the railroad track and erecting artificial structures were considered primary in the initial stage, now that the rails have linked in Kuanda, we expect the Ministry of Transport Construction and its contractor organizations to concentrate their human, material and technical resources on electrification, on installing locomotive, car and power facilities, communications facilities, and so on. It is in precisely these areas that upwards of 80 percent of all the remaining work lies. In order to stay on schedule in building the locomotive and car depots, for example, we will need to utilize tens of millions of rubles annually. That is the only way we can release depots at Lena, Nizhneangarsk and Urgal stations for operation in 1985 and another 14 depots at Taksimo, Kuanda, Chara, Tynda, Fevralsk and other stations by the end of the next five-year plan. Much work also remains in the nonproduction sphere, in installing trade complexes, schools, hospitals and housing. I personally have no doubts that the plans will be completed successfully. It is only important that the contracting organizations of the Ministry of Transport Construction not lose a moment in promptly redirecting their specialists towards the construction nature which has evolved. The resolution adopted by the CPSU Central Committee Politburo precisely defines a further program of action. It is oriented both towards builders and towards railroaders. Speaking for our branch, we are fully resolved to cope with the responsible tasks connected with operating finished Baykal-Amur Mainline facilities.

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DEPUTY RAILWAYS MINISTER REVIEWS BAM PROBLEMS

Moscow SOVETSKAYA ROSSIYA in Russian 19 Sep 84 pp 1-2

[Article by G. Savchenko, deputy minister of railways: "The Mainline Today and Tomorrow"]

[Text] The day draws ever-nearer when the last "golden" link and rails of the Western and Eastern sectors of the route will be laid near Kuanda settlement, making a continuous rail line stretching some 3,000-plus kilometers from Komsomol'sk-on-Amur to Ust'-Kut. For construction workers, the forthcoming linking signifies completion of one of the primary work stages, laying the main track, a year ahead of schedule. And it is probably quite natural for the editors to be receiving these days letters from, for example, E. Vasil'yev (Leningrad), N. Yarosh (Gomel'), V. Bernadskiy (Vladivostok), V. Korolev (Novorossiysk), V. Sapzhinov and A. Ignatov (Buryat ASSR) and others requesting that we discuss the future of this mainline, the prospects for developing and utilizing it. And it is the letters from readers that prompts this discussion.

"First of all, I should like to explain that completion of work on laying the main track does not in any way signify that we can at that instant begin utilizing the mainline. This process began long ago, in 1979, when the "Little BAM" (the Bam - Tynda - Berkakit line) became operational and the Tynda Rail Division became the first division organized on the route. A year later, the Urgalsk division appeared on the section from Postyshev (Berezovka) to Komsomolsk-on-Amur. A year after that, the Severobaykal, extending its domain from Ust-Kut to Kunerma. Since then, the Baykal-Amur Rail Line, the country's 32nd, has also been organized. It operates under very complex conditions of permafrost, a severely continental climate, high seismicity, and numerous small and large rivers in which the water occasionally floods seven or eight meters. Still, transport workers are already hauling freight on a significant stretch of the route: Neryungrin and Chegdomyn coal and timber from Central, Eastern and Western BAM sectors are being delivered to consumers and building components, materials, equipment and machinery is being supplied to mainline construction workers. In the aggregate, the road has already shipped more than 40 million tons of freight.

To some, this figure might seem insignificant. But let's think about it. If railroaders had not made this contribution, those shipments would have had to have been made locally by road on the route. Shipment net cost would have risen many-fold. The national economy will gain even more in freight transport to the

builders after the "golden link" has been laid, when, at last, all three divisions of the Baykal-Amur Road -- Urgalsk, Tunda and Severobaykal -- have been linked into a single track of rails.

As of today, 773 km of the railroad is in full-time operation. Another 1,500 km is in part-time operation. Construction workers have organized working movement of trains on the remainder of the route. We intend to release the mainline as a whole for full-time operation in the 12th Five-Year Plan. Not close to the finish yet, as we see. For example, more than 40 percent of the planned amount of capital investment in installing the road is yet to be utilized. This includes 80 percent of that allocated for locomotive and car facilities, more than 55 percent of that allocated for housing construction, nearly 70 percent of that allocated for commercial facilities, and upwards of 45 percent of that allocated for schools, hospitals, kindergartens and day care centers. In enumerating these figures, I should like to focus the readers' attention on the fact that, although more than half the planned work volume has been carried out on the BAM during the past 10 years, nearly as much must be done in the next 5-6 years. And that period should, I would think, be shortened, since the faster the Baykal-Amur Road capacities are put into operation and utilized, the faster the country will receive a return on the enormous funds spent on its construction. The simplest calculations show that transport outlays are considerably lower for full-time operation than for part-time, when one must pay for shipments at higher tariffs. Moreover, accelerated BAM start-up will make it easier to ship freight, inasmuch as the route can be shortened by 400 km as compared with the Transsiberian Road now in use. If you look at the map, you will see that the BAM is a second outlet to the Pacific Ocean. Which means what? If one is speaking about freight being shipped by rail to Kamchatka, Magadan and Chukotka, the route is shortened by a thousand kilometers. And that is very important, because the Transsiberian Road is already hard-pressed to handle the enormous flow of freight needed for the rapidly developing regions of Eastern Siberia and the Far East. And the sooner we take that portion of the freight flow off the Transsiberian and shift it to the BAM, the more economically effectively both roads will operate. All this will in the final analysis create conditions favorable to delivering the natural riches being extracted in the BAM zone to their destinations.

In talking in such detail about the prospects for utilizing the Baykal-Amur Mainline, I would not like to give readers the impression that there are no difficulties ahead or that they are not anticipated. There are and will be difficulties, and the main thing now is to avoid any delay in taking timely steps to forestall them. It was acknowledged at the CPSU Central Committee Politburo meeting held this July that mainline construction as a whole is proceeding quickly. A great deal of work has been done under harsh natural-climatic conditions, with numerous tunnels, bridges and other structures having been built. At the same time, the meeting focused attention on a number of shortcomings and unsolved problems. In particular, construction completeness is not being ensured everywhere. There are delays in installing locomotive and car facilities, municipal services, housing, children's institutions, hospitals, polyclinics, commercial and public catering enterprises. I should also like to talk in a little more detail about several of these elements of the production and personal-services infrastructure.

For a start, take the problem of unfinished tunnel construction, the Severo-Muy in particular. It was to have begun full-time operation in 1988. There are objective and subjective reasons for the delay. While tunneling through the mountains, the construction workers unexpectedly encountered a large mass of tectonic fractures filled with pebbles, sand, water...Unfortunately, scientists and specialists

have not succeeded in working out procedures for overcoming such obstacles. Only very recently was this taken up on a priority basis by the Ukrainian SSR Academy of Sciences and a scientific research institute of the Ministry of Coal Industry.... The methods proposed by them offer hope that tunneling rates will speed up quickly.

For the time being, though, the railroad is being detoured around the Severo-Muy Tunnel so that freight can be hauled until the underground route is complete. This sector has severe grades and sharp curves, demanding great skill on the part of railroaders, and foremost of engineers, in guiding consists through the pass. This means trains reaching here will have to stop time and again, divide up and get through the pass. This is, in itself, probably not complicated, but one must not forget the primary tasks of shipment economic effectiveness and train operation safety. It was for that very reason that it has been decided to continue work on the tunnel but also prepare in 1985 an open-route variant for a permanent railroad line on gentler slopes in the Severo-Muy Ridge section.

As I said, we are very disturbed by the slow development of work on building locomotive and car depots, power sectors, track maintenance districts and signal-communications in Tynda, Fevralsk, Urgal, Taksimo, Nizhneangarsk, Komsomolsk and Lena. These facilities have currently utilized only 20-25 percent of their capital investments. In the past, such an attitude on the part of the Ministry of Transport Construction to developing the material-technical base of the Baykal-Amur Road was to some extent justified. It was first of all necessary to lay the main track, without which further development of the route would have been simply impossible; in any event, it would have stretched out over a longer period. But now that the "golden link" is on the point of being laid and the rails will be continuous over the entire course of the mainline, we are justified in expecting more interest on the part of construction workers in installing the technical and operating facilities of rail transport. The linking is, in fact, a unique signal that freight shipments on the Baykal-Amur Mainline will begin to grow. Specialists are already estimating by how much the movement of trains will increase through the Lena transport junction which serves the river port of Osetrovo, by how much coal shipments from the Neryungrin and Chegdomyn deposits will increase.... Passenger travel will also begin soon to Severobaykalsk, Urgal, Fevralsk, Zeysk, Chara.... But, in order for future operations to flow normally, without interruptions, all junctions will need a developed material-technical base, beginning with modern depots and ending with tractive electric power substations. Unfortunately, the tempo of work on these facilities leaves much to be desired. During the first eight months of this year, for example, subdivisions of the Ministry of Transport Construction used only 35 percent of the capital investments in the new plan for construction of locomotive depots and only 22 percent of the investments for car depots. What will be the result? In order to provide technical servicing and maintenance, we have been forced to send locomotives hundreds of kilometers from their assigned locations, from Urgal to Komsomolsk-on-Amur, for example. Such maneuvers cost the national economy, and dearly.

Of course, putting the mainline into full-time operation will depend not only on accelerated development of the railroad itself, but also on prompt fulfillment of the social program. The specialists who will be mastering the new route

under harsh natural-climatic conditions will have to be provided with the whole complex of housing, cultural and personal services. For example, more than 160,000 square meters of housing, kindergartens for 1,100, schools for 3,600 and a 150-bed hospital polyclinic will have been built and put into operation in BAM cities and settlements by the end of the current five-year plan.

In brief, much has been built, housing-start plans are being fulfilled and overfulfilled, but still the lines of people needing housing do not get shorter. Why? Population growth on the BAM has exceeded the boldest expert forecasts. For example, during the 10-year period from 1974 through 1984, the number of residents in Tynda increased from 4,000 to 56,000, that is, 14-fold. The necessity arose of building additional kindergartens and schools, which could not be serviced and operated without bringing in additional workers. Hence the housing shortage. It became increasingly difficult with each passing year to cover this with the capital investments being released to our ministry. The plans for the branches mastering the BAM zone must evidently anticipate corresponding funds necessary to build up the BAM cities and settlements. Railroad workers alone are unable to shoulder that expenditure burden.

The ministry has responded in a business-like manner to the remarks and proposals made at the CPSU Central Committee Politburo meeting. Minister of Railways N. Konarev has approved expanded measures to create a production base and to train personnel to operate the Baykal-Amur Railroad. They outline tighter monitoring of progress in building facilities on the route. In particular, steps will be taken to promptly release 649,000 square meters of housing, children's preschool institutions for 5,130, schools for 13,232, 150-bed hospitals and polyclinics to handle 900 visits per shift. Assignments have also been approved on working out the technical documentation and allocating the funds for building commercial centers, fruit and vegetable storage facilities, bakeries, stores and dining halls. Particular attention has been paid to completing construction of locomotive and car facillties on schedule, developing the production base for line subdivisions of the track, signal-communications, electrification and power, civil construction and water supply services, and building railroad tekhnikums, vocational-technical schools and road technical schools.

The problems I have enumerated in the article need not be perceived as being bureaucratic. The fact is, the faster and more fully they are solved, the more both our ministry and everyone who will live in and master this richest region will gain.

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OFFICIAL ON NEED FOR BAM-YAKUTSK RAIL LINE CONNECTOR

Moscow GUDOK in Russian 26 Sep 84 p 2

[Interview with Yakutsk Obkom First Secretary Yu. N. Prokopyev by I. Krasikov: "Yakutsk Meridian"]

[Text] Yakutsk ASSR is a big region specialized for minerals mining. Yakutia industrial mining branches produce more than 70 percent of all industrial output being produced, foremost nonferrous and valuable metals and gas. Forty percent of the country's forecast coal reserves are concentrated in the republic. Coal mining industry has been developing at accelerated rates here since construction began on the South-Yakutsk Territorial-Production Complex. The capacity of the existing Neryungrin open-pit coal mine is already 11 million tons, and 5.6 billion tons of coking coal has been prospected in South Yakutia as a whole. The State Commission on USSR Reserves has approved shaft-type capacities here for mining 23.2 million tons a year. Further successful development of the republic economy will depend foremost on the reliability of transport supply lines. Their role is especially great in mastering new territories in the Far North. Our conversation with Yuriy Nikolayevich Prokopyev, First Secretary of the Yakursk Obkom, therefore began with his discussion of what Yakutia's transport system is today and how it influences development of the economy.

[Answer] The present Yakutia transport system is basically river and highway shipments. In the North, such shipments are very expensive. Suffice it to say that transport expenditures reach 50 percent of output net cost in the republic, while they do not exceed 10-12 percent nationwide.

Our primary transport mainline is the Lena River. The seasonal nature of river shipments give rise to considerable economic outlays connected with the impossibility of using material resources more fully. Moreover, the throughput capacity of the Lena river line is comparatively low. It is limited by the capacity of the Osetrovo river port and by the condition of the waterway in the upper reaches of the Lena. In drought years, we have to enlist additional automobiles and aircraft for shipments, which naturally leads to extra expenditures. But nothing

can be done about that, as we need to meet the consumer demand for goods and to constantly maintain the production rhythm at industrial enterprises.

We will be able to increase the shipment volume on the Lena by a maximum of 30 percent by 1990, but the demand for freight shipments will have grown by at least 60 percent. And the transport services problem will be exacerbated even more by 2000.

[Question] Which means the only way out is to build a railroad from Berkakit, the terminal station of the Little BAM, to Yakutsk?

[Answer] Without question. Putting this road into operation will play a decisive role in developing the productive forces of the entire northeastern region of the country.

Back in 1982, in accordance with the resolutions of the 26th CPSU Congress, the Mosgiprotrans Institute worked out the technical-economic substantiation for building this line. It was reviewed by the party obkom and approved by the Ministry of Railways. The USSR Gosplan opened a titles list to plan it. It was decided to begin construction of the first rail line, that portion to Tommot, in 1985.

Building a railroad mainline of about a thousand kilometers is naturally expensive. However, calculations show that the road will recompense expenditures within 6-8 years. Construction of the 380-km Berkakit - Tommot section will within three years be helping us significantly increase shipment volume, take the strain off the Lena river line, reduce the level of shipments through the river port of Magadan, and shorten the length of vehicular shipments to the central part of Yakutia. Republic national economy transport expenditures will thus be reduced by approximately 100 million rubles a year.

[Question] What will the railroad provide to develop republic ore mining industry?

[Answer] Much. First of all, it will accelerate the construction of large new ore-enrichment combines for nonferrous metals extraction. The railroad will boost this work.

Moreover, it must not be forgotten that the route will pass through that part of Yakutia in which there are large mineral deposits which have already been surveyed. The railroad will help draw them into national economic circulation.

We plan to create new enterprises for mining coal, apatites and iron ore. Utilization of iron ore deposits in the immediate vicinity of enterprises mining fluxing and refractory raw materials will create feasible prospects for building a metallurgical plant in southern Yakutia.

[Question] What has already been done in the republic to organize this work?

[Answer] The main construction forces have been defined. Installation of the line has been entrusted to the USSR Ministry of Transport Construction's Glavbamstroy. A portion of those construction subdivisions on the BAM freed for

other work will be redeployed in the months ahead on this route. The BAM has provided us with invaluable experience in railroad construction under extremely complex conditions, with examples of labor enthusiasm reinforced by precise engineering calculation. The redeployment to Yakutia of existing builder collectives with this experience will enable us to avoid the mistakes permitted early in BAM construction, to retain highly skilled personnel and the labor traditions born at the construction project of the century.

As concerns our apprehensions, permit me to refer to our experience in erecting facilities for the South Yakutsk TPK [territorial-production complex].

Dozens of enterprises now operate in South Yakutia and about a million rubles in capital investment is being used each day here. I would say we are making full use of the work-organization and party-leadership experience acquired there and tested by time in building the railroad as well. The party obkom has already reviewed questions of staffing and creating party headquarters for monitoring various areas of the lives and activity of construction workers: labor organization, socialist competition, creating normal living and cultural conditions on the route, providing people with everything they need to live and work under the harsh conditions of our North. These staffs will monitor the resolution of all production and organizational tasks, including personnel work.

Which brings me to another point. The redeployment of Glavbamstroy subdivisions will free us of the necessity of drawing up detachments from among specialists with little experience. And the rather well-developed construction industry base which has been created in South Yakutia will enable us to avoid putting up temporary settlements and unimproved housing on the route. Even in the first years of the construction project, we will be able to provide people with normal living conditions. And this is self-evidently a factor of essential importance in securing personnel.

I am confident that there will be no shortage of volunteers among competent, skilled specialists. The party obkom is already receiving dozens of letters requesting assignment to this particular construction project. One might say the republic is solidly prepared for this large undertaking. Construction of the Neryungri GRES is now proceeding apace. Its first two lines will have a capacity of 1.2 million megawatts. We are simultaneously building the Neryungri - Kurganakh 220-v transmission line, to go into operation in 1985. Both the gold miners of South Yakutia and construction workers on the mainline will have a constant supply of electric power.

A leading subdivision of the Mostostroy-10 trust, bridge-building detachment No 49, has been working in Yakutia for more than 10 years now. Its collective of highly skilled personnel is building highway bridges and participating in installing the tin-ore combine at Deputatskiy, beyond the Arctic Circle. It has already created a reliable production base for itself, and we think it will become the main collective for installing bridges for the railroad, of which there will be about 400.

The route will run parallel to the AYaM, a highway connecting the central rayons of Yakutia and the Transsiberian Railroad, which means no road adjacent to the track will be needed.

Again on the construction industry base. A number of large sand and gravel quarries are in operation in South Yakutia. Existing construction industry facilities will enable us to start up more than 100,000 square meters of housing a year. This will help boost the work from the very start. But we are suggesting that the Ministry of Transport Construction begin thinking now about broadening the base in order to double its capacity within the next two or three years through renovation. Such foresightedness will help us better secure construction worker personnel and operators of the future mainline and, in conjunction with other measures, will significantly reduce expenditures on construction of the road.

We are waiting for that event, and preparing for it. The new mainline will become the Yakutsk meridian of the BAM.

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CHIEF NOTES VARIOUS PROBLEMS REMAIN FOR BAM

Moscow KOMSOMOL'SKAYA PRAVDA in Russian 27 Sep 84 p 2

[Interview with Baykal-Amur Railroad chief V. A. Gorbunov by V. Niyazmatov: "Trains Pound the Rails"]

[Text] "This will go down in history as the year we finished laying the main railroad track and opened the whole length of the BAM to traffic," says V. Gorbunov. "This is a day the whole country has waited for. This great construction project of our time, begun 10 years ago by decision of the party, is approaching its "golden" finish. The mainline of the century has become a high, coveted destiny for thousands and thousands of young people. The railroad, cutting through permafrost, has brought enormous regions to life. Very little time remains until construction of the road is fully complete, but even now, we can say with pride that the BAM is working for the country. National economic freight is transferred along its rails, its passenger trains are running. At the same time, its operators are very concerned about not giving the impression that BAM construction ends with the linking of the rails. Judge for yourself: of the entire breadth of the BAM, that is, from Komsomolsk-on-Amur to Lena, about a thousand kilometers will be in full-time operation. That is a third of the mainline. Four hundred kilometers of the Little BAM and 770 km of the Big BAM have been released to us. The remaining two thousand kilometers will be in temporary operation under the Ministry of Transport Construction because full-time operation assumed organized traffic by trains meeting the established weight norm and the servicing of those trains. These conditions are not yet met, but they are being created.

On the BAM, we are still faced with building 60 percent of the housing and 50 percent of the hospitals and polyclinics. Another 838.8 km of railroad line is still to be put into full-time operation prior to the end of the current five-year plan.

[Question] Valeriy Aleksandrovich, it is quite obvious that laying the main track on the whole route is only a part of a large construction program for the Baykal-Amur Mainline, with full completion in the remaining years of the 11th Five-Year Plan and subsequent years in the 12th involving construction no less complex and strained than that already done....

[Answer] True, the BAM must in the final result be a railroad provided with advanced equipment and with production processes automated to the maximum. In

order to fully complete the Baykal-Amur Mainline, we are still faced with utilizing many millions of rubles in capital investments. But even now, Tynda junction, by accepting a growing freight flow from the Bam - Tynda - Berkakit line, as well as the flow of construction freight from the Eastern and Western lines of the mainline, has become a junction with serious, critical problems caused by delay in the construction of several vitally important production projects.

Referring to the railroad line itself, it has been built well. We have no complaints about the track, the roadbed or the structures built. But we do about the civil construction. Why? Planning was not thorough enough, consideration was not always given to the features of this permafrost region. It is the planners who are foremost at fault here. There were blunders by construction workers. And operators are also at fault. Unfortunately, people did not always acknowledge what kind of area they would be living in. We are now forced to rebuild Mogot settlement because it was never finished. This kind of thing was also observed at other settlements such as Murtygit and Zolotinka, but to a lesser extent. The BAM is not just tracks. People must live in this harsh region with the benefit of excellent social and personal-services conditions.

[Question] In spite of the difficulties, is it too soon to speak of recompensing the costs of the road?

[Answer] Though the road is still being built, it already operates as an independent economic enterprise. It currently has a collective numbering about 25,000. More than 64 million tons of national economic freight has been shipped. By the end of the five-year plan, freight turnover will have been increased 2.5-fold and the number of passengers being carried will have doubled.

Development of the adjacent industrial zones predetermines the construction of new enterprises, bases and organizations. During the past three years, the road has issued 70 permits to 20 ministries and departments nationwide for building and switching in new sidings. The total freight turnover of these enterprises will be more than 10 million tons of freight per year. For some reason, the economists were unable to anticipate this growth in shipments.

In 1985 we plan to develop documentation for strengthening the Bam - Tynda line. It will be hard for us, of course, because, as the flow of coal increases, there will be added shipments of construction freight. A decision was just made to install a new line from Berkakit to Tommot. No one anticipated this additional freight and so, naturally, neither did any of the calculations. In addition to everything else, "windows" must be provided for renovations in order to allow construction trains to move on and to dump out earth for the second-track roadbed. As we know, the roadbed was laid out for a single track on the Little BAM. Structures will have to be built.

We still have not resolved the question of developing special diesel locomotive models for the BAM. They must be powerful, compact and able to handle the temperature fluctuations.

[Question] The expanded "I Am A Mainline Manager" movement on the Baykal-Amur Railroad is apparently already yielding positive results.

[Answer] We consider our primary achievement to be the fact that we were able to create a combat-ready collective engaged in real operational work. It is remarkable that the railroaders who came here, from practically every road in the country, have introduced the most advanced techniques tested on their former roads and are striving to become true managers of the new mainline. I note with satisfaction that these are not time-markers thinking about their personal well-being.

We have a clear idea of the prospects for growth. They are quite tangible and depend on shipment growth connected with development of the Neryungri and Verkhnye-Burein coal deposits and with the creation of large timber-management enterprises. As the whole mainline is released for operation, through trains will travel across the BAM, passenger trains will run from Tayshet to Soviet Gavan, and the BAM will begin to work for the country at full capacity.

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SHIPPING COMPANY CHIEFS ON USE OF VOLGA-BALTIC WATERWAY

Moscow RECHNOY TRANPORT in Russian No 5, May 84 pp 16-21

[Article by F. Fomin, chief, Northwestern River Shipping Company, Ye. Vasil'yev, chief, White Sea-Onega Shipping Company, K. Korotkov, chief, Volga United River Shipping Company and V. Permyakov, chief, Volgotanker Shipping Company: "The Transportation Artery of the Northwest"]

[Text] F. Fomin [chief, Northwestern Shipping Company]:

In 1963, the last year the Mariinsk Water System was in operation, the steamship industry suffered losses of almost 3 million rubles in freight transportation. This is not surprising. After all, the delivery of freight in river vessels from Rybinsk to Leningrad was 2-3 times as expensive as by rail, since the great number of locks and the small dimensions of the lock chambers prevented the utilization of large-capacity ships.

Great qualitative changes have taken place since the commissioning of the Volga-Baltic Waterway imeni V. I. Lenin.

Twenty years have gone by. Over the course of these years, the productive potential of steam navigation has grown steadily and has changed so much as to be unrecognizable. The fixed assets have increased more than three-fold, the basis being comprised of large-capacity self-propelled cargo ships that have replaced the small-capacity unpowered fleet. They accomplish more than 90 percent of the freight turnover (up until 1964 they had only carried out 9 percent). Two thirds of the powered fleet is comprised of ships for combined river and maritime navigation of which every other ship is used to transport goods abroad. The increase in the volume of goods transported on powered cargo vessels is not accidental. Practice has shown that, despite the considerable construction costs and operational expenses, it is more efficient to utilize such ships, since they possess superior technical and economic characteristics. The productivity of labor on these ships is greater than that of unpowered vessels by a factor of six. The turnaround time for these vessels on the Cherepovets-Leningrad section has been reduced by a factor of seven, while the time for cargo processing has been reduced by a factor of two. With the increase in the freight-carrying capacity of these cargo ships over the last 20 years, the total volume of goods transported has risen by a factor of 2.5 and the freight turnover by a factor of 5.2

The passenger fleet has also changed so much as to be unrecognizable. As a result, favorable conditions have been created for water tourism--an attractive vacation for workers on river vessels. Forming the basis of the passenger fleet are modern, comfortable displacement vessels and high-speed motor vessels of the Meteor, Raketa and Zarya type.

The considerable increase in transportation and the improvement in the utilization of the fleet could only have come about with the simultaneous development of port facilities. New cargo areas and a passenger complex (piers, a passenger terminal and a hotel) have been constructed in Leningrad, while landings and stopover points have been built along the route. The Cherepovets port has been rebuilt along with a number of piers for shipping companies and other clients. The fitting out of the ports with high-output loading equipment and specialized hoisting devices has made it possible to increase the level of integrated mechanization and reduce considerably the expenditure of manual labor on the loading and unloading operations. As a result, it has become possible to use high-speed methods for processing large-capacity ships. Despite the increase in the average cargo-carrying capacity of the transport fleet to 3,000 tons, the standard processing time has been reduce to 0.4 days. The volume of cargo operations in steamship ports has reached 62 million tons.

Shipping's industrial base has developed at a rapid pace. The total production volume of industrial enterprises has increased four-fold in these years.

The Neva Shipbuilding and Ship-Repair Plant has become one of the largest in the industry. Here modern large-capacity motor vessels and powerful tugs are built. Major overhauls, medium repair and routine maintenance are carried out here, and machine-industry products are turned out as well. The level of mechanization at the enterprise has reached 44 percent. A section of digitally controlled programmed lathes has been established, three Kristall gas-cutting machines with programmed control have been introduced and a computer center has been built and placed into service.

The problems of the social and economic development of the collective have been successfully solved here. Each year approximately 4,000 to 6,000 m^2 of living space are introduced. A swimming pool, art school and vocational school have been built. The House of Culture and a general educational school for 1,050 pupils serve as consultative centers of the Leningrad River Academy and the Leningrad Institute of Water Transport. All of this has made it possible to raise the educational and cultural level of the workers and reduce personnel turnovers.

The material and technical base of the fleet's Voznesensk Maintenance and Repair Base has been considerably consolidated. A modern dock, technically equipped shops and qualified personnel have made it possible to insure economic and technical servicing as well as the repair of motor vessels with a freight capacity of 5,000 tons.

The Cherepovets and Novoladozhskiy plants have grown into mighty shipbuilding and ship-repair enterprises of the ministry.

The commissioning of the Volga-Baltic Waterway and the restoration of the fleet have made it possible to reduce sharply the time necessary to deliver freight, to improve the effectiveness and the quality of the work of the entire transport system and cope with new mass freight volumes of iron-ore concentrate, pyrites, coal, apatite, construction materials and general and other kinds of cargo. As a result, 250,000 to 300,000 tons of freight are changed over from the railroad and 4,000 to 4,500 rail cars are freed up. The high-capacity fleet, suited for processing cargo, has proven to be irreplaceable in the transport of outsize industrial equipment: turbine impellers and various assemblies for chemical and metallurgical production.

Combined river and maritime transport, including the shipping of import and export cargoes, was organized in the new deep-water route's first year of operation. Cargo from the country's most remote inland areas began to be delivered without freighthandling in estuarine seaports using the most efficient method and at the lowest cost. Today cargoes from Cherepovets are transported to Rostok (East Germany), through the Saymenskiy canal to Finland, to the Baltic countries, to Bulgaria, from the ports of Western Europe to Iran, Italy, Greece and to the African states. In 1983, steamships visited 165 foreign ports in 20 nations of Western Europe, Asia and Africa.

The amount of capital investment in the industrial and social spheres is growing constantly. It has increased seven-fold in 20 years. More than 230,000 of living space have been constructed. As a rule, the families of river workers live in well-appointed individual flats. Houses of culture, schools, kindergartens and nurseries have been built.

The character of the river worker has completely changed over the course of these years. Working in the fleet today are highly qualified specialists who have mastered sea and river navigation. For the most part, they have secondary and higher special education.

These years for the steamship industry have become years of intense creative work, of a search for and the realization of internal reserves for improving the efficiency and quality of the work of all the links in the transport process.

The Shchekinskiy method of operating using a reduced number of crewmen has been introduced in the fleet, including onboard 90 vessels for combined river and maritime navigation. A system of route planning for foreign-trade vessels and a linear form of navigation have been introduced and cost-accounting services for the transfer of goods for foreign markets and the comprehensive servicing of the fleet have been established. An experiment in labor cooperation among the Leningrad transportation workers that was approved by resolution of the CPSU Central Committee is being introduced everywhere in the country.

Patriotic initiatives directed at extending the length of the fleet's between-service times and at putting the fleet into operational readiness during the winter period have been developed. The contract brigade system with the utilization of a coefficient of labor participation and payment for the final result has been extensively introduced. The level of the brigade form of labor organization at industrial shipping enterprises has reached 62.5 percent and

100 percent in loading and unloading operations. The brigade method of servicing has likewise become the predominant form in the passenger, roadstead and auxiliary service fleets. Experience gained in operating ships with substitute crews (63 vessels for combined river and maritime navigation were in operation in the 1983 navigational season) was widely popularized as was experience in using a unified program with the utilization of elements of a group contract and a coefficient of labor participation (the group of vessels serving the Vyborg-Sayma line).

For many years, the collective of the Northwestern Steamship Company has been in the vanguard of those competing for the fulfilment of their five-year plans ahead of schedule. The steamship company was awarded the Order of the October Revolution for labor successes in the Eighth Five-Year Plan; in the Ninth Five-Year Plan it was presented with the honorary title "For Labor Valor in the Ninth Five-Year Plan" and the Red Banner of the CPSU Central Committee, the USSR Council of Ministers, the All-Union Central Trade-Union Council and the Komsomol Central Committee with an entry on the All-Union Board of Honor of the USSR Exhibition of Achievements of the National Economy; and in the 10th Five-Year Plan it was awarded the Red Banner of the CPSU Central Committee, the USSR Council of Ministers, the All-Union Central Trade-Union Council and the Komsomol Central Committee.

The 11th Five-Year Plan, like all previous five-year plans, has been marked by the intense work of the collective. The task of the first three years of the plan with regard to freight turnover has been fulfilled ahead of schedule. More than 1 million tons of various types of freight in excess of the plan have been transported for industry, agriculture and construction, and profits and labor productivity in transport operations have been improved.

With great satisfaction, the steamship company's collective welcomed the resolution on the further modernization of the Volga-Baltic Waterway, in particular, with respect to preparing the foundation materials for the second line of the canal. This is one more manifestation of the concern of the party and the government for the development of river transport and for increasing its role in the economy's transportation service. The river workers of the Northwest reply to this concern with increased efficiency and quality in their work and the fulfilment of the planned tasks of 1984 and of the five-year plan as a whole.

Ye. Vasil'yev [Chief, White Sea-Onega Shipping Company]:

One can say without exaggeration that the commissioning of the Volga-Baltic Waterway imeni V. I. Lenin opened a new stage in the development of transport communication between the Northwest and the regions of the country's center, the Volga, the Urals and the southern portion of the country's European sector.

This new waterway made it possible to transfer from railroads to more economical water arteries a wide range of industrial cargoes, construction materials, fuel, agricultural products and freight for the agroindustrial complex.

Until the 1960's, the previously existing Mariinsk Water System was practically the only segment that prevented ships from entering the sea, primarily the ships of the combined river and maritime type which were already being used by the White Sea-Onega Steamship Company. Moreover, the steamship companies of the central basin which were being heavily reinforced with cargo-carrying motor vessels and large-capacity tankers were likewise deprived of the possibility to enter the route connecting the Volga, the Kama and the Moscow Canal to the internal waterways of the Northwest.

It is no accident that the freight turnover between the White Sea-Onega and Northwestern Steamship Companies on the old Mariinsk system in the last navigational season (through Vytegra) amounted to only 113,000 tons and that the percentage of cargo carried by our steamship companies only reached 1.6 percent of the total volume of freight transported by the river workers of Karelia.

The waterways of the White Sea-Onega Steamship Company at two points, Vytegra and Voznesenye, directly adjoin the Volga-Baltic, the modernization of which on the Vytegra-Cherepovets segment was concluded in 1963. The steamship company's collective was extensively prepared for the commissioning of the new artificial waterway. The fleet was reinforced with powered cargo vessels of the White Sea, Onega, Ladoga and Baltic classes which were used extensively for transporting cargoes on combined river and maritime lines from Arkhangelsk and Mezen to the ports of the Baltic Sea as well as on the Leningrad-Voznesenye segment of the Volga-Baltic Waterway.

The 1963 navigational season was the last in which cargo between Vytegra and Cherepovets was delivered along the Mariinsk Water System. A total of 81,000 tons of cargo of only three types was transported to points located within the area of the White Sea-Onega Steamship Company, while 32,000 tons of lumber were transported from points within the steamships's area to the central regions of the country.

As early as the middle of June 1964, the first motor vessels, Baltic-9 and Baltic-10, delivered iron ore concentrate from Kandalaksha to Cherepovets, passing along a complex route across the White Sea, Lake Onega and the White Sea-Baltic and Volga-Baltic Canals.

It had become possible to ship cargo on vessels of the combined river and maritime type of the White Sea-Onega Steamship Company to the ports of all the sea basins in the country's European sector. At the end of July 1964, the Baltic-18 motor vessel with a load of apatite passed from Murmansk to Baku, thus marking the beginning of scheduled runs without freight transfers along a route more than 5,000 km long.

The iron ore concentrate shipped to Cherepovets became the primary flow of cargo traffic that originated within the limits of the White Sea-Onega Shipping Company and traveled along the Volga-Baltic. Over the course of the Volga-Baltic's first year of operation, 65,000 tons of concentrate were delivered here. In order to fully develop this heavy flow of cargo along the Kandalaksha-Cherepovets line, they began to build specialized ore and oil vessels which could transport petroleum products on the return trip to Kandalaksha. A specialized mooring facility for transferring iron ore concentrate from rail cars

to vessels was placed into service in the port of Kandalaksha. Not far from Kandalaksha, workers began building an oil-storage terminal.

Under the complex conditions of developing the new route, 7.6 times as much cargo was shipped to points served by the White Sea-Onega Shipping Company and back in 1965 than in the last year of operation of the Mariinsk Water System.

Using the new waterway, the steamship company began to specialize in the transport of cargo employing a combined river and maritime navigational scheme that did not require transferral of the cargo. The shipment of goods for foreign markets began to assume a regular nature starting in the 1964 navigational season. In 1965, a trial run from Petrozavodsk to Piraeus (Greece) carrying lumber from Karelia proved the high efficiency of transporting foreign shipments to the southern basins using the Volga-Baltic Waterway. The Baltic-56 motor boat was operated for the first time in the Mediterranean basin in 1966-1967, thus beginning year-round service for the combined river and maritime navigation fleet. In the 1968 navigational season, eight of the steamship company's vessels were the first to be operated on the Western European-Iran line.

The intra-union transportation of goods from the steamship company's ports and back through the Volga-Baltic Waterway likewise developed at a rapid pace. In 1970, 1.2 million tons of various cargoes were shipped from the steamship company's ports and 800,000 tons were carried in the return direction.

One of the longest tourist routes, the Petrozavodsk-Astrakhan-Petrozovodsk line, passes through the Volga-Baltic Waterway.

In the years of the Ninth Five-Year Plan (1971-1975), the White Sea-Onega Steamship Company provided the greatest increase in freight turnover among all steamship companies of the Ministry of the River Fleet. During this period there was intensive development of cargo shipment along the Volga-Baltic Waterway, primarily by combined river and maritime navigation. The steamship company mastered the new freight flows of apatite concentrate from the specialized port of Pergub, industrial raw materials from the ports of Lake Onega and iron ore concentrate from Kandalaksha to the Urals. With the commissioning of oil terminals at Petrozavodsk and Kandalaksha, the scheduled shipment of petroleum products to Karelia and Murmansk Oblast began to be carried out through the Volga-Baltic Waterway. Over the course of the last 5 years, the volume of goods transported along the Volga-Baltic Waterway from the steamship company's ports has increased by a factor of 1.8, while the volume of goods delivered has risen by 24 percent. In 1975, about one-fourth of all the freight transported along the Volga-Baltic Waterway as well as that for export was delivered for enterprises and sent from enterprises located within the area of the White Sea-Onega Steamship Company.

The steamship company's collective has done much to improve the utilization of the Volga-Baltic Waterway. Its main service has been the mastery of the operation of vessels for combined river and maritime navigation. For mastering the transport of freight without transfer on internal and foreign trade lines, the captain of the motor boat "50 Years of Soviet Power," L.L. Khot'kin, was awarded the State Prize of the USSR.

In the Ninth Five-Year Plan, the steamship company's fleet was supplemented with motor boats of the Volga-Don type, which were designed for the delivery of construction materials from the enterprises of Karelia for the Volga region and Moscow.

The volume of freight transported along the Volga-Baltic Waterway continues to grow. In 1980, it increased 43 percent in comparison with 1975. The shipment of iron ore concentrate increased by 30 percent, apatite concentrate by a factor of 2, mineral construction materials and industrial raw materials by 35 percent and import-export freight by a factor of 2.2.

The commissioning of the Volga-Baltic Waterway placed new demands on the White Sea-Baltic Canal--it was necessary to increase the dimensions of the navigable channel. In the 10th Five-Year Plan began the modernization of the canal, the chief direction for which is the improvement of navigational conditions and the replacement of hydrotechnical structures. This makes it possible to increase the volume of iron ore concentrate shipped yearly from Kandalaksha to ports in the country's central regions and the shipment of coal, mineral construction materials and petroleum products in the return direction.

In the first three years of the 11th Five-Year Plan, the fleet of the White Sea-Onega Steamship Company continued to be reinforced with large-capacity motor boats of the Volga-Don type. The freight flows of paper from the Kondopoga and Segezha Cellulose and Paper Combines and apatite from Astrakhan were mastered. The shipment of cargo from points within the White Sea-Onega Steamship Company in 1983 rose by 28 percent in comparison with 1980 and amounted to 4 million tons, of which more than half was iron ore concentrate from Kandalaksha and Medvezhyegorsk. For the most part, the freight arriving was composed of petroleum products and mineral construction materials.

At the present time, construction of a second lock in the Sheksna hydrosystem is underway. Its commissioning will make it possible to increase the traffic-handling capability of the Volga-Baltic Waterway, which is important for increasing the volume of cargoes of iron ore concentrate from Kandalaksha, apatite from Perguba, mineral construction materials from the mines of Karelia as well as the amount of import and export freight.

The collective has adopted its own counterplan for the 1984 navigational season which provides for the transport of 4.7 million tons of freight through the Volga-Baltic Waterway; that is, 17 percent more than in the 1983 navigational season.

K. Korotkov [Chief, Volga United River Shipping Company]:

The Volga-Baltic has opened great prospects for the development of freight shipments from the Volga, Kama and Don to the Northwest and back as well as to points along the Caspian, Black and Mediterranean Seas.

In the 20 years the Volga-Baltic has been in service, the volume of freight transported from the Volga to the Northwest has increased five-fold, while in the opposite direction it has risen by a factor of 12.

As early as the 1965 navigational season, the transport of cargoes for foreign markets in vessels of the Baltic type from points along the White Sea to Greece and from Leningrad to Iran through the Volga-Baltic and along the Volga demonstrated the high effectiveness of and promise offered by these shipments. They continue to be developed at the present time as well.

Freight motor boats of the Volga-Don type belonging to the Volga United River Shipping Company are operating successfully on internal lines between Ulyanovsk and Leningrad, Perm and Leningrad, Rostov and Leningrad and on the Akhtubinsk-Leningrad-Petrozavodsk line. Among the first to master the Volga-Baltic Waterway were the Volga vessel operators. At the present time, practically all the commanders of large-capacity vessels have fully studied this waterway and know it well. The crews of Volga boats commanded by Captains S. I. Losukov, A. I. Driven', G. I. Pronichev, N. P. Arnautov, O. A. Kazakov and A. I. Kalyagin yearly achieve high indicators in the transport of cargo along the Volga Baltic Waterway.

The beauty of the northern landscapes attracts hundreds of thousands of tourists to the motor vessels that make the runs to Leningrad. In the 20 years of navigation along the Volga-Baltic, about 500,000 tourists have been transported from the cities of the Volga region. The steamship company, however, needs "M" class passenger vessels capable of going out on the Baltic Sea. This will make it possible to open new tourist lines connecting the ports of the Baltic region and the country's South which will attract an additional number of tourists to the Baltic region and southern krays and oblasts of our country.

The increase in the traffic-handling capacity of the Volga-Baltic Waterway imeni V. I. Lenin (with the supplementation of the steamship company's corresponding fleet) will make it possible to expand even wider the sphere of transportation and communication links between the industrial regions of the South, Central, and Northwestern European part of the country.

According to forecasts of the steamship company for the future, the freight flows proceeding along the Volga to the Northwest will amount to 4-4.5 million tons. Chief among them will be 2-2.5 million tons of Kuznetsk coal, 350,000 to 400,000 tons of Akhtubinsk salt, 300,000 to 600,000 tons of grain, up to 600,000 tons of Kama gravel to Arkhangelsk and 200,000 to 250,000 tons of vegetables and cucurbitaceous produce, machines and equipment.

According to our forecasts, the freight flows from the Northwest along the Volga will considerably exceed the volumes of one-way cargo. These are primarily iron ore concentrate, apatite, Karelian crushed granite, schungite, lumber carried onboard ships and others.

For this reason, the problems of mastering the transport of one-way and two-way cargoes will require an essentially new management approach to their solution.

It is necessary to accelerate the construction of the second series of locks on the Volga-Baltic, since the downtime of ships waiting for sluicing will rise sharply with an increase in the density of ship traffic.

It remains to increase the pace of construction of specialized ships which will make it possible to utilize them effectively in both directions.

It is necessary to apply efforts toward bringing the transloading complexes of the port of Medvezhyegorsk up to design capacity, providing them with the required number of specialized rail cars to carry apatite to transshipment; to complete the construction of the specialized port of Vazhina for the transloading of coal from river transport to rail as well as of the mooring facilities at the port of Kambark for receiving coal from the railroad and sending it out on ship; and to establish and provide technical support for the transport of nephelines from the Kola Peninsula to the plants of the Volga region and the country's South.

The solution to the questions which have been posed will make it possible to introduce fundamental changes into the organization of transport operations on the internal waterways of the country's European sector and will contribute to further improvement in the utilization of the river fleet in light of the decisions of the 26th Congress and the December (1983) and February (1984) Plenums of the CPSU Central Committee.

V. Permyakov [Chief, Volgotanker Shipping Company]:

The Volga-Baltic Waterway imeni V. I. Lenin has made it possible for the Volgotanker steamship company to carry out the transport of petroleum cargoes from points along the Volga in three directions: to the ports of Finland for export, to Kandalaksha for the needs of Murmansk Oblast and to points along the Volga-Baltic as well as to Petrozavodsk.

The first experimental run with a cargo of crude petroleum from Syzran to Finland was carried out in 1964. Today the volume of goods for foreign markets transported by the steamship company's fleet amounts to 1.87 million tons, including 1.6 million tons to the ports of the Baltic Sea along the Volga-Baltic Waterway. At the present time, the transport of export goods is carried out chiefly from Yaroslavl and Gorkiy as well as from Astrakhan and Volgograd to ports in Finland, Sweden, Denmark, West Germany, Poland and East Germany.

The transport of goods for export as well as in other directions through the Volga-Baltic Waterway is dictated by increasingly complex transport and economic ties and has become possible thanks to the arrival of a tanker fleet of the combined river and maritime navigation type from the shipbuilding industry.

Starting in 1963, tankers of the Volgoneft' class began to enter the steamship company. These were design-558 tankers with a cargo capacity of 5,000 tons. On the basis of these tankers, design-1577 tankers with a cargo capacity of 4,800 tons began to be built in 1968. These vessels are allowed to sail on the Caspian, Black and Baltic Seas and the Sea of Azov with certain limitations. Special hull reinforcements make it possible to use them in icy conditions as well. The double sides and bottom make it possible to pump out the cargo of oil without residue, to maintain the quality of the petroleum cargoes transferred and to practically eliminate fouling of water basins. Being as they are standardized, these tankers can transport all classes of petroleum products.

The tanker fleet insures a very high rate of speed for the delivery of petroleum cargoes, equal to the speed of delivery by rail, which is of particular significance in the transport of valuable petroleum products.

The costs and calculated expenditures for the shipment of export cargoes on ships of the combined river and maritime type without transloading is lower in comparison with rail and sea lines by 50 and 20 percent, respectively.

The transport of petroleum cargoes to the North began with the arrival of the Neftorudovoz-class vessels in 1968. These were designed to deliver petroleum cargoes from points along the upper Volga to Kandalaksha and iron ore concentrate from the Kola Peninsula to Cherepovets. Design-1570 oil and ore carriers which have a wider maritime range have been used in this direction since 1972.

In the 1983 navigational season, 40 vessels operated according to the group method on the Kandalaksha line, hauling 914,000 tons of petroleum products. Four oil and ore carriers transported petroleum products to points along the Black Sea. In order to improve the effectiveness of utilization of vessels of the combined river and maritime class, the design-1577 tankers and oil and ore carriers were used for internal deliveries before and after operating on their own lines. In addition to this, 11 oil and ore carriers were operated on the Black and Baltic Seas in the period between navigational seasons.

The delivery of petroleum cargoes to points along the Volga-Baltic Waterway, including transport to Petrozavodsk and Segazha, is being carried out using tankers of designs 1577, 558, R77, 866, 1553 and 1570. These are basically used for the needs of agriculture and the lumber industry as well as for the river fleet. Their capacity has reached 1.9 million tons.

In the last 10 years, the overall growth in the transport of goods to foreign markets as well as to Kandalaksha, Petrozavodsk and to points along the Volga-Baltic Waterway has amounted to 3 million tons, while it has amounted to 4.5 million tons since the Volga-Baltic Waterway began operating. In the future, it will increase at a rate proportional to the delivery of additional tonnage for transporting these cargoes. Plans have been made to increase the transport of cargoes to Kandalaksha by 500,000 tons.

For the transport of export cargoes, the fleet will be supplemented with design-630 tankers which will begin arriving as early as this year. They have fewer limitations than design-1577 tankers.

Transport on river and maritime lines, as well as to Kandalaksha, is an efficient method for the economy and insures a saving of transportation expenditures in comparison with other methods of delivering fuel.

It must be mentioned, however, that the indicator of gross productivity for the tankers used to transport the kinds of cargoes we have examined is lower than the average for steamships. For this reason, under conditions of constant increase in the volume of cargo transported along the Volga-Baltic Waterway and the White Sea-Baltic Canal, it is very important to increase the utilization of the fleet by improving the sailing conditions and by reducing the time spent on sluicing and processing cargoes at loading and unloading points. The

reduction in the gross productivity during the transport of export goods and the transport of goods to points along the Volga-Baltic Waterway is basically associated with the absence of goods for the fleet to carry on the return trips.

The development of the transportation of petroleum products to export markets as well as to Kandalaksha, Petrozavodsk and points along the Volga-Baltic has not been insured by the creation of the Volga-Baltic Waterway and the arrival of the fleet alone, but also by the development of an oil terminal industry and shoreline port-operational and technical servicing of the ships. In Kandalaksha and Petrozavodsk, for example, oil terminals have been built to receive petroleum cargoes from vessels. Shore industrial sections and operational repair bases are being developed in the Yaroslavl regional administration and a fleet operational repair base is being established in Volgorechensk, while an operational repair base is also being built in Gorkiy Oblast.

The composition of the fleet personnel is changing qualitatively. The level of their qualifications is improving, and this has made it possible to rapidly master the new waterway and the modern ships. The captain of the tanker Volgoneft'-268, A. P. Il'in, was awarded the State Prize of the USSR for his great contribution to the development of petroleum product transport on combined river and maritime lines.

The stable operation of the Volgotanker Steamship Company in the current five-year plan is determined to a great degree by the successful execution of transport operations along the Volga-Baltic, in which great credit is due the collective of canal workers who over the course of the last 20 years have labored intensely, insuring normal navigational conditions on this, the largest of artificial waterways.

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CHIEF ON IMPORTANCE OF VOLGA-BALTIC WATERWAY

Moscow RECHNOY TRANSPORT in Russian No 5, May 84 pp 12-13

[Excerpts from article by V. Klyuyev, chief of the Volga-Baltic Waterway imeni V. I. Lenin: "We Are Insuring a Reliable Route"]

[Excerpts] One cannot name many river routes similar to the Volga-Baltic which have seen a continuous rise in freight and passenger traffic from its first year up to the present. The volume of freight traffic on the Cherpovets-Vytegra section has increased almost eight-fold in comparison with the level in the last year of operation of the Mariinsk system. The canal's calculated design level of capacity was reached in 1978.

There have been 7 modern locks, 3 hydroelectric power stations, 3 spillways, 5 dams, 20 dikes and other structures built on the Volga-Baltic canal (a design of Lengidroproyekt). The dimensions of the navigable channels have been determined on the basis of a reference vessel with a cargo capacity of 2,700 t. In the first navigational season, however, ships of the Volga-Don class with a cargo capacity of 5,000 tons began traveling along the canal. In connection with this, the workers on the canal were given the task of not only mastering the new, complex hydrotechnical structures but also of improving and modernizing the equipment and deepening, widening and straightening the navigational channels. At present, these operations have not ceased.

One of the first problems solved was the training of qualified personnel. The future operators studied and accepted the installations, so to speak, in progress, as construction was still underway. A branch of the Leningrad River Academy was created in Vytegra. Here 125 hydraulic technicians were trained and received their diplomas for work as watch chiefs on the ship locks. Former workers on the Mariinsk system and young graduates of the Leningrad Institute of Water Transport came for engineering jobs.

Renovation of the waterway began immediately after it had been placed into service. In the period between 1964 and 1970, the high-level marks on the approach walls and on the working miter gates and their mechanisms on the downstream side of all the locks were raised, and 5 of 10 berths on the lock approaches were rebuilt. All of this together with dredging operations to deepen and widen the navigational channels made it possible to increase the depth by 0.35 m with respect to design depths as early as the 1967 navigational season and to create conditions for ships with an increased cargo capacity of 5,000 t to sail the canal.

The canal's locks have venturi-loop lock-filling systems, lock No. 6 having the highest pressure head in the country with the chamber being filled from under the raising and lowering gates. In the first years of operation, actual and laboratory studies were conducted jointly on the locks together with workers from the Leningrad Institute of Water Transport. On the basis of these studies, operational regimes were suggested for filling (and exhausting) the chambers with a minimum expenditure of time and calm, safe settling conditions for ships during sluicing.

While the workers were mastering the equipment, efficiency experts made many suggestions regarding its improvement. For example, the rebuilding of individual lock assemblies made it possible to improve considerably the performance of the lock's drive mechanisms for the gates and valves. The electrical circuits for the control mechanisms were then modernized and the reliability of the power supply to the locks was improved. At the present time, the locks of the Volga-Baltic insure the efficient and uninterrupted passage of the transport fleet.

Understanding the importance of increasing the waterway's traffic-handling capacity, the canal workers constantly seek out internal reserves and put them into service. A system of measures was carried out on the locks, for example, which makes it possible for boat pilots to orient themselves better within the lock structures. These measures also make it possible to speed up the passage of ships. These are directional signs, reference markers, towing-eye markers, indicators of the distance to the gates and flashing operating modes for the signal lights which inform the vessel operators of the lock's readiness for accepting the vessel. During no-load sluicing and when passing small-capacity ships, a time saving is achieved as a result of the accelerated filling of the chamber. At the heavier-loaded lock No. 7, where the main freight flow is directed from the upstream section to the downstream, successful use is made of a transit throughflow of water which makes it possible to accelerate by 5 minutes the exit of large-capacity vessels of the Volga-Don type from the chamber and by 10 minutes the exit of connected rafts (under low-water conditions, the effectiveness of this measure increases). Moreover, conditions for spacing ships and for ships to pass one another have been improved considerably due to the widening of the approach canals.

A considerable reserve for increasing river traffic lies in the lengthening of the navigational season on the internal waterways. The length of the actual working period on the Volga-Baltic Canal has been increasing from year to year, especially in the last five years. Over the first three years of the 11th Five-Year Plan, the duration of the navigational period on the heavily sluiced section of the Volga-Baltic has been 256 days on the average instead of the 201 days in the first years of operation. This has been achieved as a result of a great deal of purposeful work on the part of the collectives in the regions of the hydrostructures and of the waterway's technical sections. All the locks are now equipped with special devices that insure the reliable operation of the gates and valves under conditions when the air temperature is less than zero degrees and when there is floating ice. The navigable passage is enclosed with channel markers practically along its entire length and 150 "marker" signs are in operation. About 300 cigar-shaped winter-

time buoys have been placed on difficult segments. The operators continue to work intensely, understanding that the lengthening of the navigational season on the Volga-Baltic will create conditions for increasing the duration of the fleet's operation throughout the entire Unified Deep-Water System in the country's European sector.

It is necessary to mention the contribution of the collectives of the floating cranes and suction-tube dredgers and of the ad hoc work teams to the mastery and development of the Volga-Baltic Canal. In the first years, 20 suction-tube dredgers were operated on the new right-of-way. About 95 million m^3 of heavy sediment were extracted with the help of this equipment and deposited outside the limits of the navigational channel, which radically changed the sailing conditions and the appearance of the canal. The width of the navigational channel was increased from 40 to 80 m, on the greater portion of the route and the radius of curvature was increased from 400 to 600-800 m. In order to mark the direction of the navigational channels, more than 3,600 shore and floating indicators of the navigational situation were put in place.

In order to make the operations less expensive, the canal's builders refrained from shoring up the banks of the excavation and did not manage to completely cut down the forest tracts. For this reason, during the years of operation, the deadwood and flooded forests along the entire navigational channel were cut down through the efforts of the canal workers, and the banks of the deep excavation were reduced in gradient and shored up along a considerable length of the canal. Now the shores of the Volga-Baltic make the numerous tourists happy with their brilliant cover of vegetation.

With the commissioning of the Volga-Baltic Canal, large-scale operations to fundamentally improve the navigational conditions on the Svir and the Neva and to modernize the navigational situation on Lake Ladoga were carried out. The canal workers had to display a great deal of know-how and engineering skill and introduce a number of the latest achievements of scientific and technical progress in order to cope with these tasks. For example, in order to eliminate the navigational markers along the segment of the Neva that presented the greatest difficulties to navigation, the Ivanovskiy Rapids, they used a dredging technique suggested by the canal workers of the waterway's Cherepovets technical section. They suggested a technique of dredging in heavy soil using a system of suction-tube dredgers--sucker-rod and multibucket--and bottom-cleaning cranes with divers' stations. Such a combination of technical means made it possible to extract 997,000 m^3 of heavy sediments (morainic clay) including heavy boulders with a total volume of 15,000 tons. Over the last period, 35 one-way segments with a total length of 58 km were eliminated along the waterway, while limits on the speed of ship traffic were removed on 184 km of the navigational channel.

The canal workers of the Volga-Baltic were some of the first to use solar batteries and radio-isotope generators as power sources for light-signal devices and markers on Lake Ladoga. New technology was successfully employed on the canal maintenance fleet as well; for example, a portable shore-pipe to the suction-tube dredger with a delivery rate of 750 m^3/h. The use of this shore-pipe on sand-bar sections of the river and in lakes where floating shore-pipes

cannot be used due to surface turbulence provides for an annual economic saving of 25,000 rubles. The canal maintenance and auxiliary fleet engaged in waterway operations has changed qualitatively. Its working nucleus is made up of modern self-propelled diesel-electric suction-tube dredges.

The introduction of new and the improvement of existing technical means, the application of progressive forms of labor organization and the extensive development of socialist competition has made it possible to increase the labor productivity of waterway operations in 1983 by a factor of 2.8 in comparison with 1963 with a 220-percent increase in pay.

The Volga-Baltic is not only a waterway. Its water resources are also used to obtain cheap electric power as well. Over the last 20 years, three hydroelectric power stations have generated over 2 billion kWh of electric power. Large-scale modernization work has been carried out on them. In particular, the output of the Sheksna hydroelectric station was brought up to 84 MW after the installation of the hydraulic units in the second stage in 1974. At this facility, unique in the technical respect, the newest achievements of domestic power engineering have been introduced--systems of thyristor excitation of capsule generators, new designs for water-oil reservoirs, etc.

The mastery of the Volga-Baltic, the improvement of its hydrostructures and the betterment of route conditions have been carried out and continue to be carried out in close contact with the Northwest Steamship Line and scientific research and planning-and-design organizations: the Leningrad Institute of Water Transport, the Gorkiy Institute of Water Transport Engineers, the Special Design Bureau of Lengidrostal', Lengiproproyekt, Lengiprorechtrans, the Central Planning and Design Bureau and the State Central Design Bureau. The studies of the State Central Design Bureau, for example, made it possible to create an experimental system for automatic mooring and for moving the barge of the suction-tube dredger. They likewise made it possible to begin work on the creation of a long-chute attachment for the suction-tube dredger of the R-010 design and of straight-line method for interleaving the anchors on suction dredges of the 23-112 design.

It is necessary to mention those measures which have been most significant with respect to scope and effectiveness: for hydrostructures--the equipping of the locks with a system of devices to insure their operation under conditions of minimum temperatures, the introduction of accelerated modes of operation for sluicing the ships, progressive methods for repairing concrete using new materials, and a floating repair barrier with its own built-in pumps for pumping out the chamber; for work on the route and for the canal maintenance fleet--the year-round operation of electrical suction dredges and a method of repairing them by replacing specific units and assemblies without taking the entire dredger out of operation, the group operation of suction-tube dredgers with the execution of major dredging work on particularly heavy bottom soil, the contract method of servicing the suction-tube dredgers, the mastery of the slips constructed through the efforts of the technical sections, the introduction of improved cutters for the processing of heavy bottom soil using suction-tube dredgers, the electrification of the mechanisms on wide-cut trawl lines, etc.

The introduction of these designs provides an economic saving of 300,000 to 500,000 rubles per year.

The extensive development of work in the area of production-method improvement in which each sixth worker participates has contributed to the acceleration of scientific and technical progress. In only 20 years, 11,000 efficiency suggestions have been introduced with an economic saving of 2.7 million rubles. Activity in the area of invention has also been promoted in recent years. A total of 20 patents have been submitted from 1974 to 1984, of which 13 have received inventor's certificates and 10 inventions have been introduced. The honorary title of "best innovator in the river fleet" has been awarded to 41 individuals in the collective.

Simultaneously with the mastery and development of the Volga-Baltic Canal, intensive construction of living quarters and social and cultural facilities is underway in Vytegra, Cherepovets and in the settlement of Sheksna. More than 56,000 m^2 of living space have been placed into service as well as three children's centers for 330 children, two clubs for 420 persons, a hospital complex, schools and stores. The workers of the Volga-Baltic have made a considerable contribution to the development of the economy as well. Work with a total cost of 12 million rubles has been carried out within Vologda Oblast on various facilities through the efforts of the Cherepovets technical section and the Vytegra hydrostructure region.

In an effort to centralize the issuance of maps and manuals for internal waterways, a main editorial board for maps was created as an adjunct of the canal directorate, and the systematic publication of cartographic and navigational manuals for all the river basins was begun. Approximately 180 maps and manuals totaling 500,000 copies were published from 1970 to 1984. The publication of the 10-volume Atlas of the Unified Deep-Water System was completed in 1973, and maps of all the primary river waterways of the RSFSR were published. The publishing and editing work of the directorate of the Volga-Baltic in conjunction with the other basin waterway and canal directorates continues.

The Volga-Baltic is a transport artery on which the tendency for growth in the transport of economic freight will be maintained in the future. For this reason, the resolution of the CPSU Central Committee "On Measures To Develop River Transport in 1981-1985" provides for the construction of a second line in the Sheksna locks. This work is already underway. The laying of concrete in the foundations of this lock's structure began in late 1983.

9512
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DEVELOPMENT OF VOLGA-BALTIC WATERWAY

Moscow RECHNOY TRANSPORT in Russian No 5, May 84 pp 9-11

[Excerpts from article by A. Drygin, first secretary of the Vologda Oblast CPSU party committee: "The Volga-Baltic Waterway Is Working for Communism!"]

[Excerpts] Two decades have gone by since the opening of the Volga-Baltic Waterway imeni V. I. Lenin-- the largest hydrotechnical structure in the world. This canal connecting the Rybinsk reservoir with Lake Onega is 361 km long and extends completely across the territory of Vologda Oblast. It is difficult to overestimate the significance of this waterway for the country's economy and for the Northwestern Economic Region in particular.

The first years have already proven the economic benefit of its operation. Constructed on a high technical level and equipped with modern means of automation and remote control, the Volga-Baltic Waterway united the river and sea basins of the country's European sector into a single network. The transport of goods by a large-capacity fleet without reloading has lent significant advantages to river transport in mastering the volume of freight traffic in raw materials for the metallurgical and chemical industries as well as in lumber, petroleum products and construction materials. The time taken by vessels to pass from Cherepovets to Leningrad was reduced to two days. The cost of delivery in comparison with transport along the Mariinsk lock system was reduced by a factor of three to four. The feasibility of sea-going vessels traveling along a system of internal waterways from the Caspian and Black Seas and the Sea of Azov into the Baltic, White and Barents Seas contributed to increasing the volume of freight transported to foreign markets. River fleet vessels went out in the country's sea basins and a new economical form of traffic appeared--"river-sea."

The creation of the Volga-Baltic Canal exerted a considerable influence upon the development of the economy of Vologda Oblast and of the Cherepovets Industrial Center in particular. Located at the intersection of the deep-water river artery and a railroad, the city of Cherepovets secured good transportation connections with many regions of the country.

The material and technical base of river transport enterprises developed at an accelerated rate, and industrial ports and mooring facilities were constructed. As early as 1967 the industrial port of the Cherepovets Metallurgical Combine

was placed into service. With its 540-m berthing facility, the port is capable of accepting a vessel with a cargo capacity of 5,000 t. At the present time, its designed traffic-handling capacity has been exceeded by 20 percent. Ore from Krivoy Rog, iron ore concentrate from the Kola Peninsula and molding sand, limestone and scrap metal from a number of oblasts come through the port for the metallurgical industry. Industrial goods and rolled metal are sent out by river transport.

The production of mineral fertilizers developed rapidly in Cherepovets in the 1970's. The plant that had been built--today the Ammofos association--was designed based on the utilization of the waterway for contact with the raw-material bases. At the end of navigation in 1977, its industrial port with a 414-m berth entered service. It is located to one side of the waterway and has a 7-km access channel 3.2 m deep. Clam-shell hoppers provide for the complete mechanization of the loading operations. Through its port, the association receives iron pyrite from the Urals and apatite concentrate from the Kola Peninsula and sends the finished product--mineral fertilizers for the non-chernozem oblasts--along the waterway.

Fundamental changes have taken place at the enterprises of the RSFSR Ministry of the River Fleet since the Volga-Baltic Waterway has begun operation.

At the present time, the Cherepovets river port is one of the largest in the Northwest. The outbound freight turnover has increased more than 10-fold over the last 20 years. The amount of local and transit traffic is 12 million tons for just the first three years of the current Five-Year Plan, while the volume of loading and unloading operations amounted to almost 20 million tons.

A no less important role belongs to the port in the development of joint railroad and waterway transport. Lumber for transshipment arrives on the Northern Railroad from Arkhangel'sk Oblast and the Komi ASSR, while coal arrives from the Pechora Basin and the Kuzbass. Mineral construction materials from the pits of Kama, Karelia and Leningrad Oblasts arrive at the railway via the waterway. In last year's navigational season alone, almost 1 million tons of various types of freight were transferred from rail to river transport and more than 200,000 tons from river transport to rail.

High-output equipment with cargo capacities of 5 to 40 tons are in operation at the berthing facilities, and there are powerful modern technical and transport vessels for roadstead operations and local transport. In the 10th Five-Year Plan, 350 m of the south moorage wall have undergone major overhaul. A block of service and utilities buildings and a materials and equipment warehouse have been built since the beginning of the current five-year plan, while considerable resources have been appropriated for the construction of living quarters for the river workers. The reconstruction of the lumber berth, loading areas, shore facilities and intraport rail lines continues.

During the last decade, a number of shops at the Cherepovets shipbuilding and ship repair plant have been rebuilt. An integrated mechanization of operation has been planned for the new hull-construction shop and continuous production lines have been installed for the manufacture of hull parts and the assembly

and welding of flat and three-dimensional sections. In addition, a section was created for the preliminary processing of metal and the slip was rebuilt. This made it possible to make the transition to the construction of push-boats with an output of 1,105 kW (1,500 hp) and a barge with a cargo capacity of 3,750 tons. The fleet assigned to the plant operates on the internal waterways. In combined "river-sea" service, a portion of the vessels is used for the transfer of foreign cargo.

Moreover, it was pointed out at the December (1983) Plenum of the CPSU Central Committee that in transport more than anywhere else there are greater reserves and unused capacities which can be put into action in a short period of time. This pertains in full measure to the river workers of the Volga-Baltic as well.

Some of the vessels from the transport and local fleets are unable to cope with their assigned tasks. Each fourth vessel on the lumber roadsteads of Belozersk is processed with downtimes greater than the norm. Individual shops and pieces of equipment at the Cherepovets shipbuilding and ship-repair plant are run at less than full capacity. The downtimes for vessels at the plant and in the ports undergoing navigational repair are great. Violations of labor discipline among the river workers have not yet been overcome. Economic managers and party and other social organizations still have much to do in order that the activity of all labor collectives is at the level demanded by the times.

The development of the enterprises of the Cherepovets water-transportation terminal will also continue in the future. The construction of the fifth blast furnace, one of the largest in the country, is underway at the metallurgical combine. The demand for metallurgical raw materials will increase considerably with the start-up of this furnace. A two-sided pier with a 320-m moorage wall is being built to receive and process iron ore concentrate and limestone. The Belly Ruchey, mine is under construction within the confines of the Vytegra port, and a berth with a design capacity (for the first stage) of 2 million tons of limestone annually is being built to off-load the output of the mine. During the 1983 navigational season, 180,000 tons of raw material from Belyy Ruchney have unloaded and delivered to Cherepovets. Plans have been made for the future construction of an individual base within the plant's industrial port for receiving and processing the limestone which arrives by water transport.

Industrial capacities for the production of mineral fertilizers are being increased in the Ammofos association. Plans have been made to receive up to 900,000 tons of iron pyrite and 800,000 tons of appatite concentrate annually in the future and to send out 120,000 tons of finished products to consumers by means of the waterway.

The commissioning of the Volga-Baltic Waterway imeni V. I. Lenin opened far-ranging possibilities for improving the organization of Vologda lumber deliveries. The lumber goes to construction projects in Moscow and Leningrad, to the mines of the Donbass, to the Volga region and the country's southern oblasts as well as abroad. In the 1983 navigational season alone, the Vologdalesprom All-Union Association sent consumers 2.5 million m^3 of lumber materials on vessels and barges, of which 160,000 m^3 went to Sweden and Finland. The transport of lumber cargoes in ships through the port of Belozersk has increased by a factor of 5.2 during these years, while that through the port of Vytegra has increased by a factor of 18.

The improvement in transportation lines served the development of the lumber processing industries immediately along the Volga-Baltic Waterway. The Cherepovets Veneer and Furniture Combine increased its capacities. A wood-fiber wallboard plant was built in 1974 in the settlement of Sheksna. Located in the headwaters of the Sheksna hydrosystem, the plant has a mooring facility with cranes to unload wood and chips from ships. Industrial capacities for processing wood into chips and loading it into ships have been put into service at the Annensk Bridge mooring facility which lies within the boundaries of the port of Vytegra.

The role of the Volga-Baltic Waterway is significant in providing mineral construction materials for the oblast's construction industry. Mineral construction materials are delivered to large-capacity ships from the mines of the Kama Basin, Karelia and Leningrad Oblast. A portion of them is transfered to the Sukhona steamship fleet and is delivered via the Northern Dvina River system to the ports of Vologda and Sokol, while another portion is reloaded onto railroad cars for the internal regions of the oblast. The All-Union Cherepovetsmetallurgkhimstroy Association annually sends up to 800,000 tons of crushed stone, gravel and other materials from the Kirillov Quarry along river transport to Cherepovets and 600,000 tons to the construction organizations of the Sukhona Basin. Large amounts of bank sand are extracted by the port of Cherepovets for construction projects in the city and the region. A considerable portion of the sand is unloaded while underway for the purpose of constructing protective structures in Leningrad.

The contribution of the Volga-Baltic river workers to the development of agriculture and the realization of the USSR Food Program has been significant.

The construction of one of the largest plants in the Northwest for the production of combined fodder is concluding in the settlement of Sheksna. A specialized berthing facility is being built in order to unload grain from the ships and load the finished product. In addition to the primary freight traffic, petroleum products, agricultural machines, construction equipment and chemical and mineral fertilizers for kolkhozes and sovkhozes are shipped along the canal. Grain, vegetables and other agricultural products are also transported.

The successes achieved in mastering the artificial waterway are a credit not only to the workers of the fleet, ports and shipping companies. Behind them stands the great day-to-day work of the railroad men and workers of the hydrosystem. Considerable material and manpower resources have been invested in the maintenance and management of the canal and in the technical improvement of the hydrosystem's structures. The management of the Volga-Baltic Waterway and its subunits--the Vytegra and Sheksna regions of the hydrosystem's structures and Cherepovets engineering section for the waterway--constantly work on improving the navigation conditions along the Volga-Baltic right-of-way and maintain the necessary depths in the water areas of the port and the berths. More than 35.3 million rubles have been appropriated for these purposes in the period since 1964. In order to improve the canal's traffic-handling capacity, the waterway's dimensions have been increased to 4 m in depth and to 80 m in width along the entire waterway and the radius of curvature of the canal has been increased to 600 m. This has made it possible to satisfy 50 percent of the navigational turnaround in freight using ships with a cargo-carrying ca-

pacity of 5,000 tons. The total volume of dredging operations along the canal amounted to about 100 million m^3. Sections of the canal with an overall length of 15 km were opened to two-way ship traffic and the limitation on their speed was removed over a stretch of 91 km.

The measures taken to improve the canal's capacity and the intensity of fleet traffic make it possible to increase the volumes of freight annually. In the last year, 21.4 million tons of economic cargo were transported along the canal, which was 34 percent higher than its design (calculated) capacity. In accordance with Lengiprorechtrans studies, the volume of cargo traffic along the canal will grow to 30 to 38 million tons in the future.

In accordance with the resolution of the CPSU Central Committee and the USSR Council of Ministers "On Measures for the Development of River Transport in 1981-1985," the construction of a second lock in the Sheksna region of hydrostructures, the most heavily traveled region, was begun in 1980. The estimated cost of the facility is more than 40 million rubles, including 33.8 million rubles for construction and installation operations. More than 13 million rubles have been appropriated for four years of construction and 10.6 million for construction and installation work. The pace of construction is obviously insufficient, and this could lead to a failure to commission the installation by the deadline. The RSFSR Ministry of the River Fleet and the USSR Ministry of Transportation Construction must implement the necessary measures to accelerate the work and to provide the construction project with the material, manpower and equipment. A delay in the construction of the Sheksna lock will bring about a shift in the construction deadlines for the subsequent locks, and this will create additional difficulties in the operation of river transport.

An increase in the volume of freight transferred from rail to river transport and from river transport to rail in the Cherepovets system is being held up by the production capacities of the Cherpovets pier rail station. The USSR Ministry of Railways up until now has not proceeded with its renovation. There has not been the necessary persistence in solving this problem on the part of the RSFSR Ministry of the River Fleet, either.

In our opinion, it is necessary for the Ministry of the River Fleet to solve the problem of constructing a new transshipment port in Sheksna in the near future in an effort to develop rail-river transfers in the most efficient manner possible. This will make it possible to relieve the Cherepovets system of the transit cargo traffic on the joint rail and river lines and reduce the downtime of rail cars. This means that it will also be possible to increase the interest of the rail workers in transferring the freight to the rivermen.

In a word, there is a great future for the Volga-Baltic Waterway--this is only a milestone in its history of serving the economy. The labor collectives of river transport, like all workers in the oblast, unanimously approved the results of the February (1984) Extraordinary Plenum of the party's Central Committee and the election of the General Secretary of the CPSU Central Committee, Comrade K. U. Chernenko. They are filled with resolve to realize the resolutions of the December (1983) and February and April (1984) Plenums of the CPSU Central

Committee and the First Session of the 11th Convocation of the USSR Supreme Soviet, to increase the effectiveness of utilization of river transport and to satisfy more fully the demands of the economy for the transport of freight and passengers.

9512
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IMPORTANCE OF RIVER TRANSPORT OF AGROINDUSTRIAL PRODUCTS

Moscow RECHNOY TRANSPORT in Russian No 8, Aug 84 pp 2-4

[Editorial: "An Important Task for the River Workers"]

[Text] Each year the RSFSR river transport carries a significant amount of various agricultural products and freight for agriculture. The preparatory work carried out and the unstinting labor of the ship and shore enterprise collectives help in fulfilling the set quotas for delivering the diverse range of freight to its destination.

Year by year there has been an increase in the amount of the shipments of chemical and mineral fertilizers, combined feeds, motor vehicles and agricultural equipment, construction materials and lumber as well as oil product. During the 1983 navigation season, around 42 million tons of such cargo was carried.

The river transport workers are paying particular attention to the shipping of grain, fruits and vegetables, the share of which in the total volume of agricultural shipments is around 90 percent. During the navigation season of the fourth year of the 11th Five-Year Plan, in comparison with 1983, the volume of grain shipments is to increase by 6.3 percent, while chemical and mineral fertilizers will rise by 9.4 percent and combined feeds by 8.8 percent.

The collectives of the adjacent navigation companies of the Central and Northwestern basins are confronted with great tasks in the area of improving transport services for the requirements of agriculture for the transporting of fruits and vegetables. According to the preliminary requests of the shippers of Astrakhan and Volgograd Oblasts, during the 1984 navigation season, it will be necessary to transport over 220,000 tons of fruits and vegetables to the industrial areas of the Central, Urals and Northwest.

The plan for the economic and social development of river transport in 1984 envisages that one of the most important tasks in carrying out the Food Program is the fullest satisfying of the national economy's needs for the transporting of agricultural products with minimum transport losses.

Grain is the main new-crop cargo. The transport conveyor involved in delivering it must show particular smoothness and efficiency in all its elements from the field to the consumer. The navigation company collectives, in being a component part of this conveyor line, each year carry out extensive work to organize it.

Regardless of the significant delay in the opening of the navigation season, particularly on the rivers of the Central and Northwestern basins, the fleet and shore collectives, in endeavoring to make their contribution to carrying out the adopted Food Program, widely developed a socialist competition for the early and high-quality delivery of all cargo for agriculture and primarily fuel, fertilizers and seed grain for the spring planting.

In a short period of time, shipments were fully carried out, according to demand, for all cargo destined for the interior regions over the nation along the small, rapidly-shoaling rivers such as the Vetluga, Unzha, Upper Kama, Vyterga, Yug, Pinega, Konda, Tobol, Pit and others.

The total volume of agricultural shipments and freight for agriculture in the second quarter was over 16 million tons including 1.7 million tons of grain, 1.6 million tons of mineral and chemical fertilizers. The fleet of the Volgotanker [Volga Tanker] Shipping Company during this period transported 1.4 million tons of oil products for the riverine agricultural areas, including over 22 percent along the lateral rapidly-shoaling rivers.

In the second quarter, preparations were completed for the most crucial period in the auling of agricultural product which begins with the moment of mass harvesting. By this time, as a rule, the shipping out of the previous year's grain harvest from the southern oblasts to the Central regions of the nation has been completed. The elevators are ready to receive the new crop. The basic work of transporting the old grain crop, as in previous years, was carried out by the collectives of the Volga-Don, Volga United, Western Siberian, Ob-Irtysh United, Belyy and Vyatka Shipping Companies. During the second quarter they transported more than 1.2 million tons of grain.

One of the main conditions for successfully organizing the transporting of the new-crop agricultural freight is the prompt and high-quality preparation of the transport fleet. For the second year, the navigation companies have successfully carried out the program adopted by the collegium for carrying out major overhauls on the diesel vessels with a cargo capacity of 2,000 tons for employing them in grain transporting and in addition unitized major overhauls are being carried out on the entire self-propelled small-tonnage transport fleet which has been in operation above the established service life.

Over the previous period (1983-1984), unitized repairs were carried out on 33 small-tonnage dry cargo vessels, maintenance repairs were carried out on 43 of the 866-design tankers and major overhauls on 77 2,000-ton vessels.

For transporting grain in all the river basins of the RSFSR during the 1984 navigation season, around 600 transport vessels, predominantly self-propelled, have been prepared, including the diesel cargo vessels of 5,000 tons, with a total cargo-carrying capacity of up to 1.2 million tons.

Some 140 diesel vessels with a tonnage of 600-700 tons each are being employed in shipping tomatoes and watermelons out of the riverine points of Astrakhan and Volgograd Oblasts and this is virtually all such vessels on the balance sheets of the adjacent navigation companies.

A high-speed integrated line manned by 30 vessels of the "Katamaran" and "Okskiy" class has been established for delivering tomatoes and watermelons to Moscow and destinations on the Upper Volga.

While in the previous navigation season, fruits and vegetables were transported by just two specialized vegetable transports (seven experimental trips), in 1984 eight such vessels are already in operation.

The basic distinguishing features of the vegetable transports are that they employ an air conditioning system which maintains the required temperature and humidity conditions in the cargo holds as well as a 5-fold air exchange. A flexible bulkhead divides the hold into two independent compartments with a temperature difference of up to 10° C and this makes it possible to ship in them simultaneously fruits and vegetables of a varying degree of ripeness.

The hold of a vegetable transport can carry 1,200 containers or 500 tons of tomatoes in boxes. The basic factors helping to improve the quality of the product transported in such vessels are the sorting of the product delivered for shipping in accord with the established standard, the possibility of using special containers for transporting the product and the use of an industrial air conditioning system in the cargo holds.

The vegetable transports are a promising class for the fleet and in time they will replace all the vessels presently employed in transporting vegetables and melon crops. For now, during the period of the mass delivery of fruits and vegetables for transporting, we must additionally employ cargo diesel vessels with a capacity of 2,000 tons and nonself-propelled tented barges of 950 tons.

Operating experience indicates that in preparing the transport fleet for shipping agricultural products, many shortcomings have been made. In certain, particularly the adjacent navigation companies of the Central and Northwestern basins, after completing the work in the early spring navigation season on the lateral rivers, the technical state of the grain tonnage in a number of instances has not met the established standards and requirements. The special fleet inspections for its suitability for taking on agricultural freight have at times been conducted formally without the subsequent, compulsory carrying out of the required overhauls.

In 1984, in accord with the measures approved by the MRF [Ministry of River Fleet] Collegium to carry out the Food Program, at all the ship repair enterprises and in the ports close to the loading points, for readying the vessels for transporting grain cargo, fruits and vegetables, 34 specialized areas and 41 comprehensive brigades have been organized. For this reason for reducing fleet stoppages it is essential to have the precise organizing of work by these subdivisions in overhauling the fleet.

Along with preparing the fleet for mass grain shipments, extensive work has been done by the collectives of the basin route and channel administrations which each year, upon the orders of the enterprises in the agroindustrial complex, carry out a significant amount of dredging and excavating. Just in April-May of the current year, upon the requests of the procurement organizations, work was done to clear and deepen the approaches to ten piers of elevators and grain

receiving points. The amount of this work was over 0.2 million m^3. When necessary this work should also be promptly be carried out in the remaining portion of the navigation season.

In accord with the measures adopted by the MRF Collegium, the navigation companies and major ports carrying out the basic amounts of agricultural shipments have set up operations groups to organize the prompt movement of the fleet and processing. The integrated brigades concerned with the processing of this type of fleet in the brigades have been staffed with skilled specialists.

The task for all levels of workers is to organize a precise rhythm for the transport conveyor line in shipping the new crop products.

Regardless of the great work carried out by the MRF to additionally attract grain cargo to river transport shipments, the volume in recent years has remained virtually on the same level.

One of the main reasons impeding a further increase in the amount of grain shipments by river transport, in our view, is the poor development and slow reconstruction by the enterprises of the RSFSR Minzag [Ministry of Procurement] on the river side grain receiving facilities at the vessel unloading points.

As is known, the total productivity of the Minzag piers for the unloading of grain within the limits of the adjacent navigation companies of the Central and Northwest is almost 2-fold less than the total productivity for loading by the riverside elevators and grain-receiving points. At a majority of the piers they employ obsolete types of equipment.

The MRF measures to implement the Food Program provide for the introduction at the piers of Kalach, Saratov, Perm and Kazan of a new process for transloading grain from river to rail transport employing pneumatic grain loaders with a productivity of 150 tons an hour. All the units have been installed and are working successfully. Unfortunately, the RSFSR Minzag has been very slow in reconstructing its pier and scale facilities.

An important condition for increasing the amount of grain shipments by the river fleet is the coordinated work of the related types of transport at the transloading points. Due to the delayed delivery of railroad cars to the riverside elevators for carrying away the grain delivered on the river vessels, the fleet has been forced to stand idle for a long time while waiting to unload.

The disproportion in the total productivity for loading and unloading grain at the procurer piers, the lack of coordination in the operation of the interconnecting types of transport as well as the delivery and dispatch of grain by the oblast grain products administrations by assignment to the riverside points without considering their capacity for unloading have caused additional unjustified stoppages of the grain tonnage. Thus, in the 1983 navigation season, such stoppages at the piers of the RSFSR Minzag were 1,762,000 tonnage-days and this was the equivalent of taking out of operation 11 cargo diesel vessels of 2,000 tons each for the entire navigation season. The grain tonnage was also processed unsatisfactorily at the piers of the Yaroslavl, Gorkiy and Perm Oblast grain products administrations.

Little has changed in the 1984 navigation season. In May alone, the above-planned stoppages of grain tonnage at the piers of the Gorkiy and Perm administrations were, respectively, 81,700 and 63,900 tonnage-days.

The modern self-propelled cargo vessels of 5,000 tons, with the existing productivity for processing at the piers of the procurers, are forced to stand idle more than 60 percent of the time at the loading and unloading points and this leads to great losses of their shipping capacity. Many piers in terms of their design and depths on the approaches to them are completely unable to receive and process vessels of such tonnage.

The navigation companies and ports and the respective main administrations of the MRF must increase the demands placed on the pier owners for eliminating the existing shortcomings and accelerating their reconstruction.

At the height of the summer, when the tomatoes and watermelons are beginning to ripen, there is no more important cargo for the river workers. During this crucial period, the efforts of all the workers involved in shipping are aimed at ensuring the complete and prompt shipping of all products delivered for shipment.

Due to the unstinting labor of the ship crews and shore workers, during the 1983 navigation season, tomato and watermelon shipments were carried out in a more organized manner. For the first time they were 251,000 tons.

In analyzing the results of the 1983 navigation season, one must also remember the shortcomings and unresolved problems. The faster these are eliminated the greater the guarantee that river transport will successfully ship the increasing amounts of vegetable and melon products.

As is known, in this conveyor line it takes around 25 days for the fruit and vegetable products to move from the field to the store. Of this time, 8-10 days are spent on river transport which delivers the cargo over a distance of more than 3,000 km. For accelerating the transport of agricultural products, the river workers have organized the non-stop movement of vessels. The diesel vessels carrying tomatoes and watermelons are let through the locks out of turn, on equal basis with passenger vessels. The implementing of a number of organizational and technical measures has made it possible for the MRF over the last 10 years to thrice reduce the guaranteed delivery time and thereby increase the responsibility of transport to the shippers and recipients.

Along with the measures being undertaken to shorten the time required for river transport to deliver the product in the aim of maintaining product quality, the procurers and the trade organizations must seek out ways for shortening the time these products take to move from the field to the vessel and from the vessel to the store.

One of the chief measures helping to increase the capacity of the fleet and preserve the fruits and vegetables is the broad use of containers for transporting vegetables under a through system from procurer to store shelf. In recent years definite positive shifts have been achieved in this area. During the 1983 navigation season, the procurers shipped 63,400 tons of watermelons in the TKB-67 type containers and this was 65 percent of the total amount. Experimental

shipments of tomatoes in containers have also been made. The TKB-90 special container has been judged by the USSR Gossnab and the USSR Minplodoovoshchkhoz [Ministry of Fruit and Vegetable Industry] as suitable for tomato transporting and has been recommended for introduction. The dimensions of the container are multiples of the dimensions of the wooden boxes in which the tomatoes are shipped and also of the hold dimensions of the specialized vegetable transports. Each container holds 32 boxes with tomatoes with a total weight of 416 kg.

The use of vegetable containers has made it possible to significantly accelerate the loading of the vessels, to reduce the number of workers required for cargo operations by 2- or 3-fold as well as abandon escorts. Most importantly, such a method of transporting eliminates numerous reloadings of the products from the field to the store and ensures its preservation and marketable appearance.

The main factors impeding the introduction of containers in the transporting of fruits and vegetables are the lack of specialized piers with container areas and appropriate equipment as well as the insufficient number of containers themselves.

The future significant increase in 1985-1990 in the amount of tomato and watermelon procurement in Astrakhan and Volgograd Oblasts requires accelerated construction of piers and increased container production.

The RSFSR Minplodoovoshchkhoz, Rosportrebsoyuz [RSFSR Union of Consumer Societies] and the MRF have issued the Joint Order "On the 1984 Shipments of Watermelons in Box Pallets by River Transport and Tomatoes in Vegetable Transports." Quotas have been set for the amount of watermelon and tomato shipments in containers. Specific measures have been outlined to prepare the piers and organize around-the-clock processing of the vessels at the loading and unloading points as well as for promptly returning the vegetable crating and containers. The order has outlined the duties of all participants in the vegetable conveyor line and now its precise and prompt fulfillment is required.

At present, tomatoes and watermelons are being dispatched by 49 points, including 44 in Astrakhan Oblast and 5 in Volgograd Oblast. Of the 49 piers, only 7 have vertical reinforced concrete walls while the remainder are half-flooded old vessels, planking on wooden and metal pilings, prefab wooden trestles and the natural shore. Only the piers at Olya and Biryuchki are equipped with shore cranes, at 15 piers there are floating cranes leased from outside organizations while all the others are equipped either with obsolete-design conveyors or very simple troughs and chutes for loading the vessels. Rosportrebsoyuz, the RSFSR Minplodoovoshchkhoz and the RSFSR Ministry of Agriculture which are in charge of these points must accelerate the reconstruction of the existing mechanized piers and build new ones.

There are major reserves for increasing the amounts of fruits and vegetables shipped in their organizations which can be realized by accelerating the processing of the fleet at the departure and destination points.

There are intolerably great stoppages of the ships in loading and unloading tomatoes and watermelons. Thus, at the piers of the procurement bodies in

Astrakhan Oblast in 1963, of the 714 vessels arriving to take on fruits and vegetables, 514, or 73.4 percent, were processed with delays above the established norms and an overall above-planned stoppage of 518,000 tonnage-days. Merely by eliminating these stoppages it would be possible to transport an additional over 12,000 tons of fruits and vegetables. Rosportrebsoyuz and the Minplodoovoshchkhoz must carry out the necessary measures to improve the organizing of the loading of vegetables and prevent the above-plan vessel stoppages.

The situation is no better with the unloading of fruits and vegetables from the boats at the destinations. The reasons for the above-planned fleet stoppages lie in the insufficiently high level of organizing cargo operations, uncoordinated actions of the cargo recipients and the arrival points and the unsatisfactory hauling away of agricultural products from the port piers by the fruit and vegetable depots. As a result, the above-plan fleet stoppages at the unloading piers during the last navigation season were 471,000 tonnage-days and this is the equivalent of losing a total of 10,000 tons of fleet-carrying capacity. Vegetable tonnage is poorly handled at the Gorkiy, Moscow South, Kazan and Cheboksary ports.

Significant reserves for increasing shipments each year are underutilized due to the failure to observe the established technical standards for loading the fleet by the shippers. In 1983, 392 vessels, or 55 percent of the total fleet delivered for loading, in Astrakhan Oblast left underloaded, the total amount of which was 33,900 tons. In transporting they utilized a significant number of surplus vessels which are so essential during this period for transporting the other national economic freight, including grain.

The cargo dispatchers and recipients must implement the designated measures to prevent above-plan stoppages at the fruit and vegetable loading and unloading points as well as to observe the technical ship loading standards. This is an essential reserve for increasing the shipments of fruits and vegetables.

For improving the organization of the shipping of agricultural products, a great deal should be done by the collectives of the navigation companies and ports. All possible measures must be taken to satisfy the 10-day and daily requests of the shippers and to harden up supervision over the correctness and quality of loading the ships and the promptness of their processing. The shippers and recipients must be given the necessary aid more energetically and steadily in working out and introducing progressive methods for cargo handling jobs and they must promptly be provided with floating cargo handling equipment.

One of the basic directions in realizing the reserves should be a comprehensive socialist competition among the workers of the related types of transport as well as the transport and procurement workers. Coordinated actions by these related workers should be the basic lever in mobilizing the collectives to reduce fleet stoppages.

The dispatcher workers of the ports and navigation companies have a major role to play in organizing the shipments. Dispatcher control over fleet operations should be subordinate to the main goal of ensuring the rhythmical operation of all elements of the transport conveyor line on a basis of high-quality 10-day and daily planning of fleet and port operations.

The efforts of the dispatchers should be focused on strictly carrying out the traffic schedule and the fleet processing standards, disclosing the real amounts of agricultural products delivered for shipment, ensuring the effective and rational placement of the vessels at the loading piers and strict control over the dispatch of the fleet considering the capacity of the unloading points and the movement of the fleet along its routes. The dispatcher personnel must maintain constant contact with the command of the vessels engaged in hauling agricultural freight and constantly provide help in resolving arising questions.

Ensuring the prompt and high-quality hauling of agricultural products from the new crop will be a substantial contribution by the river workers to carrying out the Food Program outlined by the party.

10272
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UPDATE ON KLAIPEDA-MUKRAN FERRY PROJECT

Moscow MORSKOY FLOT in Russian No 5, May 84 pp 14-15

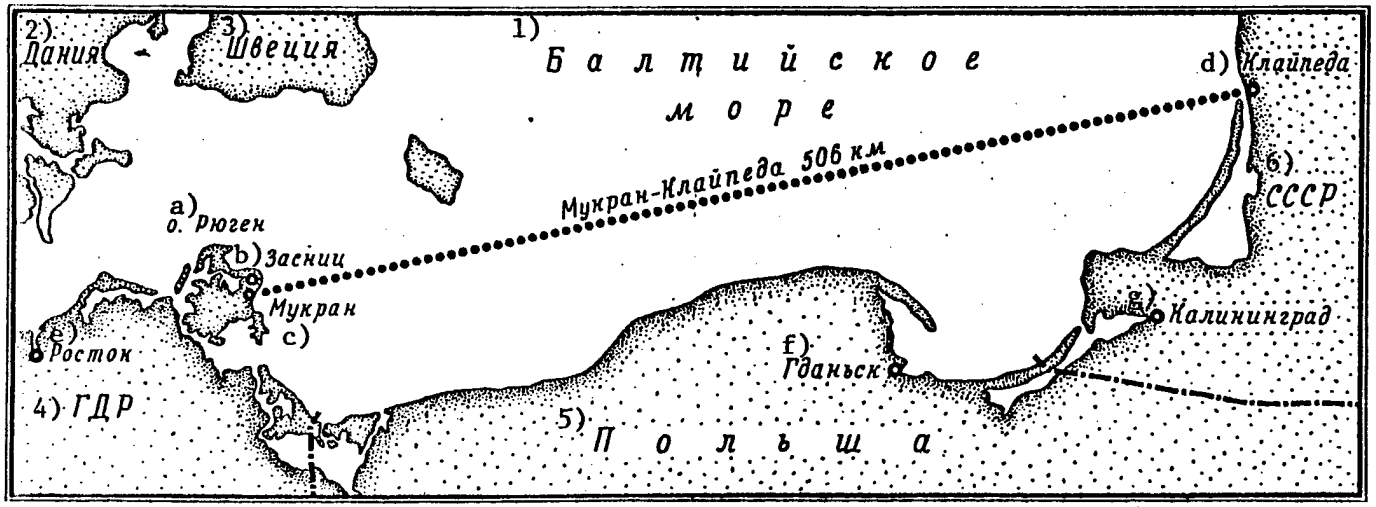
[Article by M. Gavrilenko (Soyuzmorniiproyekt): "The Klaipeda-Mukran Ferry Crossing"]

[Text] In the last few years, in the cooperation of the CEMA member-countries there has been an intensification of the orientation toward solving the greatest problems which are of primary importance for the development of the national economy, ensuring its material resources and their fastest delivery from manufacturer to consumer. In accordance with the provisions of the Comprehensive Program for Further Intensification and Improvement in the Cooperation and Development of Socialist Economic Integration of the CEMA Member Countries, a long-term target program of cooperation (DTsPS) in the sphere of transport was developed and is being implemented. The corresponding agreements were signed and are being put into effect.

The problem of making the transport of goods between the CEMA member countries more efficient holds one of the leading places. An important role in this is that of rebuilding and technical reequipment of the railroad lines, which encompass a number of routes from East to West. In the Soviet Union and the Polish People's Republic, the line from Vladimir-Volynskiy (USSR) to Katowicz (PNR) is already in operation, and work has begun on rebuilding the main part of the Hungarian railroads, along which approximately 80 percent of the international transport is carried out. Mainlines are being developed which will make it possible, without reloading, to supply freight from the USSR railroads to Hungary and the GDR.

To increase the efficiency of transport of the ever-increasing freight flow volume between the USSR and the GDR, the governments of the two friendly states came to terms on organizing railroad-sea ferry connections between Baltic ports. The freight transport volume on ferries (according to an estimate for 1990) will be 5.3 million tons. Great attention was paid to choosing the points for construction of shore structures for the ferry complex on both the Baltic shores, as well as to determining the types of ferry vessels.

On the GDR territory, the choice of the point was decided unequivocally--Mukran. Selection of the point on the eastern shore of the Baltic drew the attention of specialists from many scientific research institutes and design institutes in our country.



1) Baltic Sea; 2) Denmark; 3) Sweden; 4) GDR; 5) Poland; 6) USSR.
a) Rugen Island; b) Sassnitz; c) Mukran; d) Klaipeda; e) Rostock;
f) Gdansk; g) Kaliningrad.

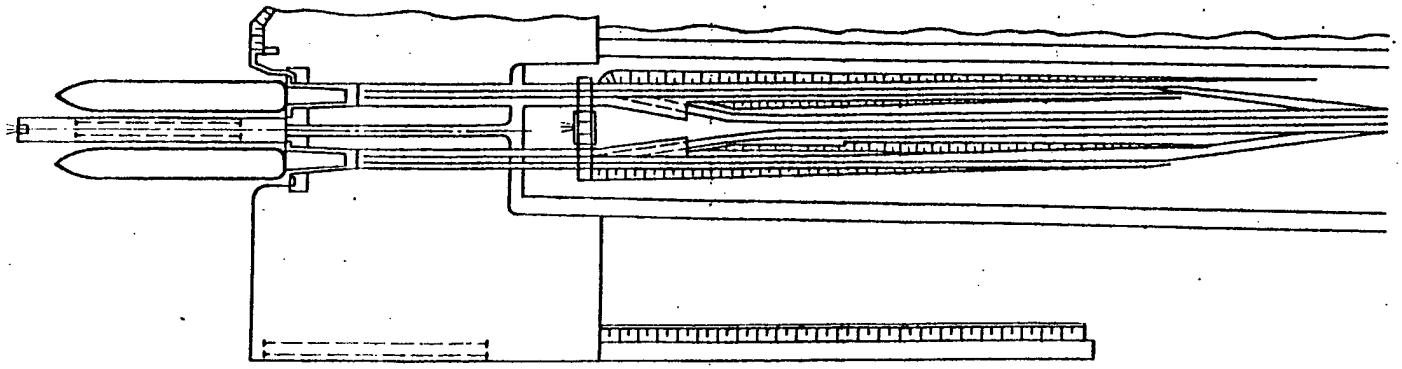


Diagram of the shore structures for the ferry crossing at Klaipeda.

When comparing the variants of freight transport on ordinary and specialized ships (container carriers and ro-ro vessels), the designers came to the conclusion that delivering goods in railroad cars without reloading gives the highest effect, if it is implemented for a short distance. Tallinn, Riga, Ventspils, Klaipeda and Kalinnigrad were examined as possible points for the construction. As a result of calculations, it proved hors-concours to be the port of Klaipeda--the shortest distance from all the accessible points. At the same time, the length of the round-trip run is determined as 48 hours. The assigned volume of transport can be carried out by six ferries with a car capacity of 103 units.

Development of the plans and construction of the shore complexes and ferry vessels, having no analogy in world practice, was commissioned to the Ministry of the Maritime Fleet and the Ministry of Railways on the part of the Soviets and the Ministry of Transport on the part of the GDR.

GDR specialists, drawing in soviet specialists from the Leningrad and Baltic TsPKB [Central Planning and Design Office], were entrusted with drawing up the plan for a new type of ferry and metal structures for the bridges connecting the shore complex with the ship. Soyuzmorniiproyekt and its affiliated branch, Kaspmorniiproyekt, drawing in specialists from the Lithuanian Industrial Design Commission, were commissioned to draw up the plan for the marine part of the ferry complex. Planning of the railroad terminal, including the station at the ferry terminal, with its receiving, shunting and alignment parks, was entrusted to the Lengiprotrans Institute.

The designers were faced with involved problems: to position the ferry complex so that, in the process of construction and operation, the environment would not be affected adversely, and there would be no interference with the existing intensive shipping operations. It is well known that the navigable canal for the commercial and fishing ports at Klaipeda is at the same time a channel connecting the Kursk bay with the Baltic Sea, and also serves as a channel for the migration of fish, particularly of such a valuable type as Baltic eels.

Specialists from the USSR Academy of Sciences and the Lithuanian SSR Academy of Sciences, as well as various departments, whose interests were affected by the construction project, were drawn into the search for the optimal solution, taking into consideration the ecological conditions.

The marine part of the complex will consist of a pier 210 meters long and about 30 meters wide, to which ferries and large ro-ro vessels can be moored on both sides, as well as the necessary devices and services for technical service.

All this creates the possibility for full-value service for the vessels and highly productive utilization of the shore equipment.

The production process control system makes provision for the use of modern computing and duplicating equipment, reciprocal information from both the participants in the transport and those in related organizations and also the exchange of information between the administrations of the complexes in Klaipeda and Sassnitz-Mukran and the ferries at sea.

The ferries which will be used on the Klaipeda--Sassnitz-Mukran line are double-decked vessels over 190 meters long and over 26 meters wide, with a draft slightly over 7 meters and displacement of over 22,000 tons. The power unit will have four diesels with 3600 h.p. each, as well as the necessary auxiliary means of power supply for the vessel. Comfortable cabins are being provided to accommodate the crew and passengers, totaling 54 persons. Sports facilities with equipment are specified for the crew's relaxation.

The ferries will work strictly according to schedule, and moreover, the ferry's anchorage time for all operations, including separating the cars, rolling them out and removing them to the alignment park, supplying new chains of cars from alignment park to the ferry and securing them, filling out the freight documents and observing the customs formalities, should not exceed four hours. It should be noted that this is the first time that such a short period to process a ferry with a capacity of 103 four-axled cars has been outlined.

Experience in the work of the ferry-railroad-sea crossings in operation in the USSR and the first international crossing from Il'ichevsk to Varna confirms the fact that to select a full shipload of cars at the railroad-ferry station, there is a non-decreasing circulating pool of cars, 2.5-3-fold exceeding the number of cars drawn into the chain to roll onto a specific vessel.

At the same time, the greater the car capacity of the ferry, the larger the number of cars taking part in the shunting to make up the chains of cars.

To select chains for a ferry of the "Geroi Shipki" type, according to the calculations of Kiyevgiprotrans, there should be at the Il'ichevsk Ferry station a circulating pool of cars of 250-300 units, corresponding to the multi-kilometer marshaling yard, with highly mechanized shunting operations. Unfortunately, these calculations were not put into effect.

In this case, the imbalance of the arriving and dispatched shiploads of cars shows up. For example, a ferry of the "Geroi Shipki" type takes on board 108 units, but arriving components are formed from 50-60 cars. The increased holding capacity of up to two and more trains leads to an accumulation of cars at the station and formation of multi-kilometer marshaling yards to accommodate all the cars taking part in the formation of the chains.

An increase in the holding capacity of the ferries does not always lead to a rise in the turnround capacity of the ferry complex. Losses of time in processing the ferries increases the anchorage time of the vessels so much that the transport process is disturbed.

Realizing the complications that arise when transferring cars with valuable national economic goods from one type of transport to another with such a large capacity of the ferry to operate on the line between Baltic ports, Soyuzmorniiproyekt set out to develop a plan to organize and administrate the operations of the ferry complex. This will make it possible, before putting into operation the basic construction of the underway complex of the ferry crossing, to organize personnel training for the operations.

The port workers, railroad workers and seamen, in advance, before the start of work, can carry out combined measures to ensure processing the ferries in the assigned flow. It should be noted that the Main Administration of Traffic of the MPS [Ministry of Railroads] does not attribute proper significance to modern-day development of the regulations and norms for work of the Klaipeda-ferry station, inadequately evaluates the innovation of a variant for processing the ferry on two levels. The proposal to include the MPS Central Scientific Research Institute in the joint development of the plan to organize and administer the operations of the interdepartmental-international complex wa rejected by the MPS.

It is important to prepare the shore projects before the completion of construction of the first ferry, which will put out for trial connection with the shore complexes at Mukran in mid-summer, and in Klaipeda--autumn of 1986.

It is expected that the international ferry crossing will go into operation in autumn of 1986 and by mid-1989 will be at full strength.

12151
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IMPROVEMENTS, PROBLEMS IN KHOLMSK PORT OPERATIONS

Moscow MORSKOY FLOT in Russian No 5, May 84 pp 21-22

[Article by V. Kukin, chief of the Kholmsk Port: "Solving Problems of Interaction..."]

[Text] Included in the composition of the Kholmsk Transport Center are the Kholmsk railroad station, a motor vehicle transport enterprise and the affiliated branch of the Vanino office of the All-Union Association Soyuzvneshtrans. The Kholmsk port is the base organization of the transport terminal.

To direct the work of the transport terminal, a coordination council was set up, which plans its coordinated work for the forthcoming week, and then analyzes the results and draws conclusions from the joint activity. A work group carries out daily direction of the interface workers' operations.

To improve the interrelations of the transport workers, single dispatcher shifts were set up, which conclude agreements every year on comprehensive socialist competition. The results of the competition are summed up quarterly, and the information on this is published at special stands.

Under the conditions of the competition among the dispatcher shifts, the indicator of fulfillment of the monthly goal for processing cars is included, and the best shifts are awarded a bonus from the port funds.

Measures were carried out to improve the use of the port's production capacities and of the railroad station. An enclosed hangar has been put into operation. The car rearrangement is now carried out in any weather. A new railroad siding constructed on the port territory has made it possible to implement receiving of goods from the ships directly into the cars.

Berth No 8 was renovated at the port, 2 warehouses were built, the automatic loader stock was increased by 56 units, and work is being done to expand the port's territory.

In five years, the transport workers have considerably increased the production volume and have achieved an improvement in the qualitative indicators of the work. For example, the volume of materials handling work in the port increased by over 700,000 tons, of transfer by the motor vehicle enterprise--by 48,000 tons, and of goods dispatched by the railroad station--by 327,000 tons.

The indicators for processing ships and cars have improved considerably. The total layover time of the transport fleet per ton of processed goods has been reduced by 17.5 percent, and of the unproductive idle time for ships--by 18.5 percent. The idle time for cars subject to freight operations has been reduced and the static load per car has increased by 12.5 percent, and hundreds of cars have been freed.

In accordance with the results of the All-Union Socialist Competition, the collective of the transport terminals, for 1982, and the enterprises of the Kholmsk transport terminal were rewarded with AUCCTU certificates and monetary prizes.

Individual dispatcher shifts headed by dispatchers from the port and the railroad station, V. Fradkov, V. Sokolov, V. Komlev and A. Stupak, are making a great contribution to the success of the matter.

In 1978 the consolidated comprehensive brigade of docker-machine workers, headed by B. Mandrik, came forth with an initiative to send import goods to the railroad cars with a guarantee of their safe-keeping and high-quality processing, and UKB [consolidated comprehensive brigade] No 1, headed by A. Kaminskiy, employed for transfer of lumber loads, came forth in 1980 with an initiative to conclude open agreements on comprehensive socialist competition between all the participants in the transport process--from the load dispatchers to the receivers. This sort of agreement is now concluded yearly between the brigades of the lumber industry enterprises engaged in loading the lumber and the crews of the transport ships attached to the lumber lines, UKB No 1 of the port and the lumber exchange of the Kholmsk Pulp and Paper Plant. This has made it possible to accelerate the processing of ships not only in port, but also at their loading points, and to increase considerably the throughput of the transport complex.

In 1983, as compared with 1982, the total intensiveness of processing lumber carriers rose by 52 percent, and the volume of reloading lumber goods--by 17 percent. Over 180,000 tons more of national economic goods were transported. The total layup time for ships of the transport fleet was reduced by 15.6 percent as against the norm, and non-productive down times were reduced by 26.1 percent. The down times for cars for loading operations were reduced by 6 percent, and 389 cars were conditionally freed.

Meanwhile, the work of the transport terminal has its own problems. Construction of the shore structures for the second section of the ferry crossing at the Kholmsk railroad station is being held up. For example, ferry berth No 2 at Kholmsk will be completed in 1984, but development of the Kholmsk railroad station is still at the planning stage. With this state of affairs, the ferry complex cannot ensure an increasing volume of goods transport.

There are also large hidden reserves for accelerating the sending of import goods from the port. The transport volume of these goods constitutes about 9 percent of the total volume, but 60-70 percent of the entire covered warehouse area of the port is constantly occupied by them.

This stems from the following reasons. The port is obliged to unload the goods arriving in accordance with the distribution assignments of the MVT [Ministry of Foreign Trade] associations, in very small batches in the containers, or as baggage or even at times as parcels.

In addition, there is a constant shortage for such loads of containers, which mainly come from Magadan, and the Sakhalin division of the Far East Railroad is not in a position to allot the necessary number of containers.

There is one more reason: the shortage, and in some periods complete lack, in the appropriate form, of cars prepared to ship goods for national consumption.

To correct matters the MVT must consolidate into car-sized batches the various orders going to certain transfer points.

In addition, the Sakhalin division of the Far East Railroad should accelerate putting into operation the center for preparing the cars.

The motor vehicle transport workers began to work more poorly in 1983. They did not fulfill the plan for centralized transport of goods from the port. The idle time for motor vehicles is 50 percent of the operation time.

Solving these problems will undoubtedly make it possible to improve the work of the transport terminal and more successfully resolve the tasks posed for the country's transport workers.

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NEW EQUIPMENT HELPS NIKOLAYEV PORT WORK

Moscow MORSKOY FLOT in Russian No 5, May 84 pp 20-21

[Article by B. Nesterovskiy, chief of the Bureau of Technical Information of the Nikolayev Port: "The Reserves Have Not Been Exhausted"]

[Text] At the Nikolayev port in 1983 labor productivity rose by 5.4 percent as compared with the goal, but the wages are not outstripping this growth.

The problem of the growth of labor productivity is being solved due to the introduction of new equipment and advanced technology, mechanization of manual processes and active work by the efficiency experts and inventors at the port. In building up the competition of production innovators to the motto, "Workers' Initiative—For Engineering Support", the port yearly obtains over 500,000 rubles of economic effect from introducing proposals.

The level of mechanization for the materials handling work in bulk-loading goods at the port is 97-99 percent, and in piece goods—66-80 percent. This is because the transfer machines perform the operations only by shifting packets already made up from several units of piece goods. The process of making up the packets itself remains labor-intensive and complicated. Reducing manual labor in interhold and intercar operations also remains a problem.

One of the basic methods for reducing manual labor is the introduction of packet and container transfer. It would appear that everything here is for suppliers of the goods: pack up their stock in packets and containers, and that's the end of the matter. Unfortunately, the suppliers are not hurrying to do this. A lengthy, persistent correspondence is carried on with the goods shipment points, and the port workers often have to go out to visit the place. This has brought several results. An example of this is the present overload of tapioca. Formerly the ships brought tapioca in sacks, with piecemeal stowing in the holds. Now through the general concerns of the seamen and port workers, they bring the tapioca to us in sling containers. The port innovators introduced turntables, roll-trailers and all-purpose grips for the industrial lines and the freight operations with the tapioca became fully mechanized.

The port is constantly supplemented with new transferring equipment: gantry cranes and loaders of domestic production, and from the Japanese firm Toyota, tractors, trailer trucks ....

Quite recently a powerful Khartman mobile pneumatic cargo transfer machine was put into operation at the port's grain complex. Its two units, mounted on a gantry, are capable of transferring cargo from ship to car at up to 300 tons of grain an hour. From his high-positioned cab, with a good view of vessel and berth, a single operator controls the machines and booms with the grain pipes. The new unit has considerably increased labor productivity and has reduced labor input to unload the grain. But even here the port's efficiency experts are not slackening. In particular, taking into consideration the limited potentials for loading to the berth, in accordance with a proposal by I. Vorob'yev and V. Gemberg, a special four-roller car made at the port has been installed under the gantry of the loader.

In 1983 the number of production innovators at the port increased to 365 persons. For successful introduction of new machines, devices and advanced technology, they were allotted over 10,000 rubles reward.

In the All-Union Socialist Competition for attaining the best indicators for invention and efficiency work, the Nikolayev port was awarded prize-winning places four times. Gas-electric welder D. Mel'nik and engineer D. Kostritsa became excellent workers in invention and efficiency expertise. The ranks of innovators are constantly being supplemented. Now about 300 port workers have to their credit one or two efficiency suggestions.

The state of the inventive and efficiency expert operations is included in the number of basic indicators when the results of the competition are examined. The yearly payment of rewards for suggestions introduced reached 16,000 rubles.

The creative thought of the innovators penetrates to all corners of the port's production activity.

The panorama of the container section is beautiful. Filled with goods, the containers of international standard are easily unloaded from the ships and placed on platforms and motor vehicles. The container carriers are unloaded several times faster than the ordinary ships. But here is something that has worried the innovators even at this most mechanized section.

"Judge for yourselves," says senior technologist V. Molchanov, "the containers have freed dockers from repacking the goods totally, but here the gripping unit (spreader) on the top of the container took two workers to place it manually with the aid of guy-ropes. Is this really the procedure? On ordinary gantry cranes there is no opening device for the spreader. Together with engineers M. Vysotskiy and A. Sin'ko we reequipped and adjusted for mechanical grip of the containers an opening device using magnetic disks. Crane operator V. Shepel' and fitter I. Soldatov helped us to put the new device into operation. Now the crane operator himself opens up and places the grip on the container from the control panel.

Efficiency experts Yu. Levchenko, O. Gulak and S. Golgovskiy were concerned with raising labor productivity for loading cotton onto the ships. They changed the structure of the frames on which the grips for the bales are suspended. Now the frames carry not 10, but 16 bales at one hoist.

After changes in the system of access routes to berths No. 4 and 5, there was a noticeable acceleration in the maneuvering work with the railroad cars. The authors of this suggestion, A. Tsepordey, M. Karagodin and I. Popov, personally took part in the reconstruction of the railroad tracks.

Port specialists P. Nos, Yu. Levchenko and L. Grishkova introduced a set of quickly detachable reinforcements for individual-package loads. This innovation helped to reduce the auxiliary time when transporting piece goods on loaders and motor vehicles.

The brainchild of the Nikolayev port workers -- a small crane to form packets of bagged goods in the ships' holds--is shown at the Exhibition of USSR National Economic Achievements. There is now no heavy manual labor involved in reloading raw sugar, rice and other goods in sacks, and labor productivity has increased due to reducing the number of dockers engaged at the industrial line.

A suggestion from port innovators P. Perepelitsyn, V. Fel'dman, P. Grigor'yev and G. Nayman made it possible to modernize the upper supports of the car-dumper at the ore-reloading complex. The need for additional dumping of the car for its complete cleaning was eliminated. The efficiency of the car and ship processing increased, and less electric energy was expended. The overall economic effect reached 52,000 rubles a year.

The technical creativity of the port workers undoubtedly has a favorable effect on the increase in labor productivity. Not all the reserves have yet been exhausted, however. There are as yet few efficiency suggestions coming in to improve work organization at the berths and introduce advanced industrial processes for processing the ship and cars. After the new equipment and efficiency measures are introduced, the output norms are not always reviewed on time. The level of introducing innovations borrowed from scientific-technical information materials is not satisfactory.

To set this situation right, reviewers to select useful and necessary technical-economic innovations for the port have now been designated at all the production sections. A provision on material incentive for the port workers for the introduction of innovations borrowed from scientific-technical information and advanced experience has been put into operation.

12151
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RAILCAR SHORTAGE HAMPERS KALININGRAD PORT OPERATIONS

Moscow VODNYY TRANSPORT in Russian 4 Oct 84 p 2

[Article by VODNYY TRANSPORT correspondent V. Skolub, Kalingrad: "No Contact": under the rubric: "An Urgent Signal"]

[Text] The Kaliningrad commercial seaport has not coped with the September plan for processing bulk cargoes. More than 10 ships have been waiting to be unloaded for 8 to 12 days. The same trend is typical for October as well.

Dockworkers are in a position to ship up to 9,000 tons per day, but they cannot do this. It was learned at a regular meeting of the Kaliningrad transportation hub's coordination council that one of the most important sectors of the transport production line--the railroad sector--had been working at half-strength for the entire previous month. Dockworkers had ordered 3,177 railway cars, but received only 1,440.

About 1,600 cars are needed to unload the port and release all bulk cargoes now lying at anchor in the roads and at the docks from the captivity of idle time. One would think that more pressure has to be applied to the railroad workers. Not so: 150 cars were ordered on 28 September, and only 75 were delivered; they sent 68 on the 29th and 80 on the 30th.

"We are not in a position to fulfill the port's orders," say M. Protashchik, chief of the traffic department of the railroad division, and V. Bogdanovich, chief of the Kaliningrad Shunting Yard Station.

The Kaliningrad department serves three large ports and dozens of other organizations with heavy cargo flows, but it is not seeing the proper attention to its needs from the Ministry of Railways. The station needs a daily "replenishment" of enclosed cars, grain cars, gondola cars, and flatcars.

A problem also has developed with cotton shipment. There are now 7,500 tons of this raw material in the port's warehouses and in the holds of the ships which have been transformed into floating repositories. Dozens of telegrams and the most urgent dispatches come to the port every day with requests, pleas and threats from textile workers in Kalinin and Moscow Oblast, Vychuga, Shuya and Ivanovo, from Belorussia and Kostroma... The workers of Kaliningrad would be happy to comply with the requests, but they have been deprived of the opportunity.

8936
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ILICHEVSK CONTAINER TERMINAL AIDED BY COMPUTER SYSTEMS

Kiev PRAVDA UKRAINY in Russian 20 Sep 84 p 3

[Article by Yu. Shevchenko: "The Computer as Director of Freight Traffic"]

[Text] The container terminal in Ilichevsk, the largest on the Black Sea, has come up to its planned capacity ahead of schedule. It is equipped with highly productive transshipment technology. An operating inventory of arriving containers is retained by a computer, which monitors the movement of all capacities. At the dispatcher's command, the computer issues data on the availability and location of one load or another in a number of seconds, which helps to quickly organize the delivery of containers, railway cars and motor vehicles to the berth and to load ships in a timely manner.

More than 20 modern large-capacity Black Sea container ships are now sailing on international routes. They have been subordinated to a single shipping coordination center. Current data on ship movements, on the basis of which the best schedules for their runs are worked out, are collected here. This has increased efficiency in utilizing every square meter of a vessel's space and has eliminated "no-load" miles.

Special berths for processing the "railway cars without wheels," as they call the containers, also have been built at the Odessa and Nikolayevsk ports. This has helped to eliminate waiting time while lying in the roads and to dispatch vessels on their runs more expeditiously.

The stock of containers is being replenished by output of the Ilichevsk Ship Repair Yard imeni 50th Anniversary of the USSR. The appropriate fleet also is being brought up to date. Soon the large-capacity ships "Geroi Monkady" and "Vinnitsa," which are being built in GDR shipyards, will arrive in the Black Sea.

The Black Sea Steamship Line has become the largest seagoing container operation in the country, having taken over the shipping of the majority of foreign trade cargoes. The flow of cargoes through its ports will be increased by 100,000 tons annually up to the end of the five-year plan.

8936
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RIGA MARITIME PORT IMPROVEMENTS REVIEWED

Moscow MORSKOY FLOT in Russian No 9, Sep 84 pp 12-15

[Article by Ye. Valentinov: "The Port on the Daugava"]

[Excerpts] The maritime port of Riga. The call sign of its radio station is constantly on the air. Captains are radioing about the time of arrival at the entrance buoy of Daugavgriva. Domestic and foreign ships are arriving. They come from Europe, Asia, Africa, America - from all over the third world courses run to the shores of the Dauyuva.

All information is concentrated in the office of the dispatcher. In it are the names of ships, affiliation by flag, information about the cargo and its disposition, and other characteristic data. The seamen state their needs for provisions, fuel, fresh water, and for technical, cultural and medical services. The orders and requests are sent as either urgent or routine. For each of them the port services are obliged to respond promptly.

There is an ordinary atmosphere of businesslike efficiency in the port. There is a forest of portal cranes on the two-kilometer long pier strip. Powerful floating cranes are ready to go into action at any time. Adroit locomotives sometimes move loaded trains and sometimes roll rail cars out along the places of the cargo operations. Dashing forklift trucks scurry over the whole area including the warehouse facilities. Their strong claws, stretched out ahead, carry all kinds of cargoes in bales, packets, rolls, and cases.

Millions of tons of cargoes - ore, coal, metal, rolled steel, timber, grain, equipment, cotton, cartons, machines, electric motors, unique instruments, sugar, and many others - are transshipped annually by the Riga dock workers. Their hands, their keeness, and their collective efforts are the basis of progress.

Today, the commercial port of Riga is one of the largest ports and one of the most advanced in technical facilities in the country. "We constantly pay attention to the introduction of new equipment and technology for the loading and unloading operations" says the chief of the port, V. Yevstigneyev.

This work is being carried out according to quarterly, annual and long-term plans. In the current five-year plan, a whole series of important measures have been implemented.

Seventy production processes and methods of handling cargoes and schemes for the stowage and securing of them on ships, in rail cars, in containers, and on heavy-vehicle trailers have been developed and perfected.

Eighty seven production work charts, instructions, propositions, technical specifications and standards have been composed and reviewed.

Fifty machines, load-grasping devices, fixtures, packages, and technological attachments have been developed and acquired.

Twenty seven machines, graspers, fixtures, and other kinds of equipment have been modernized and standardized.

Several kinds of machines, graspers, fixtures, packages, and technological attachments are in use experimentally.

As the result of these and other measures, the speed of processing the fleet is increasing annually. The productivity of labor and the handling of certain kinds of cargo has grown. This growth is significant. For instance, for sugar and flour in bags, in 1983 it amounted to 64 percent compared with 1980. Economic efficiency is steadily increasing.

The introduction of new equipment and technology together with an improvement in the organization of work has had a favorable effect on the principal performance indicators of the port as a whole.

In this, the assistance of the personnel of the computer center had a large part. Its chief, I. Sablin, noted: "Electronics saves men from routine duties and increases the effectiveness of operations." Already five subsystems have been introduced; namely, for keeping track and analyzing the loading of rail cars with bulk cargoes, for effective control of the principal activity (the work of the chief dispatcher), for keeping track of labor and wages, for monitoring the fulfillment of the assignments and instructions of the management, and for analysis of the processing of ships according to the NPGRP [expansion unknown].

The transportation center. The Riga transportation center was organized on the base of the commercial port in September 1978. In addition to the port, the Riga department and the station of the Riga-Krasta Baltic Coast Railroad, the industrial association Promdortrans [Industry for Road Transportation?] of the Ministry of Motor Transport and Highways of the Latvian SSR, the Riga office of the V/O [All-Union Association] Soyuzvneshtrans [Association for the Transport of Foreign Imports and Exports in the USSR], and the Latvian Steamship Company are parts of the makeup of the center.

A coordinating council consisting of representatives of the above listed enterprises and organizations manages the operations of the center. The chief of the port leads the activities of the council.

A coordinating group carries out the daily management of the transportation center. This working group is made up of the chief dispatcher of the port, the chief of the transport and forwarding office, the chiefs of the freight regions of the port, the chief of the Riga-Krasta railroad station, the

deputy director of the Riga office of V/O Soyuzvneshtrans, a representative of the USSR Ministry of Procurement, the chief of the port station of Goskhlebinspeksii [State Grain Inspectorate], the chief of the ports department of the Steamship Company, and the deputy director of the port grain elevator.

The coordinating group holds a meeting every morning. At these sessions an operational analysis is carried out on the organization of the work for the past 24 hours and the operations of the center's interfacing elements for the next 24 hours is agreed upon. Depending on conditions, the leaders of the enlarged comprehensive brigades (UKB) are invited to such sessions.

The plan for the united technological process of the work of the riga-Krasta railroad station and the port of Riga is the principal document on the basis of which all the activities of the center are constructed. To improve the coordination of their operations, united, around-the-clock dispatcher shifts were created for the port and the station.

Within the frameworks of the comprehensive socialist competition of the seamen, port workers, and railroad men, competition of the shifts has been organized. The evaluation of their work is done according to uniform indicators. These indicators reflect the rates of loadings of imported cargoes, the rates of unloadings of rail cars with export cargoes, the fulfillment of the norms for berthing and the norms for static loading of rail cars, the fulfillment of the comprehensive norms for the outputs of the brigades of dock workers, the number of rail cars sent off, and the time for processing ships.

The analysis of the results and the determination of the victors in the socialist competition is done at expanded meetings of the committees of the trade unions of the port and the station once each quarter. At general meetings, members of the united comprehensive shifts analyze the work of the past quarter and outline a plan of action for the next period.

The personnel of the port and the station annually undertake joint socialist obligations and also conclude occasional agreements about ahead-of-schedule processing of specific ships.

All these organizational and technical measures are conducive to raising the productivity of labor and the intensity of cargo operations. The dock workers,for instance, have shortened the time for the processing of rail cars by 20 percent of the norm. In so doing, special attention is being given to the fulfillment or the overfulfillment of assignments related to the decree for the Food Program. The throughput capacity of the grain complex was brought up to almost 400 rail cars per day.

Daily at 12 o'clock in the port of Riga a radio roll call begins of the cargo areas, the services, and the departments in the process of which, the working life of the collective is illuminated. The chief dispatcher reports. He gives information about ships, the piers and other facilities and activities.

The container terminal. According to the plan for the modernization and expansion of the port of Riga, its old grounds were fully activated. The question arose of new areas. Downstream on the Daugava river is Kundzin'sala island. It appeared to be a suitable place for a new cargo area. On it the container terminal is being erected. Its first stage already is coming on line.

The chief of the area, A. Bolonenko says more precisely: 'In April 1981 work on the container terminal was begun. The first stage was broken down into three complexes and, right now, two are in operation."

The design capacity in freight turnover of the first complex is 250,000 tons of cargoes in containers and, for the second complex, it is 560,000. This entered into the planning program for the terminal for 1984.

Despite the fact that the construction of the container terminal is still continuing, its complexes, right now, look like powerful structures. The half-kilometer long pier wall has been well made. All equipment is designed for the processing of international standard containers.

The transportation lines, like a network of arteries give life to the complex by connecting it with the city, the republic, and the country. Three railroad freight platforms provide for the work of the terminal. Cranes work around the clock. The tracks come up to a covered freight ramp - the place for the loading and unloading and forming-up of containers. Over the whole area are containers, containers, containers..... Railroad trains arrive and depart. The transportation and loading processes are provided by motor vehicles. various tractors, trailers, and lift trucks of domestic and foreign make. The terminal is fitted with the last word in equipment.

The combination of railways and roadways permits concentrating equipment beside a ship or storage place. The total area for storage,including grounds for open storage, is more than 14 hectares.

Three ships can be moored simultaneously at the berths of the terminal. The Ro-Ro ship "Inzhener Kreylis" operates on the regular shipping line from Riga to English ports. The Ro-Ro ship "P'yer Pult" serves the line from Riga to Rostok. To speed up the loading and unloading of such ships, many dock workers and seamen have mastered the driver specialty.

Last year 13,443 containers passed through the terminal, about 40 percent of them in the export direction and 60 percent in the import direction. Such a gap complicates transportation and forwarding activities and leads to the accumulation of a large number of containers.

During a year, the active complexes of the terminal process about 300 ships, 90 percent of them ahead of schedule. It is rare, but idle ships are heard of. They are caused by imperfections in the arrangements for cargo operations and also by the shortage and low effectiveness of some equipment.

The construction project of the container terminal for the port of Riga was calculated to be completed by the year 2000. In the end it will process more than 18 million tons of cargo in containers annually. It is important that the deficiencies noted in the course of construction be eliminated promptly. Thus, to increase the throughput capacity of the first stage of the terminal, the need was recognized for constructing new spur railways and also for constructing connecting tracks for an exit from the container terminal directly to the Riga-Tovarnaya station going around the Riga-Krasta port station, which is a principal bottleneck and lowers the capacity of the port as a whole by 35-40 percent. The construction, however, is proceeding extremely slowly although the decision was made in 1982.

Meanwhile the staff of the terminal is relatively small, hardly more than 200 persons. Almost half of them are dock workers, machinists, and operators of transshipment equipment. All five brigades work 24 hours a day according to an 8 hour shift schedule. Each brigade has a single duty which favors optimization of the labor process and the fulfillment of planned assignments.

In the area and also in the port, the problem of the repair of transshipment equipment has not been solved. There is no repair base. Meanwhile such work has to be done by primitive methods.

Some social problems are being solved slowly. The lack of showers and other domestic accomodations is making itself felt. Three boarding houses are overloaded with families and the port has stopped the enrollment of bachelors for work. The construction of dwellings is being carried out extremely slowly. There is more discussion than action on a home for small families. The productivity of labor and the stability of the makeup of the labor collective depends directly on the solution of these and other problems.

There are problems which must be solved outside the port. Among them is the planned feeding in of rail cars. For instance, in the port plan for the quarter, the processing of 855,000 tons of grain was recorded, but the total of the plan for the removal of grain by rail cars specified only 670,000 tons; that is, 185,000 tons less. A paradox! And there is more. The gap between export and import cargoes in containers is growing, but there is no plan for the delivery of additional flat cars for the imports. As a result, the operation of the container terminal is being paralyzed.

Realizing the decisions of the 26th CPSU Congress and having taken part in the national competition for ahead of schedule fulfillment of the assignments of the 11th Five-Year Plan, the personnel of the port of Riga adopted socialist obligations for 1984 in which were envisaged the processing of 70,000 tons of cargoes above the plan, increasing the transshipment of cargoes in containers by 8 percent, and increasing the productivity of labor by 1.3 percent. The collective has pledged to complete the plan for the amount of cargo processed in the four years of the 11th Five-Year Plan by the 67th anniversary of the Great October Socialist Revolution.

9136
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BRIEFS

CONTAINER TERMINAL EXPANDED--Odessa--The Ilichevsk container terminal has become the largest on the Black Sea. With the placing into service of its second stage, about 5,000 containers with cargoes can be received and processed here simultaneously. The complex is fitted out with powerful pier-side facilities which are controlled by computer. This permits the efficient regulation of the arrival at the piers of containers, rail cars, and motor vehicles and it speeds up the turnover of ships by 20-30 percent. Special piers for the processing of containers also have been built in the ports of Odessa and Nikolayevsk. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 12 Sep 84 p 1] 9136

CHANNEL WIDENING BEING COMPLETED--Vyborg--A unique operation - the clearing of a 24-kilometer channel through the rocks of the Vyborg inlet - is being completed by the blasters of the special Leningrad administration Soyuzvzryvprom [Trust for the Conduct of Drilling and Blasting Operations]. The Vyborg shipyard is finishing the construction of the floating drilling rig "Shel'f 3"(the first two were built in Astrakhan) for the drilling of oil and gas wells on the continental shelf in the Barents Sea. The installation is 92 m long, 74 m wide, 97 m high, and has a draft of 4.85 m. It can be anchored in water depths up to 200 meters and can drill up to 6,000 meters deep into the bottom. In the middle of September "Shel'f-3" is scheduled to be taken out of Vyborg into the Gulf of Finland. In a conference with the participation of the Vyborg maritime commercial port captain, V.Abramov, the captain of the shipyard, A. Lushchenkov, and other specialists, an order was developed for towing the unique object along the channel. Six tugs will take "Shel'f" out. The width of the channel on the 24-kilometer stretch in many places did not permit the passage. The blasters came to their aid. The modernization of the channel will permit the passage into Vyborg of large-tonnage ships. [By V. Shchetinin] [Text] [Moscow NEDELYA in Russian No 37, 10-16 Sep 84 p 5] 9136

NEW FLOATING PIER ACTIVATED--Yuzhnyy Port--A floating pier for large-tonnage ships has been placed in service in the port of Yuzhnyy. This deepwater mooring is situated in the inner roadstead and guarded by breakwaters. One hundred-thousand-ton ships of the "Marshal Budennyy" class can moor at this pontoon which is fastened to a reinforced anchoring slab laid on the bottom. With the specialized pier, cargo operations can be carried out simultaneously by ships on both sides by means of floating transshipment mechanisms. [By our special correspondent, D. Romanov] [Text] [Moscow VODNYY TRANSPORT in Russian 18 Sep 84 p 1] 9136

IMPROVING CONTAINER TERMINAL OPERATIONS--The use of the new generation of computer equipment which has been introduced at the Leningrad maritime port - the container harbor of the Baltic - promises supplementary capabilities in the automation of production processes. With the aid of the new equipment debugging for the problems in accounting for and planning the operations of the container terminal began yesterday. The application of computers with substantially larger mathematical capabilities will permit obtaining information on the progress of large-capacity containers around the territory of the Neva harbor more promptly. Right now it has become the largest transshipment point for the steel boxes in the Northwest part of the country. From here they are sent into ports on all continents. The commissioning of the unique base where containers undergo repair and a preparatory session has speeded up the passage of cargoes. The application of the new technology in the organization of the process of transportation is one example of the realization of the long-term program for intensification of the work of the most important shops of the port. Here now, practically for every dock worker there has to be one machine. These can be loaders, various types of cranes, or conveyor lines. Their use has provided for a stable growth of the productivity of labor without enlisting a supplementary work force. [By L.Frolov] [Text] [Leningrad LENINGRADSKAYA PRAVDA in Russian 28 Sep 84 p 2] 9136

HUNGARIAN-BUILT CRANE DELIVERED--The whole collective of the Hungarian ship and crane building plant saw this 16-ton capacity floating crane off on its first navigation. Rising to a labor duty in honor of the imminent 40th anniversary of the liberation of the country from facism and the 13th Congress of the Hungarian Socialist Worker's Party, the shipbuilders pledged to build the crane for the USSR one month early, and they kept their word. The floating "stevedore" will be permanently registered in one of the Soviet maritime ports. The enterprise, whose buildings are widely spead out along the Danube shore,is experiencing its second birth. A modernization, the technical documentation for which was developed by Soviet specialists, has been completed here. It will permit the plant to increase the output of products by almost 60 percent and to join in still more broadly in the fulfillment of integrated tasks. Right now specialists of the two countries are working on the development of a crane of increased capacity and powerful tugs. In the next five-year plan, Soviet clients will receive a batch of 2,400-hp pusher tugs. [Text] [Moscow VODNYY TRANSPORT in Russian 2 Oct 84 p 1] 9136

CSO: 1829/2

INTERSECTOR NETWORK DEVELOPMENT

TRANSPORT CONSTRUCTION MINISTER ON BAM, OTHER PROJECTS

Moscow EKONOMICHESKAYA GAZETA in Russian No 41, Oct 84 p 6

[Article by USSR Minister of Transport Construction I. D. Sosnov: "At Transport Construction Sites"; passages enclosed in slantlines printed in boldface]

[Text] The country's transport construction workers have successfully carried out the subcontractor work plan for the first three years of the current five-year plan. New railroad lines and second tracks have been put into operation, important railroad sectors have been electrified, dozens of large, unique bridges have been built, hundreds of kilometers of high-quality highways have been built, and mechanized docks and transshipment complexes have been installed at river- and seaports.

Since the start of this year, we have put into operation the Gosgranitsa - Uzhgorod - Batevo rail sector, about 80 kilometers of second track, upwards of 260 kilometers of surfaced highway, and several large mineral fertilizer storage facilities. More than 400,000 square meters of housing has been released for occupancy.

Start-up of the second line of the Minsk subway and a new section of the Kharkov subway ahead of schedule were gratifying events.

/Builders of the Baykal-Amur Mainline just won a major victory. After taking on socialist obligations to complete laying the main track and open the entire length of the BAM to train traffic ahead of schedule, they have kept their word with honor./

During the past 10 years, collectives of the Glavbamstroy and the subunit of fighting railroaders have moved nearly half a billion cubic meters of earth, erected thousands of bridges, water bypasses and other man-made structures, and put up dozens of settlements near stations. Two new cities, Tynda and Severobaykalsk, have appeared on the map of our homeland.

Builders moved toward their cherished goal through the untracked taiga, mountain ridges, mari and permafrost. The trailblazers did not have it easy. One example. Nature presented an unpleasant surprise at the finish of the project. Crevices and slides prevented tunnelers from breaking through the Kodar Ridge on time. But there are no hopeless situations. A 7.8-km temporary rail detour around the future tunnel was planned on an emergency basis and built in record

time, only 17 days. During these two and a half weeks, 390,000 cubic meters of earth was moved and 11 water bypasses were built.

Building on their success, the Komsomol youth collectives of builders of the Baykal-Amur Mainline decided to open it for through train traffic in late October to celebrate the birthday of the Komsomol and the 67th anniversary of Great October.

The Baykal-Amur Mainline is our primary and largest project. But one must not forget about other important construction projects in rail, sea, river and motor transport and civil aviation. This year, our work program has increased approximately three percent, to 5.5 billion rubles. The Ministry of Transport Construction as a whole coped successfully with the assignments for the first half of the year.

Unfortunately, things got complicated in July and August: those months, a number of our collectives permitted serious delays, which they were not fully successful in compensating for in September. The Ministry of Transport Construction party-economic aktiv which met several days ago discussed the situation and outlined concrete steps to reach the planned frontiers for 1984.

It was noted that 13,000 workers had been sent just to construction sites of the Ministry of Railways. During the summer, 20,000 student construction detachments rendered tangible assistance. Our organizations received 486 excavators, 549 bulldozers, about 1,600 trucks, nearly 600 boom and tower cranes, and much other equipment this year. All trusts were allocated sufficient resources to meet plan assignments. Consequently, it was a question of how to make intelligent use of the available potential.

Unfortunately, leaders of our subdivisions were unable to use these considerable forces and funds wisely when laying second tracks on the Aksarayskaya-II - Astrakhan-II, Achinsk - Krasnaya Sopka and Svecha - Kotelnich and when electrifying the Karymskaya - Chernyshevsk sector. This was strongly pointed out to them. The lag must be overcome as quickly as possible.

Organizations working on civil aviation, maritime and river transport facilities need to increase their activity. Leaders of the Volga and Southern Glavzheldorstroy, the Northern and Western Glavzheldorstroy and the Glavmorrechstroy were strongly criticized in the party-economic aktiv and the Ministry of Transport Construction collegium.

We are especially alarmed about losses of working time, unproductive labor expenditures, and intrashift machinery and vehicle idle time. Insufficient coordination of the actions of all participants in the construction process has had an effect. Implementation of the well-known CPSU Central Committee and USSR Council of Ministers decree "On Improving the Planning, Organization and Management of Capital Construction" will help overcome these and other shortcomings.

The ministry is implementing a complex of measures aimed at unconditional fulfillment of all the demands contained in this important document. Specific implementers have been determined and concrete schedules have been set and will be constantly monitored.

With the help of improvements in the economic mechanism, we are counting on raising discipline and organization at the construction sites to the necessary level and improving all qualitative indicators. The article "Word of Honor of the Construction Worker" published in PRAVDA and the CPSU Central Committee decree adopted on this question have elicited a lively response in collectives of transport construction workers.

The importance of accelerating scientific-technical progress is especially important in transport construction. We must, after all, operate often in uninhabited places remote from the main production bases.

/Work quality, as well as labor productivity and working conditions, depend on the active introduction of scientific and technical achievements./

The efforts of our scientific, technological and design organizations are currently focused primarily on solving the problems of further reducing labor- and metals-intensiveness and improving the quality of transport project installation. In particular, concreting technologies using automatic mixers and anchored foundation pits are being scrutinized most intently.

An effective technology for building the track superstructure, using a complex of highly productive mobile units based on the T-158 tractor, is now being introduced into railroad construction. The assembly of rail-tie grid links has been shifted to special bases equipped with mechanized test stands and flow lines. Let's make it a goal to ensure the delivery of items directly to the construction sites with a maximum degree of factory readiness and in consolidated components. In bridge-building, the sphere of application of columnar support shafts, hollow reinforced piles and casings, is being broadened. Bridge construction technology is being fundamentally improved.

In subway and tunnel construction, high-speed tunnel drilling using modern heading machines, economical industrial components and steel-polymer anchors are yielding a high return.

While concerned about the present, we are also thinking about the long term. In 1985, we will need to do a lot of work and put a number of sections of new railroad lines into full-time operation. Among these are the Tynda - Ust-Nyukzha, Fevralsk - Urgal and Dipkun - Bryanta sections on the BAM, the Purpe - Pur in Tyumen Oblast, the Yevlakh - Belokany in Azerbaijan and the Aktogay - Sayak in Kazakhstan. Many hundreds of kilometers of mainline will be electrified. Construction workers will open new subway stations and lines for grateful residents in Moscow, Tbilisi, Baku, Gorkiy and Novosibirsk.

/New tasks will face us in the 12th Five-Year Plan, primarily involving providing the country's fuel-energy complex with transport services. The heaviest work load is expected to be in Western and Eastern Siberia, the Transbaykal, Far East, Kazakhstan and the Volga area./

In this connection, let me note in particular the growing role of planners. Our Glavtransproyekt must begin now preparing its institutes to meet the orders of the 12th Five-Year Plan promptly and well. We need to use leading experience accumulated in building the Baykal-Amur Mainline more fully and boldly; success

was often achieved there not through traditional, standard engineering resolutions, but by using original ones. It is extremely necessary that the more extensive use of progressive components and effective work methods be anticipated in the planning stage.

Transport construction workers are acutely aware that millions of passengers will judge their work not based on production projects, but on terminal buildings. It is the direct duty of builders and planners, using familiar passenger transport resolutions, to make these facilities more comfortable and architecturally more expressive.

Referring again to the Baykal-Amur Mainline, representatives of various union and autonomous republics, krays and oblasts participated, through sponsorship assistance, in construction of the station settlements and terminals. Each mainline station therefore has its own particular appearance, its own unique flavor. We need to continue using the best of what was discovered as a result of that large-scale search for new resolutions.

It is gratifying that the leading collectives of construction and planning organizations, industrial enterprises of Moscow and Leningrad, the Ukraine, Georgia, Azerbaijan and Moldavia, have taken on additional socialist obligations to broaden sponsorship assistance in the construction of housing, hospitals, children's preschool institutions, schools, trade, sociocultural and municipal-services facilities in cities and settlements on the Baykal-Amur Mainline route. The importance of this initiative would be hard to overestimate. This practice would seem to be useful in other places as well.

Ministry of Transport Construction subdivisions, having concentrated their forces and equipment at the most important start-up projects for 1984, are now picking up their work tempos. Preparing for the fall-winter period which will, by all indications, be a harsh one, is a very pressing problem. It signifies first of all the necessity of ensuring reliable stockpiles for the future, along with unconditional fulfillment of the start-up program for the current year.

Particular attention is being paid to monitoring work on ensuring an uninterrupted electric power supply and organizing highly effective winter labor at projects in Western Siberia and at agroindustrial complex construction sites for wintering livestock. Maintenance on buildings, heating systems and other utilities has been speeded up.

Significantly raising the technical and organizational level of production, strengthening discipline in every way possible, and improving the use of available capacities and material resources are becoming a basic daily activity of transport construction subdivisions.

The 12th Five-Year Plan must be more taut and its assignments more important than today's. Each labor collective is seeking out reserves for inclusion in drafts of future plans. Transport construction workers are fully resolved to contribute to further strengthening the economic and defense might of our homeland.

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