The Current State of the ROK's Railways and Ways of Connecting Railways Between South and North Korea (Summary)

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1. Introduction

Recently, the potential for linking the railways of North and South Korea, which have a total of 316.6 km of track missing, has been increasing rapidly. On the Gyungui line, a trunk line connecting Seoul, Pyongyang, Sinuiju and China that runs along the west coast of the Korean Peninsula, 12 km of track is disconnected on either side of the DMZ (demilitarized zone). The Gyungwon Line, which runs along the east coast, connecting Seoul, Wonsan, Rajin, Khasan and Russia, has a total of 31 km of track missing on both sides of DMZ.

The plan to connect the missing sections of railway between the north and the south has its origin in an agreement concluded during the historic South-North summit meeting held in Pyongyang in June 2000. On 18th September that year, a ceremony to mark the commencement of work to link railways and roads between the countries took place and work on the West Coast Line began.

The ROK has already completed its share of work on the Gyungui line, but work on the DPRK side has not yet finished. As there was a line running to Shinuiju from Busan, via Seoul and Pyongyang before 1948 and the two countries share the same technical and hardware standards, there should be no major technical problems in linking the two sides of the Gyungui line. However, railways in the DPRK are very old and in need of modernization, with trains only able to run at 30-40 km/h at present.

The ROK is currently making preparations for admission to the Organization for Railway Cooperation (OSJD), which is one of the main institutions coordinating international freight transportation, including that on the Trans-Siberian Railway.

An agreement was concluded by the DPRK and Russia on 14th August 2001, regarding the mutual dispatch of engineers and consideration of the issues involved in linking the two countries' railways, given that they use different gauges.

In 2002, work to make the TSR line an electrified, double-track line along the whole of its length was completed.

Recent rapid changes, including the linkage of the railway between the two Koreas, will have significant effects on railways in Northeast Asia. Therefore, it is important to consider the current state of and future plans for railways on the Korean Peninsula.

2. The current status and development of the ROK's railways

The transport system in the ROK is mainly road-oriented, resulting in the railways accounting for only 8% of all passengers and 1.2% of all freight in 2002. The country's road-oriented policy has given rise to significant social costs, which have been calculated as costing the country 1.9 billion won, or 3.7% of GDP, as a result of road traffic congestion. The role of the railways has also been

reevaluated in terms of energy, the environment and safety. The ROK has therefore established a National Transport Masterplan for 2000 to 2019, in which the railways play a bigger part, with the total distance covered by rail services being enlarged from 3,129 km to 5,000 km and work being carried out to ensure that 78.4% of railway lines are double-track lines and 86% are electrified. The reasons for the increased emphasis on rail transport are its ability to transport large volumes of passengers and freight, while also relieving atmospheric pollution.

The ROK is currently promoting four projects aimed at strengthening the role played by the railways:

1) The construction of a high-speed railway that will lead to the introduction of trains running at 300km/h from Seoul to Busan, taking 2 hours 40 minutes to cover the 444.3 km distance. This project is due to be completed in April 2004.
2) The connection and rebuilding of the Gyungui line linking the two Koreas to form a TKR (Trans-Korean Railway) that will ultimately connect the ROK with the TSR and Northeastern China.
3) The expansion of the urban railway network, which lacks the capacity to deal with metropolitan transport, with the aim of increasing the size of the network threefold on 1999 levels by 2020.
4) The privatization of the state-owned KNR (Korea National Railroad), in order to improve efficiency. However, this project has been dogged by protests from the labor union, which is vehemently opposed to privatization.

KNR began operating in 1899, running a service on 32.5 km of track between Seoul and Incheon, and has spent the last 104 years as a government enterprise, leading to inefficiency and insufficient competition. Government regulation has failed to make it market-oriented. The total number of kilometers covered by the ROK's railways per thousand people is only one-third to one-ninth of the figure for such advanced countries as Japan, Germany and France.

3. The current state of and ways of connecting railways between South and North Korea.

There is a big difference between the condition of rails in the ROK and those in the DPRK: the DPRK has a more extensive rail network and a greater percentage of its track is electrified. However, the ROK has a more modern network, with an automated signal system, higher average speeds for trains and a higher percentage of its lines being double-track, something that is due to the difference in the level of economic development between the two countries.

I would therefore like to suggest a way forward for connecting the railways of the two countries, in a way that will improve the current international freight transportation system, with a particular focus on upgrading the DPRK's railways.

Firstly, all missing sections between the ROK and the DPRK must be connected, including the Gyungui and Gyungwon lines, thereby linking the ROK with Europe by means of the TSR and TCR.

Secondly, the construction of a modern railway system should be promoted, including the introduction of automated train control and automated signal systems, the strengthening of the railbed and the enlargement of transformer substations. In addition, the average speed should be increased to 70-80 km/h, in order to be competitive in the international freight market.

Thirdly, a new type of locomotive that can run on both direct and alternating current must be devised, as well as a system for tracking freight movements and a system that will allow trains to move freely along rails of different gauges.

Fourthly, a logistics center that will handle freight efficiently must be built, covering about 15 acres.

Fifthly, unified through consignment notes will be required, in order to ease the passage of cargo through customs checkpoints, especially in border areas.

Finally, the idea of creating a joint Northeast Asia railway study council and a block train company for the region will be actively pursued.

4. Conclusion

If these proposals are carried out, the connection and operation of railways between the two Koreas will promote mutual cooperation and the revitalization of the railways, while yielding economic benefits and new business opportunities.