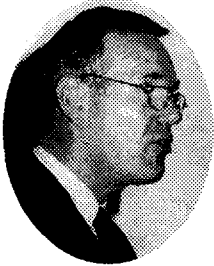


## Impressions of a Guest from Europe on the RailTech Vision Conference



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Ten years have passed since my last visit to Korea on the occasion of the International Symposium on High Speed Rail Systems organized by the Korean Transport Institute in October 1989. At that time, it was the objective to introduce the maglev and VHSR (very high speed rail) systems with their different areas of application and to discuss them with local partners against the background of the Seoul-Pusan HSR project. Congratulations on the success of the Centennial seminar. I am much pleased to be invited to the memorable seminar and I would like to express my sincere gratitude to Korean members' hospitality.

In the meantime, construction of this line is well under way with some civil works already completed - congratulation on this progress.

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• 편집자 주 : 이 글은 Wolfgang Henn 박사가 9월 16일 교육문화회관에서 개최된 한국철도 100주년 기념 국제 세미나 Railtech Vision 21에 참가한 소감을 적어 보내 온 것이다.

This year's Rail Tech Vision Conference which coincided with KNRs 100th anniversary provided an excellent opportunity to assess the present situation of railways in general and the Korean Railways in particular. In addition to the economic and entrepreneurial aspects, the technical features of urban and long-distance rail transport was the focus of much attention.

Furthermore, the foreign guests were impressed by the presentations of the Korean colleagues and the superb organization by KRRI.

The similarity of challenging tasks at hand and the possible solutions as outlined by many speakers should provide a common basis for a further cooperation between the Korean and foreign experts. In this connection, KNRs statement in the Opening Session that in addition to the construction of new lines, the upgrading of existing lines will be of particular importance in future, should be pointed out

again. This is exactly the direction that has been followed in Europe and in my country for years.

New lines sustainably improve the competitiveness of the railway in highly frequented corridors. However, only in combination with the qualitative upgrading of the existing lines the maximum possible success can be achieved for the railway network-wide. Therefore, new lines plus upgraded lines safeguard the future of the railway - there is no alternative. In France, for example, the TGVs cover all important regions of the country even outside the new-lines-network. ICE trains of the Deutsche Bahn AG on their journey routes across Germany on average run on less than 50 % new lines with  $v_{max} = 280$  kph, whereas the longer sections on upgraded and old lines allow  $v_{max} = 200$  kph.

Thus, it seems sensible - as called for recently in Korean newspapers - to also methodically upgrade the network in the southern and western parts of the Korean Peninsula until the new high-speed line will be operational. It was mentioned that if this plan be realized, it will take less than 3 hours from Seoul to Mokpo, 1 hour 40 minutes from Seoul to Janghang, 2 hours 40 minutes from Seoul to Masan. All the major cities in South Korea will be connected in less than 3 hours. If the benefit of high speed railway is limited in only the Seoul-Pusan Axis, the residents living in other regions will be complaining, in addition to the loss of the not fully utilized market potential from the railway point of view.

A sophisticated operating concept has to be the basis of these measures on the infrastructure

of the lines to be upgraded taking into consideration the KTX trains which also have to operate on these busy lines. The concept is characterized by the considerably longer operating occupancy of the lines and stations and higher speed of the trains.

The upgrading measures can include alignment improvements, construction of additional line and station tracks, modifications of tunnels, strengthening of bridges and permanent way, electrification as well upgrading of signaling and telecommunications equipment. Here, the definition of the upgrading standard as only as good as necessary is a great challenge for the design engineers as well as the implementation of these upgrading measures without obstructing ongoing operations. Tailor-made solutions are required in any case.

The use of tilt-body vehicles on existing railway lines allows trains to run much faster in narrow curves - after appropriate upgrading measures - with high ride comfort for passengers. Thus, travel times can also be reduced without major line improvements. The travel times are reduced according to the length and alignment characteristics of the existing lines by up to 20 % as compared to conventional trains.

For more than five years, the railway experts of Deutsche Bahn AG / DE-Consult have been involved in the construction supervision of the high-speed railway line Seoul-Pusan together with Korean engineers and have been assisting with our experience. The cooperation on this challenging national project can only be described as excellent. We are convinced that

together we will conclude this project successfully. We would like to

continue this cooperation with the Korean railway engineers and even extend it also to the upgrading of existing lines.

The construction of new lines, upgrading of the existing network and the use of tilting trains open up an entirely new era for the Korean National Railway. This is further emphasized by the prospect of reunification - as has been the case for us in Germany. Therefore, I hope that we, the German railway engineers, may continue

to cooperate with our Korean colleagues in future.

I cannot conclude my impressions on the Rail Tech Vision Conference without extending to KRRRI my appreciation for the superb organization of this excellent conference. I am particularly grateful to Dr. Ki-Heung Han of KRRRI for showing me the beautiful Chang-Duk-Kung Palace and taking me to the Nam-San TV-Tower in Seoul with its magnificent view of this thriving metropolis.