

## **TRANSPORT OF THE RUSSIAN FAR EAST AS A PART OF NEA REGIONAL TRANSPORTATION SYSTEM**

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### **COMMENTS**

Transportation system of the Russian Far East is a part of the entire Northeast Asian transportation system. Basic structural elements of this system, which provide integration of the traffic flows, are the following:

- seaports;
- railways;
- cross-border transport passages.

#### Seaports and access roads to ports

The number of seaports in the Russian Far East is 32, including 23 commercial seaports, 11 of which with year-round navigation are connected to trunk-railways. The bulk (80%) of overall freight turnover in the seaports and of marine foreign trade shipments is provided via four major ports of Vladivostok, Nakhodka, Vostochnyi, and Vanino. These ports have direct access to the outlets of the Trans-Siberian and Baikal-Amur railway lines.

The structure of dry cargo transshipped through the Pacific seaports in 2002 included export – 74.3%, import – 5.7%, and 20.0% of coasting trade. The total annual handling capacity of seaports in the Russian Far East is about 80 mln t; with the load of 60-70% during the last three years. The ports suffer cargo base insufficiency. To eliminate this, work is carried on to reconstruct the cargo-handling facilities. In 2002, a terminal was opened for mineral fertilizers transshipment in the port of Vostochnyi with the capacity of 2.5 mln t per year, which allows berthing vessels with a deadweight capacity of 40 thousand t. During the period of up to 2010 it is planned to construct in Vostochnyi handling facilities for liquefied gas (with the capacity of 1 mln t per year), methanol (with the capacity of 1 mln t per year), petroleum products (4 mln t per year). In the port of DeKastri handling facilities for bulk-oil cargoes (with the capacity of 10 mln t per year) are planned for construction.

The sea shipment structure is raw material (Fig. 2), where the share of coal is 15%, oil and oil products – 24%, metal – 19%, timber – 12%, container cargoes – 3%, mineral fertilizers – 1%, others – less than 1%.

Fig. 2. Cargo turnover structure of the Russian Far East seaports in 2001.

The ports in the Russian Far East are controlled by major financial-industrial groups. The port of Vladivostok is governed by a joint-stock company “Magnitogorsk metallurgical works” (which holds about 30% of shares)<sup>1</sup>. The port of Vostochnyi (with the cargo turnover of 18 mln t), the most modern one in Russia, is supervised by a company “Severstal’trans” (“North steel transportation”) (holding 60% of shares).

In Nakhodka there operate three seaports – commercial, oil-loading and fishing ones.

The commercial port of Nakhodka (6 mln t per annum) is under control of “Eurasia holding” (about 60% of shares). The Nakhodka oil-loading commercial port (10 mln t per annum) is controlled by the holding YUKOS. The port’s development is connected with implementing the construction project of an oil pipeline Taishet – Nakhodka.

The port of Vanino specializes in handling coal, timber cargoes, alumina, metals, refrigerator and container cargoes, machinery and equipment, mineral fertilizers, ore concentrates. Negotiations for purchasing the port’s controlling block of shares by the holding “Russian aluminum” are under way. In this connection the port has prospects for additional handling of 4.5 mln t of coal, 300 thousand t of bauxites, and 300 thousand t of aluminum. Coal and bauxites used to go via port of Vostochnyi, and now they are redirected to the Tatar Strait. The program “Modernization of the Russian Transport System” envisages construction of a coal terminal in Vanino with the throughput capacity of 23 mln t and estimated cost of 150 mln US dollars (taking into account expanding carrying capacity of the Far-Eastern Railway).

A number of projects for the improvement of seaport infrastructure in the Russian Far East are planned for the nearest future, specifically under the Federal target program “Modernization of the Russian Transport System (2002-2010)”, namely:

- in Vostochnyi port construction is planned of handling facilities for liquefied gas, with the capacity of 1 mln t per year, methanol transshipping at berth N 39-a with the capacity of 1 mln t per year, and handling facilities for oil products with the production capacity of 4 mln t per year;

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<sup>1</sup> The Ports of the Russian Far East// Russian Seaports. – 2002. – N4

- in Nakhodka port construction is planned of handling facilities for general cargoes and containers at berth N 8, with the production capacity of 560 thousand t per year.
- in Vanino port construction is planned of handling facilities for perishable goods with the capacity of 120 thousand t per year; construction of specialized handling facilities for coal with the capacity of 12 mln t per year;
- 2<sup>nd</sup> construction stage of handling facilities for bulk-oil cargoes in the port of DeKastri, with the production capacity of 10 mln t per year.

In addition, in the Far-Eastern ports reconstruction is envisaged of the handling and production infrastructure facilities in the amount of 6.5 bln rubles.

#### Cross-border transport passages.

In the Russian Far East there operate six motor-vehicle frontier check-points. There are three railway frontier check-points in the region: Grodekovo-Suifenhe; Makhalino-Hunchun; Khasan-Tumenjiang.

#### Railways

There are two major Russian railway lines passing throughout the territory of the Russian Far East: the Trans-Siberian and Baikal-Amur lines. About 45% of the railways are electrified.

In 2002 cargo transportation made up 375 mln t, including 55 mln t of foreign trade cargoes, of which 51.1 mln t went for export and 2.3 mln t were imported. The dynamics of cargo carriage in specialized container trains by the Trans-Siberian railway shows positive trend (Fig.3).

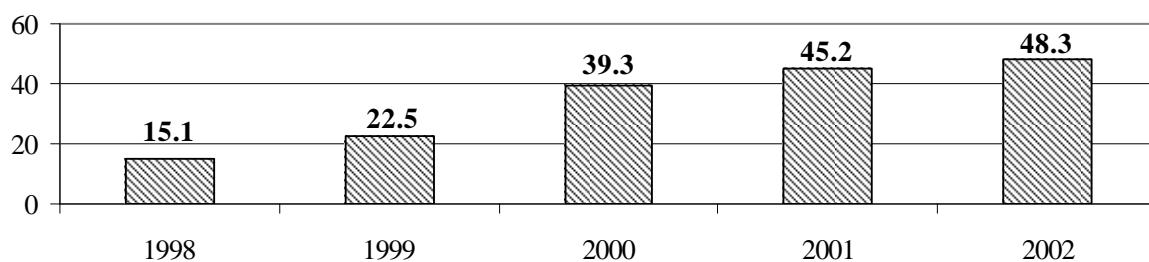


Fig.3 Cargo transportation in container trains by the Trans-Siberian railway (in thousands of TEU)

Source: The official site of the company “RGD” (“Russian Railways”) <http://www.rgd.ru>

In 2002, the total volume of transit cargoes transportation by the Trans-Siberian railway was 1.6 mln t, where 20% of transit carriage was servicing China's connections, 70% - South Korean

connections with European countries, 10% - Japan's links with countries of Europe and Central Asia.

The share of the Trans-Siberian railway in the world market of container traffic makes up only about 1%, with large prospects for growth.

### Motor Transport

In the East the Russian Federation has a common overland border only with the Chinese People's Republic. Transit over the territory of China and North Korea being impossible, practically no international motor transportations have been carried out in the NEA region. On the border with China there operate 14 motor-vehicle check-points. The major check-points are Pogranichnyi and Poltavka, which in 1998 were passed through by 25% and 35% respectively (29.2 and 40.1 thousands) of all motor transport vehicles.

### *Prospects for natural resource transportation in the NEA region*

The NEA region has developed a transportation system which is fundamentally different from the one in European countries, whose basic features are:

1. The existence of several independent subregional overland transport networks: Asian overland automobile and railway transportation links having direct access to Europe (including main lines on the territory of Russia and China);
  - practically autonomous overland communication system of the island state – Japan;
  - induced autarchy of the overland transportation system of North Korea;
  - highly differentiated level of development of domestic transportation systems of countries in the region.
2. Vast spaces, hence the main connecting link here is the ocean. The overall system of maritime traffic acts as a connecting link for the most of intraregional and international transportation. The sea transport carries a large part (70-80%) of all foreign trade cargoes in the region. The growth in the volume of transportation in prospect may be restricted by only two factors: reduced production capacities of the seaports and lack of fleet tonnage. At present these problems are not urgent.

The development of Northeast Asia's transportation system, the possibility of its integrating the transport system of the Russian Far East in many ways depend on the patterns chosen for natural resources transportation.

The basic development trends of natural resource transportation and the problems related to the formation of cargo traffic are the following:

- Intensifying oil and oil products transportation by railway transport and via seaports of the Russian Far East. The preconditions are: development of the Sakhalin shelf and construction project of a pipeline Angarsk-Nakhodka. Transportation under the Sakhalin shelf operation project involves the work of the ports of Kholmsk and Korsakov, which act as ports of transshipment and supply bases for oil fields. Oil transportation is also performed by the ports of DeKastri and Nevelsk, which formerly functioned as a timber port and a fishing port, respectively. Oil- and gas pipelines have been built running through DeKastri, from the Sakhalin shelf to Komsomolsk-on-the-Amur. Formerly oil cargoes were carried in tanks by railway from Komsomolsk-on-the-Amur to Nakhodka, where in the oil-loading port they were pumped over to tankers. At present tankers' loading occurs in DeKastri where there is a pipeline, a pumping station, and a marine terminal. This enables cutting transport route of the carriages. In prospect it is planned to extend the pipeline to the port and build a floating storage which will be capable of loading tankers with the tonnage of up to 100 thousand t. The capacity of oil export terminal is proposed to be increased up to 10 mln t a year. The implementation of the construction project of a pipeline Taishet-Nakhodka will make it possible to increase the port's cargo turnover. In this connection it is advisable to build oil terminals in seaports.
- Intensifying coal transportation. The operation of Elginskoye coal deposit in Yakutiya will make it possible to expand utilization of the Baikal-Amur railway and the seaports by 15-20 mln t of cargo annually. Starting the deposit development is only possible after finishing construction of the rail line from the Baikal-Amur railway (from station Ulak to Elga, 316 km). The rail is planned to be made single-track with 21 sidings, the construction of 119 small and 57 large bridges, as well as one tunnel, the carrying capacity of the railway being designed of 20 mln t per year<sup>2</sup>. Export of coal is planned via the ports of Vostochnyi and Vanino. The capacity of the coal terminal in Vostochny is 12 mln t per year. Already now it works in excess of this volume. The analogous situation can be observed in Vanino. Here specifically for the coals of Elginskoe deposit the construction of a terminal is planned, with the capacity of 10 mln t per year. To handle this amount of cargo traffic, it is necessary to

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<sup>2</sup> Determining the Place and Role of the Republic of Sakha (Yakutiya) in the Development of Power Industry in the Khabarovsk Territory. – Yakutsk, 2003. -73 p.

also increase the capacity of the port railway stations, which might become an impeding element in expanding shipping operations.

- One of the goods showing much promise, which provides at present the load of the transport system, is metal. It is usually carried by ocean transport, though the rules for metal transportation for export are determined by the railway tariffs and the quality of the transportation services rendered. To have an uninterrupted and reasonable in prices transportation process, major metallurgical companies set up their own transport companies and use their own vehicles. In recent years this scheme has included trading seaports as well, whose sizeable packages of shares are acquired by metallurgical works and affiliated companies.
- One of the principle trends to improve the quality of transport services rendered should be closer cooperation of different modes of transport, above all implying work coordination. The negative results of the lack of coordinated actions are demurrages of cars in seaports in wait for discharge or loading, or underutilization of marine terminals because of untimely arrival of cargoes by rail (in the first quarter of 2003 alone the ports denied handling 3.5 mln t of cargoes due to unavailability of the ships in that period). This problem can be solved by building a uniform system of information exchange among railways, which are main traffic arteries leading to ports, and the sea terminals.
- Preventing China from direct access to the sea. The proposal on long-term leasing the port of Zarubino to China is being actively discussed. It is offered to supply to the port one more track of the Chinese standard in the direction of Zarubino-Hunchun and to build a container super-terminal with the capacity of up to 100 thousand TEU per year. With such volume of transshipments, the port could be one of the largest in the NEA region. China is also interested in using Russian ports for exporting its coal to the USA and Japan. Therefore it is ready to invest in the development of railway and port infrastructure on another's territory.
- Improving railway access port stations and cross-border passages, whose facilities are often not adequate to the port ones.