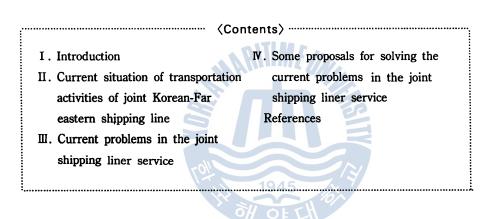
Current Problems in Transportation Activities of Joint Korean-Far Eastern Shipping Line and Some Proposals for Solving Them*

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I. Introduction

Since mid-1980s the progress in talks and establishment of full diplomatic ties between Korea and Russia increased trade, tourism and cultural exchanges.

The impact of the above economic and political developments on foreign trade can easily been identified through statistical tables published. Korean foreign trade with Russia

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grew from US \$ 150.5 million in 1987 to US \$ 859.1 million in 1992.

Since road and rail transportation system is not available between Russia and Korea via North Korea at the moment, all trade goods must be carried by sea. In such circumstances, a direct shipping line was established between Port of Pusan and Port of Vostochny in July 1991.

This paper aims to identify current problems in the line and to suggest some proposals and ideas in order to solve the problems. This research was based on field surveys and interviews carried out by the author in Korea, Russia, and Japan from 1991 to 1993.

II. Current situation of transportation activities of joint Korean-Far eastern shipping line

ARITIME /

The line provides joint service, i.e. two calls per week between Port of Pusan and Port of Vostochny. The service was made by the Korean party, Korea-Soviet Shipping Company, Ltd.(KSSC), which was launched by the Hyundai Merchant Marine Co., Ltd., the Chun Kyung Shipping Co., Ltd., and the Russian party, the Far-Eastern Shipping Company (FESCO). Each party provides one ship to the joint service. M/V "Trade Luck" (430TEU) has been employed by the Korean party from July 1991 until now. She will be substituted by "Hyundai Vostochny" (439TEU) in the end of February, 1994. FESCO put M/V "Kapitan Gnezdilov" (320TEU) in the service from starting point until March 1992 and replaced her with M/V "Aleksandr Tvardovsky" (400TEU) from April 1992.

Each party is responsible for operating its own ship at its own expense; it pays all operating expenses of the ship, including wages, fuel, repairs, consumable stores, cargo handling and port charges. In other words, two fully-manned and provisioned ships are employed to ensure two calls weekly at each port in the joint service. The agents appointed by FESCO and KSSC, which are the Transorient Shipping Co., Ltd. in Seoul and the Asia Merchant Marine Co., Ltd. in Pusan, perform all the normal services to two ships and her masters.

Table - 1 shows container cargo volume carried by two ships from 1991 to 1993 by month.



Table-1 Continer Cargo Volume by Month in Pusan/Vostochny line

(Unit: TEU)

| MONTH | | 1991 | | | 1992 | | | 1993 | | |
|-------|-----|--------|-------|--------|--------|-------|--------|--------|-------|--------|
| | | DIRECT | TSR | TOTAL | DIRECT | TSR | TOTAL | DIRECT | TSR | TOTAL |
| JAN. | E/B | 675 | 379 | 1,054 | 228 | 454 | 682 | 393 | 353 | 746 |
| | W/B | 996 | 365 | 1,361 | 2,121 | 579 | 2,700 | 802 | 523 | 1,325 |
| FEB. | E/B | 409 | 112 | 521 | 165 | 565 | 730 | 784 | 976 | 1,760 |
| | W/B | 904 | 190 | 1,094 | 1,435 | 360 | 1,795 | 1,258 | 713 | 1,971 |
| MAR. | E/B | 840 | 252 | 1,092 | 288 | 491 | 779 | 632 | 718 | 1,350 |
| | W/B | 1,265 | 600 | 1,865 | 1,812 | 595 | 2,407 | 1,403 | 728 | 2,131 |
| APR. | E/B | 974 | 250 | 1,224 | 106 | 177 | 283 | 494 | 325 | 819 |
| | W/B | 990 | 493 | 1,483 | 1,561 | 536 | 2,097 | 945 | 542 | 1,487 |
| MAY. | E/B | 698 | 205 | 903 | 103 | 260 | 463 | 814 | 403 | 1,217 |
| | W/B | 685 | 280 | 965 | 638 | 467 | 1,105 | 1,463 | 625 | 2,088 |
| TTDI | E/B | 512 | 66 | 578 | 197 | 253 | 450 | 560 | 219 | 779 |
| JUN. | W/B | 420 | 210 | 630 | 636 | 311 | 947 | 1,338 | 508 | 1,846 |
| JULY. | E/B | 194 | 857 | 1,051 | 373 | 241 | 614 | 640 | 500 | 1,140 |
| | W/B | 336 | 382 | 718 | 758 | 629 | 1,387 | 1,237 | 771 | 2,008 |
| AUG. | E/B | 259 | 771 | 1,030 | 275 | 165 | 440 | 660 | 602 | 1,262 |
| | W/B | 593 | 603 | 1,196 | 1,040 | 487 | 1,527 | 1,390 | 427 | 1,817 |
| SEPT. | E/B | 293 | 213 | 506 | 409 | 347 | 756 | 796 | 300 | 1,096 |
| | W/B | 526 | 369 | 895 | 1,129 | 650 | 1,779 | 1,746 | 706 | 2,452 |
| ост. | E/B | 250 | 215 | 465 | 523 | 439 | 962 | 744 | 464 | 1,208 |
| | W/B | 534 | 623 | 1,157 | 1,318 | 877 | 2,195 | 1,361 | 355 | 1,716 |
| NOV. | E/B | 362 | 359 | 721 | 383 | 508 | 891 | 1,118 | 538 | 1,656 |
| | W/B | 841 | 436 | 1,277 | 1,079 | 479 | 1,558 | 1,827 | 565 | 2,392 |
| DEC. | E/B | 340 | 324 | 664 | 540 | 624 | 1,164 | 829 | 331 | 1,160 |
| | W/B | 3,180 | 977 | 4,157 | 1,269 | 489 | 1,758 | 2,214 | 257 | 2,471 |
| TOTAL | E/B | 5,806 | 4,003 | 9,809 | 3,590 | 4,624 | 8,214 | | + | 14,193 |
| | W/B | 11,270 | 5,528 | 16,798 | 14,796 | 6,450 | 21,255 | 16,984 | 6,720 | 23,704 |

Source: Korea-Soviet Shipping Co., Ltd. (1994)

As can be seen from Table-1, container cargo volume began sharply to decline from mid-1992 due to temporary distruption of loan agreement between Korea and Russia. However, according to aid policy of U.S.A. for the Commonwealth of Independent States (CIS), the transshipment cargo volume mainly through the Sea-Land service began to increase from October 1992. The cargo mainly consists of rice, wheat flour, and food. It is expected that this transshipment keeps a certain level for the time being and supports



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to increase container cargo volume between Port of Pusan and Port of Vostochny.

While major commodities of the Korean export trade consist of manufacturing and consumer goods, e.g., T.V. set, refrigerators, second-hand cars, shoes, clothes, and wooden furniture, Korean import commodities mainly consist of timber, iron and steel bars, zinc, fish product, cotton, copper, foodstuff fertiliser, etc.

Let us now turn our attention to the current situation of Port of Vostochny. The construction of Vostochny Port was begun in the bay of Wrangel in 1970 according to the USSR government's decision, and was necessitated by the following circumstances. The first and foremost this was due to accelerated development of Siberia and Far-Eastern regions. It is worthwhile to mention also that the centre of business activity has begun to be shifted to Asian-Pacific region. Rapid economic development of Japan, Singapore, Hong Kong, Korea, China, and some other countries of this region brought about a considerable broadening of trade relations with Far-Eastern Russia and West European countries; increased volume of trades; engendered new cargo flows; inspired bigger goods turnover. It was not by chance that construction of the port coincided in time with laying of Baikal-Amur railroad mainline.

A new, up-to-date, large port became an urgent necessity, capable to meet requirements of Far-Eastern region in sea trades and demands of the USSR foreign-trade relations with countries in Pacific-rim area. The port with round-the-year navigation, deep water enough to handle the largest bulkers has been also connected by auto-railroad routes

Table-2 Structure of Cargo Flow in 1990 in Port of Vostochny

| Name of Cargo | Volume(thousands tons) | % of the total volume | | |
|---|------------------------|-----------------------|--|--|
| Timber cargoes: | 701.8 | | | |
| — timber | 345.0 | 3.0 | | |
| technological chips | 356.0 | 3.1 | | |
| Bulk cargo: | 8,702.0 | | | |
| — Coal | 8,017.7 | 70.4 | | |
| - construction sand | 684.3 | 6.0 | | |
| General cargoes in containers | 1,916.4 | 16.8 | | |
| Cars and lorries | 16.3 | 0.2 | | |
| Chemical cargoes | 45.1 | 0.4 | | |
| Other Cargoes | 11.4 | 0.1 | | |

Source: Vostochny Port(1991).



with other cities in Russia and Europe and has access to Trans-Siberian and Baikal-Amur railroads.

As shown in Table – 2, cargoes currently handled at the port are: coal, timber, technological wood chips, ISO containers, cars, general cargoes, sand.

Every year the port is called by 1,500 ships of different types, including bulkers of up to 150,000 dwt and carrying flags of all countries of the world.

Container complex of the port is one of the largest in Far-East Russia as regards the length of berth line, dimensions of storage spaces, number of reloading equipment as well as volumes of container handling. The complex executes the full set of operations: loading/discharge of vessels, receipt/dispatch of containers by railroad and motor transport, packaging/unpackaging of containers in the storehouse. Besides there are a berth to handle ro-ro ships and storage site to transship motor cars.

In direct proximity from the complex there is a plant for repair of containers. Some minor repairs can be made at a specially equipped site at the complex itself. There are shops for maintenance and repair of reloading equipment.

The first complex's berth No.8 was put in operation in May 1976. These days the complex includes four berths: No.8, 7, 6, 5 as can be seen in Figure -1.

Berths No.8 and No.7 have overall length of 662m and depth 11.5m. The two berths employ technological scheme which provides for the use of wheeled berth loaders. Receipt of containers from motor transport is provided at the control point at the gates of the complex, which is equipped with automatic balance.

Loading/discharge of railcars is made at railroad front, equipped with four travelling gantries of 30.5t capacity each. The two crane branch lines can accommodate a train of 50 railcars.

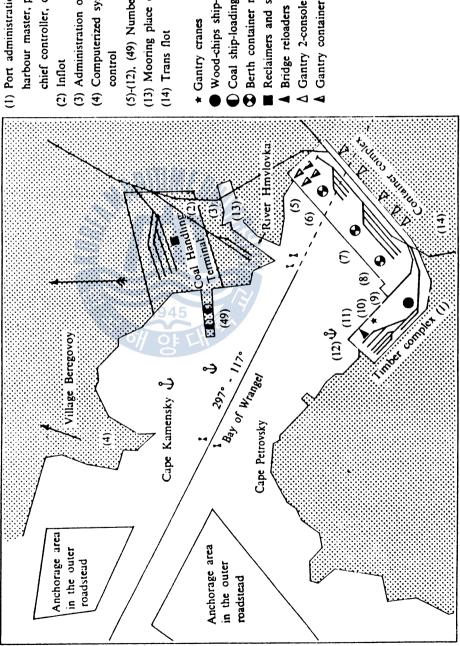
Each berth is installed with two gantry reloaders. Berth No.8 has a storehouse of 189m in length and 60m in width. The storehouse has inner rail track capable to simultaneously place of up to six railcars. Storage sites of berth No.8 and No.7 can stow about 7,000 containers in two tiers.

Berths No.6 and No.5 have an overall length of 624m and depth of 13m. Berth No.6 is equipped with two gantry reloaders, five rail travelling cranes in storage area and two more of the kind at the seaside front. An overall equipment's capacity is 30.5t. Containers are stored at the sites in 4-tier stacks.

Berth No.5 is prepared for assembly of equipment. It is analogous to berth No. 6. and the total terminal's throughput capacity will account for over 300,000 containers a year.



Figure-1 Plan-Scheme of Vostochny Port



- chief controller, controller's office. (1) Port administration, office of the harbour master, pilot service,
 - (2) Inflot
- (3) Administration of port fleet
- (4) Computerized system of navigation control
- (5)-(12), (49) Numbers of berths
- (13) Mooring place of port fleet (14) Trans flot
- * Gantry cranes
- Wood-chips ship-loading machines
 - Coal ship-loading machines
- ◆ Berth container reloaders (portainers)
 - Reclaimers and stackers
- Gantry 2-console cranes (transtainers)
 - Gantry container cranes



III. Current problems in the joint shipping liner service

1. Low reliability of service

For many customers served by a liner, they consider some or all of the following aspects of the service as important as ocean freight: frequency of sailings, speed of transit, reliability of service, quality of service, space availability. For these reasons, although customers of the liner service are likely to take a keen interest in the ocean freight, this is a situation where the shipper and the liner company are bound to recognise non-price competitive factors above.

In particular, some customers are likely to value reliability of service, in terms of adherence to published sailing dates and confidence that the service will continue in depressions as in booms.

One of current problems we can draw from the joint shipping line between Pusan and Vostochny is that reliability of service was in particular very low in the period between the beginning of December and the end of February due to high seas near Port of Vostochny. As a result, a ship's departure time from the port was delayed and it thus caused to delay a call in Port of Pusan. It is reported that two ships employed in the route did not perform regular services as published time schedule during the past years.

2. Poor port facilities

Container handling equipments are generally deteriorated and often out of order in Port of Vostochny. It takes much time to repair them due to short of spare parts. In addition to this, they often do not work due to short of industrial electric power in Primorsk region.

3. Poor management capacity

Under good quality of service we can include safe transit for the container cargo, freedom from handling damage, pilferage, prompt and accurate administration, and the provision of a range of through transport services. All operations at the complex are computer



controlled.

The field surveys and interviews showed that M/V "Kapitan Gnezdilov" put into the service from July 1991 did not prepared in advance documents for customs cargo clearance before entering to Port of Pusan and thus the local agent Asia Merchant Marine Co., Ltd. collected all inforantion directly from the Russian ship calling in Port of Pusan and prepared them. It caused her to delay considerable time. Thus, KSSC installed INMARSAT on her in order to avoid such delay but she was replaced her with M/V "Aleksandr Tvardovsky" (400TEU) from April 1992.

4. Poor Port MIS and No Cargo Tracking System

The automated management system is designed to control transshipment of ISO containers and allows for advanced planning of cargo operations before arrival of transportation means to port; prepares cargo papers; charges payments for transshipment and storage of cargoes; provides all necessary information on transportation process. Such system is not completely operated at Port of Vostochny. This is linked to the fact that the main reasons of TSR cargo traffic reduction against the trend of the cargo volume growth on the Far East-Europe trade route are uncomputerized services and long transit time, and no cargo tracking system.

5. High bureaucratic system at Port of Vostochny

Customs cargo clearance has become a very complicated procedure. This has been due to the existence of five major factors. These include strict government control of exports and imports; the licensing of exports and imports; financial considerations for revenue purposes embracing hard currency; statistics exports and imports trades; and, lastly, the documentation requirements for all exports and imports arising out of the other four factors. It seems that these factors are not exception and rather more serious in Russia. The field surveys and interviews showed that it took about one week to transfer containers unloaded from a container ship to train and to make it depart for Trans-Siberian Railway (TSR) transport. Thus, coupled with extraordinary delay of cargo handling in Vostochny, it makes main advantages of TSR discolour.¹⁰

¹⁾ G. A. Levikov, "Trans-Siberian Container System: Some Problems, Ways of Solution", in *Current Issues in Maritime Economics*, International Conference at the Erasmus University, Rotterdam, June 20—22, 1991, p. 2.



6. Russian crew's poor job attitude

After bewildering change at the political level, the countries of CIS are now adjusting to breathtaking economic reform. Since 2nd January 1992, the Russian government committed to capitalism's values and methods has set both Russia and the other former republics on course for integration into the world market. Free prices, privatisation, rouble convertibility: these are no longer just concepts on politicians lips, but fast becoming reality.

However, it seems that the Russian crew are less oriented to capitalism and have no cost and time consciousness in operating ships, despite that time and cost are very important factors in liner shipping. The interviews say that they are much more interested in commodity trading like peddler in England in the sixteenth century than in their own job. In addition, frequent change of Russian crew on the same ship caused them to lose opportunity to accumulate know-how in handling container cargo as well as in operating a ship in the liner route of Pusan/Vostochny.²⁰

7. Difficulties to collect empty containers

As shown in Table-1, the 16,798TEU were handled for out-bound compared with 9,809 TEU for inbound in 1991. Among 9,809TEU for inbound, empty containers amounted to only 25% of total out-bound container. Leaving aside time lag to collect them, the rate to collect them is very low compared to other liner routes.

In addition to this, the container transportation eastward is highly limited in TSR and correlation of the number of containers carried westward and eastward is 2 to 1. As a result of traffic imbalance between western and eastern directions, there arise serious problems in organising and arranging empty containers for exports from the Far East.



²⁾ The operational needs of container line are assessed on an assumed number of voyages and cargo operations in a given period. The support services activities are based on experience and observations, being largely of a routine nature. J. H. Downard, *Managing Ships* (London: Fairplay Publications, 1984), p. 120.

IV. Some proposals for solving th current problems in the joint shipping liner service

Some current problems have been drawn from joint Korean-Far eastern shipping line between Port of Pusan and Port of Vostochny above. Some ideas and proposals for solving them can be suggested as follows:

First, to increase quality of service and reduce ship's time in port, it is necessary to establish port MIS at Port of Vostochny. This system must be not only designed to track cargo system as well as to provide customers with cargo and relevant information. It should be also linked to TSR system, which is directly related to the joint shipping line. It seems that such system is unlikely to be equipped very near future under present economic situation in Russia. However, either military tracking system or technical assistance and financial support from Korean side with cooperation of other shippers can be provided for establishing port MIS and cargo tracking system.

Second, as one of ways to secure considerable container cargo volume in the joint shipping line, Pusan Port Authority needs to strengthen the function of transshipment in Port of Pusan. Transshipment volume of container cargo through Sea-Land service and from China gives us some implications on the direction of development of the joint shipping line.

Third, Korean party must proivde Russian party with advanced management technique in order to increase efficiency in ship's operation and to keep reliability of service.

Fourth, the reward and penalty system must be introduced in the joint service and may be helpful to encourage each party to adhere to the published time schedule and prescribed service level as agreed between two parties.

Fifth, to let Russian crew acquire know-how in ship's operation and business practice in capitalistic conditions, Korean party must ask Russian party not to change Russian crew frequently.

Sixth, it is desirable to establish regional and international port associations, which can demonstrate their dynamism and serious approach to identify current problems in port operation and management and to promote its productivity and efficiency in Port of Vostochny.

Seventh, associated with the sixth proposal, the various types of port training and technical cooperation programmes available from bilateral and multilateral sources can be suggested in order to develop Port of Vostochny.

