VELOPMENT OF RAILWAYS IN MANCHOUKUO

By

CHOKYURO KADONO

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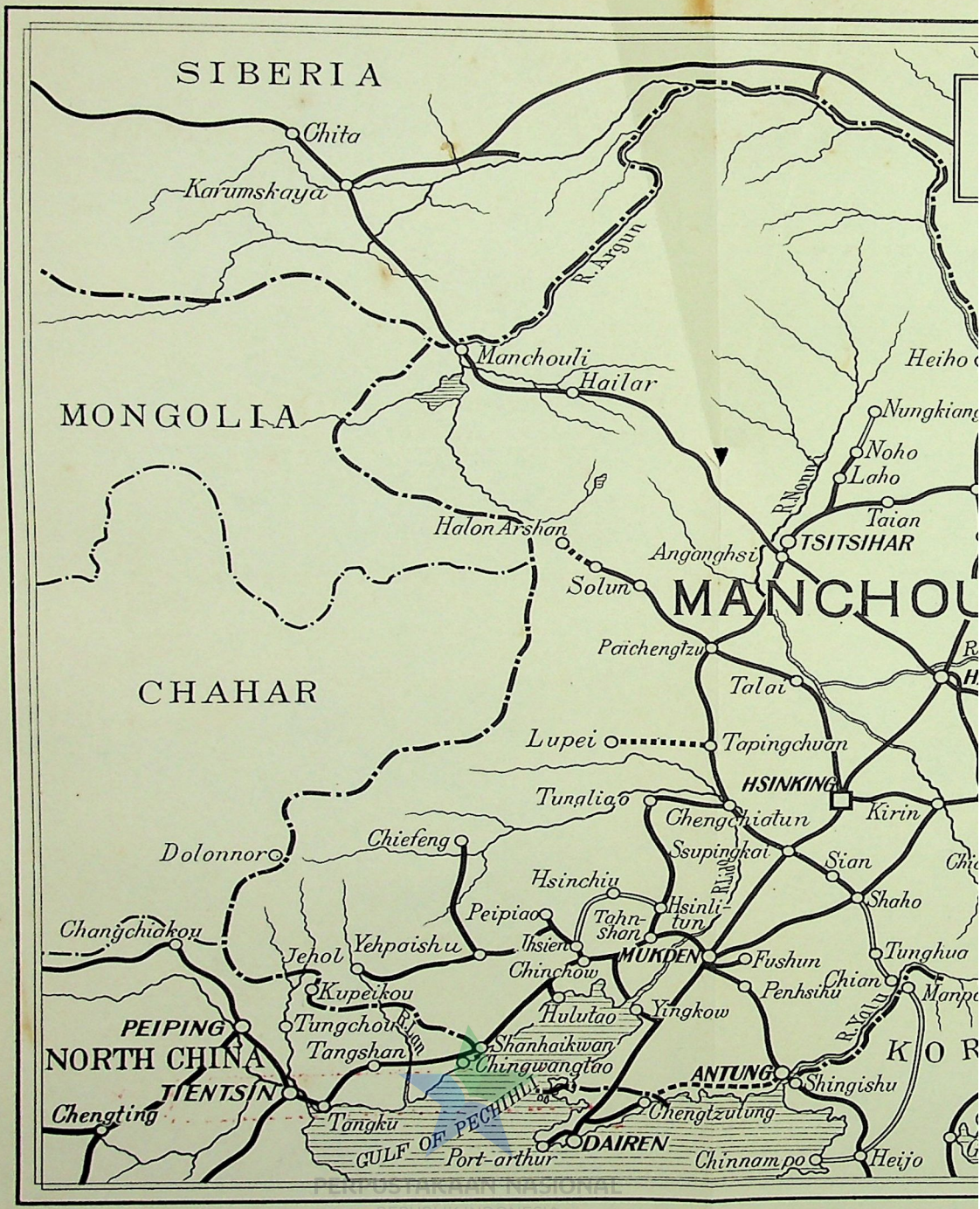
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CHAPTER I

INTRODUCTION

RAILWAY development in Manchuria progressed in close relationship with the varying tides of the political and military influences of the many foreign Powers interested. In the early stages, unfortunately, railways were built, not with the idea of having them serve as forerunners of culture and civilization, but rather as instruments for the prosecution of the political and military policies of the foreign Powers concerned. As a result, for nearly half a century, Manchuria and her people were made the victims of the most intense international rivalry. History presents no better instance than this of the pernicious evil that can be wrought when railways are made to subserve the ends of aggression and selfish aggrandizement.

All that, however, has been liquidated by the founding of the State of Manchoukuo. In formulating a basic railway policy for the new state, the Manchoukuo authorities have decided upon the nationalization of the principal lines within her borders under a general unified system of management, replacing the haphazard, disjointed management of the past. And in connection with new lines to be constructed in the future, they are giving their attention first to the needs of industrial and economic development, then to the demands of national defence and peace preservation.

In order to carry out this basic policy, the authorities entrusted to the South Manchuria Railway (S.M.R.) not only the management of the existing state railways but also the construction of new lines. In 1933, therefore, the S.M.R. established the General Direction of State Railways in Mukden and the Railway Construction Bureau in Dairen to facilitate performance of the tasks entrusted to it.

Subsequently, in the spring of 1935, the Chinese Eastern Railway (C.E.R.) was purchased from Soviet Russia and incorporated into the state railway system. With the exception of a few minor private lines, therefore, the railways of Manchoukuo are divided

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broadly into two systems, *viz.* state lines and S.M.R. lines. And as these two systems are now operated, in actual practice, through the General Direction of State Railways, the advantages and profits accruing to Manchoukuo from the unification of her railways have been harmonized with Japan's special interests in that State.

The total length of railways existing prior to the Manchurian Incident did not exceed 6.219 km. But through the addition of 3.124 km. constructed during the last four years, the total has been raised to 9.343 km.,—thus showing an increase of 50 % since 1931.

The present railway system of Manchoukuo may be classified as follows (*Cf.* attached Table No. 1) :—

State Railways	7,880.1 km.
S. M. R.	1,129.1 „
Private Railways	334.6 „
Total . . .	9,343.8 km.

In addition to the above lines, there are today some 910 km. of new lines in actual process of construction which are expected to be completed within a year or two, so that it will not be long before Manchoukuo will be boasting of a railway system exceeding 10,000 km. When this total length is attained, Manchoukuo, with an area of 1,400,000 square kilometres and a population of 30,000,000, will possess 0.7 km. of railway per 100 square km. of area and 3.3 km. per 10,000 of population. While these figures, as can be seen from the following table, may show ample scope for further development as compared with the more advanced countries of Europe and America, they are more than ten times as great as in the case of China, both as to mileage of railway per unit of area and per unit of population. In fact, the railway development of recent years is quite remarkable when we consider the strides made in a relatively short period notwithstanding the numerous engineering difficulties presented, in all but the southern part of the state, by mountains, deserts and swamps. And when it is further considered that most of the outlying frontier regions are still barren and uninhabited, it cannot be said that the present railway system of Manchoukuo is necessarily deficient. It is especially worth noting that the numerous lines which now radiate from such important cities as Hsinking, Mukden, Harbin,

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Tumen, Tsitsihar and Chinchow show a distribution well calculated to form the main skeleton of the Manchurian railways.

COMPARISON OF RAILWAY DEVELOPMENT
IN VARIOUS COUNTRIES

Country	Length of rr. per 100 sq. km. of area	Length of rr. per 10,000 of population
Manchoukuo . . .	0.7 km.	3.3 km.
China . . .	0.05	0.3
U.S.S.R. . . .	0.4	5.3
Japan . . .	5.6	3.2
Canada . . .	0.7	68.2
U.S.A. . . .	5.4	34.3
Great Britain . . .	12.4	7.1

CHAPTER II

DEVELOPMENT OF MANCHURIAN RAILWAYS

The history of railway construction in Manchuria had its beginning in 1903, when the Ching Dynasty was already on the wane. In that year were opened the Chinese Eastern Railway and the Peking-Mukden Railway which had been constructed by Russia and Great Britain respectively. By that year, the oldest railway in the world, the Liverpool-Manchester Railway, had already been in operation for 78 years; the Tokyo-Yokohama line, the first in Japan, for 31 years; and the Shanghai-Wusung Railway, China's earliest line, for 27 years. Manchuria's railway history is thus of relatively recent date.

Russia completed the Chinese Eastern Railway and connected it with the Trans-Siberian line so as to strengthen her Far-Eastern policy, and thus succeeded not only in bringing the whole of Manchuria under her dominant influence but in advancing still further eastward to the point of keeping an eye on the political developments in Korea. This situation eventually led to the Russo-Japanese War. And in consequence of the Treaty of Portsmouth Japan acquired from Russia the southern division of

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the Far Eastern Line running between Changchun (Hsinking of to-day) and Dairen, together with its attendant interests. Then, with the establishment with the South Manchuria Railway Company in 1906 to represent her rights and interests in Manchuria, Japan laid the foundation of her continental policy and achieved, for the first time, that dominance in Manchuria for which she had staked her national existence and destiny in her wars with China and Russia.

The new situation thus created, however, was not passed over in silence by the United States who, now a powerful participant in the affairs of the Far East, announced the principle of the Open Door policy and followed it up with plans for the purchase of the S.M.R. by Harriman and for the neutralization of Manchurian railways. These plans, however, came to nought because of the disapproval of the three countries directly concerned, *viz.* Japan, Russia and China.

Ever since its establishment, the S.M.R. has not only been operating as a most lucrative enterprise, but also serving as the central agency for the prosecution of Japan's continental policy, devoting itself to the improvement of old lines and construction of new ones, as well as to the economic development of South Manchuria in general. The services rendered by this company may well be compared with those of Britain's East India Company under the leadership of Lord Clive.

After changing the gauge of its main lines from 5 feet to 4 ft. 8½ in. (standard gauge), the S.M.R. built two new lines, one between Kirin and Changchun and the other between Ssupingkai and Taonan, to serve as feeders for the main line. Moreover, the Antung-Mukden Railway which had been built for military use during the Russo-Japanese War was reconstructed in 1911 and since then it has come to be utilized as a trunk line connecting Manchuria with Korea.

With the unprecedented prosperity which came in the wake of the World War, the S.M.R., forged to the front as one of the most profitable enterprises in the world, giving rise to the so-called "Golden Age of S.M.R." In striking contrast to this, the Chinese Eastern Railway, first dealt a crushing blow by the Russo-Japanese War and later unable to make recovery of under the Communist regime, steadily went from bad to worse. In 1914, it was forced to reorganize under joint Russo-Chinese

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management because of the pressure brought to bear by the North East Provincial Government under Chang-Tsuo-Lin.

The wave of racial and naturalistic awakening which swept the world after the Great War gave rise, in China and Manchuria, to an insistent movement for the recovery of their vested rights and interests, which, in the domain of railway construction, became manifest in ever increasing demands for the employment of their own financial and technical resources.

In 1922 the Anglo-Japanese Alliance was abrogated as a result of the Washington Conference, and Shantung was restored to China. At the same time Japan signed the Nine-Power Pact, thereby endorsing the principle of the Open Door and the maintenance of China's territorial integrity. Encouraged by these agreements, China went ahead seeking to recover her complete sovereignty over Manchuria or throughout the country by pressing upon the Powers to relinquish tariff control, navigation rights (on the Yangtze River) and other extraterritorial rights. Japan, possessing more interests in this part of the world than any other Power, was naturally the most affected by this new trend in China.

China's widespread nationalistic campaign against Japan began in 1922 with the movement to recover Port Arthur and Dairen. This was followed by a movement for the recovery of her railway interests. The Manchurian authorities (war lords) soon joined forces with the Nanking Government with the aim of amassing sufficient strength to drive out Japanese influence with a single, heavy blow. But when, in time, China discovered that such efforts on her part could not deprive Japan of the rights which the latter had secured by treaty, she changed her tactics and projected a network of railways surrounding the S.M.R. on all sides so as, it was interpreted, to destroy the utility and value of Japan's principal rights and interests in Manchuria.

The following three lines were projected by China :

Eastern Main Line :—Hulutao-Mukden-Hailung-Kirin-Hailin-Ilan (Sanhsing)-Tungkiang-Fuyuan.

Western Main Line :—Hulutao-Tahushan-Tungliao-Taonan-Tsitsihar-Ningnien-Heiho.

Southern Main Line :—Hulutao-Chaoyang-Chihfeng-Dolonnor (Tolun).

Having planned these lines, China lost no time in commencing construction, and in the face of the vigorous protests made by

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Japan she completed the Tahushan-Tungliao section of the Western main line in 1927, and the Mukden-Hailung-Kirin section of the Eastern main line in 1928–9. Furthermore, under a plan calling for the expenditure of U.S. $ 6,000,000, she commenced work in 1930 on the construction of a harbor at Hulutao which would function as the commercial port and distributing center for the region served by the above lines. Had all these schemes been successfully consummated they would not only have destroyed the value of the S.M.R. and Dairen harbor but would have wiped out Japan's special interests in Manchuria from the very foundation. Such an eventuality seemed all the more likely as the big drop in the price of silver at that time placed China in a position of decided advantage to compete with the S.M.R., and thus placing the latter in dire difficulties. Japan was finally forced to the position where she had to make the momentous decision either to stand by her rights and remain in Manchuria or to renounce them and get out. The upshot of this train of events was the "Manchurian Incident" which broke out in September of 1931.

CHAPTER III

PRESENT CONDITION OF MANCHURIAN RAILWAY SYSTEM

As a natural consequence of the Manchurian Incident, and the subsequent establishment of the new State of Manchoukuo, the afore-mentioned scheme for the construction of three new trunk lines by China came to an abrupt end, and the work on Hulutao harbor was likewise dropped (for the time being, for it was restarted in 1935). In their place, work was started on the construction of new railways projected by the new Government, with due consideration to the political, economic and defensive needs of the country. And as the attached map shows, most of the lines included in the first program of railway construction has been already built, thus completing the fundamental network of Manchuria's railway system. Moreover, a five-year program envisaging the construction of approximately 1,500 km. of new

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lines has been projected, and work thereon is expected to be begun sometime this year.

Following is a description of the lines comprising Manchoukuo's present railway system, with some reference to the value of the new lines now under consideration.

I. STATE RAILWAYS

Eastern Group

Hsinking-Tumen Line

The most noteworthy of the new lines already completed is the Hsinking-Tumen line. It was more than twenty years ago that this line, then known as the Kirin-Kainei Railway, was the object of controversy between China and Japan; and its completion was obstructed many times by the North-Eastern (Mukden) authorities. When this line was first projected it was intended to make use of the light railway which was already being operated between Chiao-yang-chuan and Kaishantun as a part of a line which should in time run from Tunhua to Kainei in North Korea. This scheme was later altered, however, and the line was constructed instead from Chiao-yang-chuan via Yenki to Tumen on the Tumen River, thence across the river to Nanyo where it connected with the North Korean Railway.

Through the completion of the section of 189.9 km. between Tunhua and Tumen in April of 1933, and the consequent direct connection with the North Korean Railway, Hsinking obtained access to the ports of Yuki, Rashin and Seishin on the coast of Japan Sea.

It is interesting to note here that the completion of the above line has greatly shortened the distance between Manchuria and Japan, for it is only about 900 km. by sea from the ports of North Korea to the ports of Tsuruga, Fushiki, Niigata, Sakata and Noshiro on the west coast of Japan. The advantages of this route over the others can be seen from the following table :

DISTANCE BETWEEN HSINKING AND TOKYO

a)	Via Dairen and Shimonoseki . . .	2,890 km.
b)	Via Antung and Fuzan . . .	2,760 ,,
c)	Via Rashin and Tsuruga . . .	1,925 ,,

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When improvements of the afore-mentioned ports are completed and liners of latest design are placed in service between them, time required to cross the Sea of Japan will be appreciably shortened; so it should not be long before a new era in communication between Europe and Asia will be ushered in. Harbor improvements at Rashin, the middle one of the three North Korean ports, are to be started this year with an estimate of ¥ 8,000,000, and upon completion of the first part of the improvement program next year, this port will have a capacity of 3,000,000 tons. And when the improvements are completed in their entirety, capacity will be increased to 9,000,000 tons, thus making of Rashin a port equal to Dairen. Much of the agricultural products and other goods of North Manchuria will then move through North Korea, so that the ports of Rashin, Yuki and Seishin, as well as those of Dairen, Hulutao and Yingkou further south, are destined to play important roles in international commerce in the near future.

Lafa-Harbin Line

This line of 290 km. branching off northward from the Hsinking-Tumen line at Lafa was built before negotiations for the transfar of the C.E.R. were started. This line, linking the Hsinking-Tumen line with the northern lines, was made to cross the C.E.R. by an overhead bridge in the eastern suburb of Harbin. This line was originally intended to nullify the utility and value of the Harbin-Changchun section of the C.E.R. and to reduce the degree of dependence upon the latter by securing direct connection with the northern lines. Even after the purchase of the C. E.R., however, the Lafa-Harbin line continues to be of great value as a trunk line for carrying to North Korea the products of North Manchuria which concentrate at Harbin.

Tumen-Mutankiang Line

This line of 252 km., running northward from Tumen across the fertile regions of Kanto and one of the most important wooded districts of Manchuria, connects with the C.E.R. at Mutankiang. From Mutankiang there has also been completed the Ning-Chia line of 460 km. which runs northward from Mutankiang via Linkou and Poli to Chiamussu on the Sungari River, while another line running from Linkou eastward to Hulin on

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the eastern frontier has already been opened as far as Mishan. Another branch line has been projected to connect Mishan with Fuchin on the lower Sungari.

Formerly this triangular area between the Sungari and Usuri Rivers was a huge marsh devoid of all modern transportation facilities. Construction of the above lines should therefore greatly facilitate the immigration project around Chiamussu.

Shaho-Chian Line

This line, 248 km. in length, branches off from the Kirin-Mukden line at Shaho and reaches the Korean border at Chian by crossing the southern part of the region served by the Hsinking-Tumen line and via Tunghua. At the Korean border it crosses the Yalu River and connects with the Korean Railway coming from Heijo. Work on this line was started last year from both ends, i.e. Shaho and Heijo, and is now nearly finished. Through its connection with the Ssupingkai-Sian-Shaho line at Shaho, this line will be linked indirectly with the S.M.R., so that upon its completion it will not only promote the development of the important forested region it traverses, but will provide another important line of international communication along with the Antung-Mukden and Hsinking-Tumen lines. And as another line running parallel with the Korean border from Tumen via Tunghua to Antung will be laid sooner or later, to be extended in time to Dairen by connecting with the Kimpuku Railway running through Tahushan, development of this region which has hitherto received little attention may be expected to begin before many years have passed.

The above group of railways radiating north and south from Hsinking-Tumen line should become of ever increasing value for defensive purposes along the eastern frontier as well as for the promotion of local development, especially as the districts of Tunghua and Huaijen are rich in mineral deposits as yet untapped, and the Kanto district where Korean immigrants have for many years been engaged in the cultivation of rice is suitable for stock-raising as well. With the development of transportation over the Hsinking-Tumen line, this region promises to become an important field also for light and heavy industries.

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Southern Group

Mukden-Shanhaikwan Line

This line of 419 km. constitutes the eastern half of what was formerly the Mukden-Peiping line. When the North Eastern Government under Chang father and son was in its zenith of power, it had been intended to use this line, with one terminus at Hulutao, as a check against the S.M.R. by connecting it with the main line in China, as was explained in Chapter II.

The situation is now changed. Today this line, in addition to directly linking Manchuria and North China, serves indirectly as an important organ of cultural and economic co-operation between Japan, Manchoukuo and China. As we see the international train running between Mukden and Peiping—made possible by the through-communication agreement concluded between the authorities of Manchoukuo and China in June of 1934 and March of 1936—we cannot but marvel at the singular change wrought by time. The loan contracted from Great Britain for the construction of this section of the railway has been assumed by Manchoukuo.

Jehol Lines

The construction of all the lines in this district was commenced after the Manchurian Incident. Jehol is for the most part a desert-like plateau which formerly had few roads and showed little promise of agricultural development as it had only 700,000 cho (1 cho—2.45 acres) of arable land and no products to speak of except opium. Subsequent investigation of its natural resources has revealed the fact that it has rich mineral deposits. There was already a line running northward from Chinchow on the Mukden-Peiping line to Peipiao to serve the coal fiields there. And after the Manchurian Incident new lines totalling some 500 km. were completed,—one line branching off southward from Chinlingszu and reaching Jehol via Chaoyang and Liaoyuan, and the other branching off from the former line at Yehpaishu and running northward to Chihfeng.

Although reclamation work in Jehol must commence with irrigation and forestation projects, completion of the above new lines should usher in a new era there and contribute to its industrial development.

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Hsinlitun-Ihsien Line

This new line, running westward from Hsinlitun on the Tahushan-Tungliao line to the coal fields of Hsinchiu, thence southward to Ihsien, is now under construction. The coal fields of Hsinchiu are said to be the largest in Manchuria, so that upon the completion of this line, the region about Hsinchiu, together with the eastern district of Kanto, shows every prospect of becoming a center for heavy industries, surpassing even Fushun in magnitude and importance.

All of the afore-mentioned railways of the Southern group being of the greatest importance to Manchoukuo, the value of Hulutao as a shipping center for the freight handled by those lines has been recognized as being of such moment that it has been decided to recommence harbor construction this year at a total expenditure of ¥ 10,000,000.

Western Group

Paichengtzu-Halon Arshan Line

Of the total length of 338 km. a section of 84 km. between Paichengtzu (Taoan) and Huaianchen has been already finished, and all that is left to complete the remaining 254 km. between Huaianchen and Halon Arshan via Solun is the tunneling work at Nanhsingan. A plan is now being considered to extend this lines through the Hulun-pei-erh Plateau and Kanchu to connect with the former C.E.R. near Hailar. If this plan materializes, this line may replace the former C.E.R. as a trunk line between Europe and Asia.

Tapingchuan-Lupei Line

This line of about 174 km. extending from Tapingchuan on the Tsitsihar-Ssupingkai line to Lupei is now under construction. Sometime in the near future, however, two extention lines will have to be considered,—one extending to the frontier between Western Manchoukuo and Mongolia, and the other southward via Linsi to Chihfeng.

The Great Hsingan Mountain Range runs through the western part of Manchoukuo forming, as it were, the roof of the country. That region, therefore, is for the most part made up of mountains or deserts, and with the exception of stock-raising by the nomadic Mongolian tribes and a slight production of salt, it is wholly undeveloped industrially. It is essential that the above extensions

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be built to hasten the development of this region through forestation and irrigation schemes.

Northern Group

Railway development in North Manchuria has been greatly retarded. Prior to the Incident there were but two lines totalling 396 km. in length,—one between Harbin and Hailun, and the other between Tsitsihar and Taian. Since then, these two lines were joined at Peian, whence an extension was built northward to Heiho facing the town of Blagovestchensk on the Russian bank of the Amur River. With this, the Great Trans-Manchurian Railway was completed. These new lines with a total length of approxmately 560 km. were a much needed addition to the hitherto inadequate railway system of the north, and will not only open up the region which has been termed the "treasure house" of Manchoukuo but will perform the important mission of strengthening national defence.

The former C.E.R. of over 1,721 km. traversing North Manchuria is referred to in Chapter IV—"Transfer of C.E.R."

II. SOUTH MANCHURIAN RAILWAYS

A group of railways, of which the S.M.R. was the nucleus, has had to pass through many and varied vicissitudes since the Russo-Japanese War because it represented Japan's rights and interests in Manchuria and constituted the basis of Japan's continental policy. These lines were the pride of Japan not only because of their superior equipment but because they served as channels of culture and commerce for the whole of South Manchuria. Useful and valuable as they have been in the past, they will doubtless be even more so in the future.

Most of the region served by these railways being already well developed both as to culture and industry, it is expected that these lines will prove the most profitable of all the Manchurian railways, as indeed they have been in the past. And it is interesting to note that such subsidiary lines as the Mukden-Kirin, Tahushan-Tungliao and Ssupingkai-Tsitsihar lines which were at one time bitter competitors of the S.M.R. are now all smoothly co-operating unit of this great Manchurian railway system.

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III. PRIVATE RAILWAYS

Development of private railways in Manchuria has been seriously retarded. Since the opening of the Kimpuku Railway in Kwantung Province in 1927, not a single private line has been projected. This condition may be explained by the great risks and difficulties to which private enterprises were exposed under the rigime of the old provincial war lords who for so many years sowed the seeds of disorder and chaos in Manchuria. With the exception of the Kimpuku Railway above-mentioned and the Tsitsihar-Anganghsi line, all of the private railways are short lines built for local mining use. (following table).

The Kimpuku Railway runs from Dairen parallel with the S. M.R. as far as Kinshu, thence along the east coast of Liaotung Peninsula to Chengtzutung. This line is later to be extended northward via Tahushan to Antung; but at present the connection between Antung and Chengtzutung (200 km.) is made by motor car. Upon the completion of this project, the distance between Antung and Dairen will be shortened by one-half, thus greatly facilitating over-land communication between Dairen and Japan proper.

PRIVATE LINES

Name	Length	Gauge	Yr. opened
Kimpuku . .	102.1 km.	4′ 8½″	1927
Mulin . .	63.5 ,,	5′ 0″	1925
Holikang .	56.0 ,,	5′ 0″	1926
Kaifeng . . .	63.7 ,,	1 m.	1926
Hsihsien . .	19.3 ,,	2′ 6″	1914
Tsiang . . .	30.0 ,,	1 m.	1909
Total .	334.6 km.		

IV. PROBLEMS INVOLVED IN RAILWAY CONSTRUCTION

Difficulties overcome in Construction

Manchuria, extending from 40° to 53° north latitude, occupies virtually the same latitudes as South Europe. But as most of the

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country is plateau-like in terrain, facing the sea only on the south, it has a continental climate, with a relatively low isothermal corresponding to that of north Europe and Canada. Summer and winter are long; spring and autumn extremely short; and as a temperature of 40° below zero centigrade is no unusual phenomenon in the winter, any kind of work outdoors is practically out of the question from November to March. Hence it is necessary that all preparations for building and construction projects be made well in advance during the long winter season, to be executed at full speed as soon as warmer season sets in. In view of such climatic difficulties, the completion of the railway construction explained in the foregoing pages in so short a time was no mean accomplishment, especially when it is considered that as the first year was spent in the making of plans and preparations, it was not until 1933 that the actual work of construction was started, and with only six or seven months of the year available for work. This achievement was the more remarkable when it is considered that the workers were constantly exposed to the danger of predatory raids by bandits.

A part of the credit for the above accomplishment must go to the skill of Japan's railway engineering. As an instance of the proficiency of the Japanese railroad engineer might be cited the construction, as mentioned before, of the overhead bridge by which the Harbin-Lafa line crosses the C.E.R. Another is the change of the Hsinking-Harbin line (240 km.) to standard gauge last August. This Harbin-Hsinking line, formerly the southern section of the C.E.R., had a 5 ft. gauge. And as the gauge of the S.M.R. with its terminus at Hsinking was 4 ft. 8½ in., connection with Harbin could not be made without changing trains at Hsinking. In order to overcome this inconvenience it was decided to alter the former line to standard gauge of 4′ 8½″ also. On the morning of August 31st, 1935, at 5 o'clock, the work of altering the gauge was begun simultaneously all along the line, and by 8 o'clock it was completed without having suspended train service between Harbin and Hsinking during the three hours required for the work. This made possible the introduction of through-service between Dairen and Harbin, with a shortening of 8 hours in running time between the two cities on the northward run, and 6 hours 50 minutes on the southward run. The improvement expenses of ¥ 14,000,000 set aside for this purpose

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was devoted mainly to the repair of stations, signalling equipment and connection facilities.

One of the biggest works in the early days of the S.M.R. was that of reconstructing the Mukden-Antung line, a light railway of 2 ft. 6 in. gauge, which had been constructed by the Japanese army during the Russo-Japanese War for the transport of ammunitions and provisions, to a parmanent trunk line of standard gauge. This undertaking was one of tremendous difficulty because of the mountainous character of the country and the presence of many streams, which necessitated the construction of 205 bridges and 24 tunnels. Frequent floods and epidemics were further retarding factors, but the work was completed ten months earlier than originally expected, extending from September, 1909 to November, 1911, and its cost amounting to more than ¥ 25,000,000.

Demand for Laborers

Railway construction, together with other enterprises, created a demand for large numbers of laborers. Statistics show that some 600,000 immigrants entered Manchuria yearly, most of them coming from Shantung, Hopei and other North China provinces. They worked in Manchuria from spring to autumn, returning home in early winter with their small savings. Many came to Dairen by sea, while some came by the Peiping-Mukden line, so that these were looked upon as temporary customers for the Manchurian railways. Movement of Shantung laborers in large numbers to Manchuria had began before the establishment of Manchoukuo, so it might be said that the industrial development of Manchuria has been benefitting the farming villages of North China for many years. But now that the various construction enterprises of Manchoukuo are assuming definite shape, with establishment of order and expansion of industries, many of the immigrants from Shantung are beginning to settle there permanently. The time is approaching when demand for labor in Manchuria will cease to increase ; and since it is apparent that the continued entry of immigrants unrestricted as in the past must cause the supply of labor to exceed the demand, thus giving rise to undesirable social problems, measures for the restriction and control of immigration began to receive the attention of Manchoukuo authorities about a year ago. But effective control

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will probably not be easy because of the surreptitious entry of considerable numbers through the "Wall" near Shankaikwan.

The number of coolies employed in 1935 was about 246,000, including 84,000 employed by the S.M.R.; for 1936 it is estimated that those figures will be reduced to 208,000 and 76,000 respectively. Of the above coolies, 120,000 were immigrants last year, and 103,000 are to be allowed to enter this year. It is presumed that about 200,000 coolies will be required yearly for some time to come, of which one-half is expected to be supplied by those coming from Shangtung.

Estimate of Construction Costs

No publication being made of the funds required for the railway construction, there is no way of knowing the details. But as the construction of new lines are being carried out under contract by the S.M.R. with funds supplied by Japan in the form of capital increase or debenture loans to the company, a rough estimate of costs can be made.

It is estimated that a total of ¥ 320,000,000 has been expended to date, and that over ¥ 300,000,000 more will be needed to complete the new railways and harbor construction already projected, as well as for the improvement of existing railway lines. Since the maximum estimate of construction cost per kilometre, including cost of rolling stock, is ¥ 230,000, and the minimum ¥ 80,000, the average cost per kilometre may reasonably be placed at approximately ¥ 100,000. These figures are by no means high when the difficult character of railroad building in Manchuria is taken into consideration.

CHAPTER IV

TRANSFER OF CHINESE EASTERN RAILWAY

The C.E.R., which was built by Tsarist Russia to facilitate the prosecution of her Far Eastern policy, was the first line laid in Manchuria and hence is of considerable historical significance. Under the Soviet regime, there came a change in the policy of management of this line. The spectacular features which

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characterized its management in the old days soon disappeared, and its decline followed rapidly upon its reorganization as a joint Russo-Chinese enterprise. As though the ultimate fate that awaited the line upon the establishment of Manchoukuo were anticipated, tracks and rolling stock alike were badly neglected, with the result that its business went from bad to worse, and the movement of the products of North Manchuria was greatly impeded by the high freight rates charged.

Moreover, since the C.E.R. was a gigantic 5 ft. gauge railway line traversing North Manchuria for a distance of 1,721 km., its continued existence beyond her jurisdiction and control was not only a matter of great inconvenience to Manchoukuo, but a source of international friction in connection with the systematic control of railway transportation within the new State. Such circumstances gradually brought the authorities of the two countries together to consider transfer of this line. Official negotiations were opened in June of 1933 and continued intermittently for some time, but no agreement could be reached on the price. But finally, through the good offices of Mr. Koki Hirota, then Minister for Foreign Affairs, the agreement for the sale of the C.E.R. was officially signed at Tokyo by Foreign Minister Hirota, M.C.C. Youreneff, Russian Ambassador to Japan, and Manchoukuo Minister S.T. Tinge on March 23rd, 1935, with Japan assuming the position of surety for both parties. The negotiations required nearly two years, during which period more than forty meetings were held. But once the agreement was signed, the Manchoukuo authorities who had made through preparations in anticipation of the event, were able to take over the line without interruption of its service. Thus, at last, the difficult problem was brought to a happy conclusion.

The rights transferred by the sale to Manchoukuo covers the main railway lines between Manchouli and Pogranichinaya and between Harbin and Changchun (Hsinking) totalling 1,721 km. in length, together with such attendant assets as telegraph, telephone and water-supply equipment, rolling stock, factories, forests, etc. As compensation for the railway, Manchoukuo is to pay ¥ 140,-000,000 Japanese currency, in addition to approximately 15,000,-000 roubles as retiring allowances and 2,480,000 roubles annually as pension to disabled employees.

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After the transfer was effected, it was discovered that the property of the C.E.R. was not so valuable as had been estimated, and that not many of the lines and buildings could be utilized in the future. Moreover, as a considerable quantity of the C.E.R. rolling stock had been taken out of Manchoukuo into Russian territory before the transfer, it was agreed that such Soviet rolling stock as was then being used in Manchoukuo should be taken over in place of the former.

The above-mentioned price of ¥ 140,000,000 is to be paid partly in cash and partly in goods. ¥ 46,700,000 is to be paid in cash, of which ¥ 23,300,000 was paid simultaneously with the signing of the contract of sale, and the balance plus 3 % simple interest thereon is to be paid with Manchoukuo treasury bonds in four installments between December 1935 and March 1937. The remaining sum of ¥ 93,300,000 being payable in goods, the Trade Representative of U.S.S.R. is required to conclude contracts, within six months of the signing of the agreement, for the purchase of goods produced or manufactured in Manchoukuo or Japan; and the good so purchased must all be delivered within three years.

As has already been explained, the C.E.R. has greatly deteriorated in value and is probably destined to be used as a local line in the future. But it can be said that the transfer of this line, by effecting a complete withdrawal of Soviet influence from Manchuria, will enable Manchoukuo to unify her domestic railway system and thus to contribute to "the safeguards of peace in the Far East".

CHAPTER V

MANAGEMENT AND FUTURE OF MANCHURIAN RAILWAYS

Establishment of General Direction of State Railways

Immediately upon the founding of Manchoukuo, the authorities proclaimed the nationalization of all railways within the country, and in February, 1933 entered into a contract with the S.M.R, whereby the latter was entrusted with the management of the newly created system of state railways as well as with the

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construction of all new lines. Whereupon the S.M.R. established the General Direction of State Railways at Mukden headed by Mr. K. Usami, a Director of S.M.R., to carry out the important mission entrusted to it. Local offices have already been established in Mukden, Hsinking, Taonan and Tsitsihar to promote systematic management, and another is to be established soon in Chinchow to take over the work now being handled by the Mukden local office. The management of the North Korean Railway connecting Seishin-Kainei-Yuki-Rashin was also entrusted to the S.M.R. in the autumn of 1933, and an office has been established at Seishin for the management of these lines. This new connection, by making possible through-service with the Hsinking-Tumen line, will effect a revolutionary improvement in the transportation of North Manchurian goods and will, moreover, add greatly to the importance of the North Korean ports by enabling them to serve as outer ports of Manchoukuo.

Management of the Manchoukuo state railways has been entrusted to the S.M.R., not from any desire to turn them into a purely business proposition deprived of the inherent characteristics of government enterprise, but rather in order to render more sound the interest which the S.M.R. had in those lines, and also to promote political, economic and defensive co-operation between Manchoukuo and Japan. As the S.M.R. has had thirty years' experience in railway management in Manchuria, it may confidently be expected that the unification of Manchurian railways will be carried out efficiently under its management.

The General Direction of State Railways has been doing its utmost ever since its organization to improve the older state lines, but as most of them are badly worn out, huge sums will have to be expended to complete the necessary repairs and improvements.

Another difficult problem was the personnel of the lines entrusted to S.M.R. There were in all about 38,000 employees, most of whom were without adequate education or training. The number of employees per kilometre of line being about twelve, it was considerably in excess of the actual need. But as it was not possible to discharge a large number at one time, able men from the S.M.R. staff were transferred to serve as instructors and trainers. The results have been generally considered satisfactory.

Another scheme was to designate villages located on both sides of the railway within 5 km. of the lines as "railway protecting

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villages", with the idea of making the villagers realize the importance of railways and the necessity of their protection against the attacks of bandits. Such measures are very necessary under the conditions now obtaining in Manchoukuo and are likely to exercise a very helpful influence upon the future development of its railways.

The condition of the business of the state railways has not yet been made public. In the case of the existing lines, the authorities have hardly had sufficient time to undo the harm done by slipshod management in former days. As for the new lines, most of which were constructed from the standpoint of national interest with the view to opening up regions hitherto undeveloped, it is yet too early to expect profits. And as there is need of still further construction of new lines entailing huge outlays, the position of the authorities is by no means an easy one. But their keen enthusiasm and proficient management afford an expectation that conditions on the whole will improve before long.

As shown in the attached Table No. 3, passenger and freight transportation on the State railways and the S.M.R. from 1932 to 1934 has shown a yearly increase, in revenue as well as in volume.

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Table 1

RAILWAY MILEAGE IN MANCHURIA (March, 1936)
(In Kilometer)

Section	In operation			Under construction	Projected
	Already Operated	Newly Operated	Total		
I. The State Lines :					
(1) Eastern Group :					
Hsinking-Tumen	338.1	189.9	528.0		
Tien-Tu Line	111.6	—	111.6		
Mukden-Kirin	447.6	—	447.6		
Lafa-Harbin	—	290.9	290.9		
Ssupingkai-Shaho	67.3	82.0	149.3		
Shaho-Chian				248.0	
Tumen-Mutankiang	—	252.2	252.2		
Mutankiang-Chiamssu	—	460.0	460.0		
Linkou-Mishan	—	183.0	183.0		
Mishan-Hulin				165.0	
Poli-Fuchin					200.0
(2) Southern Group :					
Mukden-Shanhaikwan	419.6	—	419.6		
Tahushan-Chenchiatun	367.1	—	367.1		
Hsinlitun-Ihsien				130.0	
Chinchow-Peipiao	112.6	—	112.6		
Peipiao-Jehol	—	345.3	345.3		
Yehpaishu-Chihfeng	—	149.5	149.5		
(3) Western Group :					
Ssupingkai-Tsitsihar	571.4	—	571.4		
Hsinking-Paichengtzu	—	333.7	333.7		
Paichengtzu-Nanhsingan	84.3	251.8	336.1		
Nanshingan-Halon Arshan				2.2	
Tapingchuan-Lupei				174.0	
(4) Northern Group :					
Harbin-Peian-Tsitsihar	348.9	208.4	557.3		
Peian-Heiho	—	303.5	303.5		
Ningnien-Noho	48.0	48.8	96.8		
Noho-Nunkiang (Morken)				191.0	
Late C.E.R. Line :					
Hsinking-Harbin	240.0	—	240.0		
*Harbin-Manchouli	935.0	—	935.0		
*Harbin-Pogranichinaya	546.0	—	546.0		
(5) Miscellaneous	118.0	25.6	143.6		
TOTAL :	4,755.5	3,124.6	7,880.1	910.0	200.0

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Table 1—*continued*

RAILWAY MILEAGE IN MANCHURIA (March, 1936)

(In Kilometer)

Section	In operation			Under construction	Projected
	Already Operated	Newly Operated	Total		
II. The S.M.R. Line :					
Hsinking-Dairen . .	704.3	—	704.3		
Mukden-Antung . .	260.2	—	260.2		
Miscellaneous . . .	164.6	—	164.6		
TOTAL :	1,129.1	—	1,129.1		
III. Private Lines Total :	334.6	—	334.6		200.0
GRAND TOTAL :	*6,219.2*	*3,124.6*	*9,343.8*	*910.2*	*400.0*

Note : *Gauge :—

The State Line (6,399.1 km)	4. 8½ feet.
The S.M.R. Line (1,129.1 km)	4. 8½ „
Kimpuku Line (Private) (102.1 km)	4. 8½ „
*Late C.E.R. Line (1,481 km)	5. — „
Holikang Line (Private) (56 km)	5. — „
Muling Line (Private) (63.5 km)	5. — „
Other Private Lines (113 km)	Narrow G.

Table

THE REVENUE OF RAIL-

(figure in

	1934 (First half year)					Pas-
	Passenger		Freight		Total	
		¥	Tons	¥	¥	
(1) The State Railways	3,626	6,595	5,328	19,298	25,893	9,301
Mukden Ry. Bureau	1,440	3,098	1,371	5,145	7,243	4,922
Hsinking „ „	1,228	1,498	1,566	5,185	3,064	2,058
Harbin „ „	366	553	614	2,096	2,649	586
Taonan „ „	591	1,446	1,778	6,872	8,318	1,735
(2) S. M. R.	6,839	10,055	10,321	48,080	58,135	11,634

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Table 2

NEW LINES CONSTRUCTED SINCE 1932

Section between	Mileage	Opened to Trafic
1) Tunhua-Tumen (Eastern group)	189.9 km.	Aug. 1933
2) Hailun-Peian (Northern group)	106.0	Nov. 1933
3) Peian-Taian (,,)	102.4	Nov. 1933
4) Laha-Nonho (,,)	48.8	Nov. 1933
5) Lafa-Harbin (Eastern group) .	290.9	Aug. 1934
6) Peian-Heiho (Northern group) .	303.5	Feb. 1935
7) Hsinking-Paichengtzu (Western group) .	333.7	Jun. 1935
8) Tumen-Mutankiang (Eastern group) .	252.2	Jun. 1935
9) Yehpaishu-Chihfeng (Southern group) .	149.5	Sep. 1935
10) Linkou-Mishan (Eastern group).	183.0	Dec. 1935
11) Ssupingkai-Sian (,,) .	82.0	Dec. 1935
12) Huaianchen-Nanhsingan (Western group) .	251.8	Jan. 1936
13) Mutankiang-Chiamussu (Eastern group) .	460.0	Jan. 1936
14) Chilingszu-Jehol (Southern group) .	345.3	Mar. 1936
15) Miscellaneous . . .	25.6	
TOTAL :	*3,124.6 km*	

Note : Gauge in standard 4.8½ feet each.

3

WAYS IN MANCHURIA

1,000)

1933				1932				
senger	Freight		Total	Passenger		Freight		Total
¥	Tons	¥	¥	¥		Tons	¥	¥
14,711	8,900	36,080	50,781	6,121	10,716	7,680	34,997	45,713
7,339	2,798	12,504	19,843	2,823	5,298	1,888	10,069	15,367
2,935	2,050	6,190	8,240	1,596	1,993	1,712	4,462	6,455
823	1,120	2,220	3,043	386	549	433	1,939	2,488
3,615	2,932	15,165	18,780	1,416	2,876	3,648	18,527	21,403
18,757	18,851	94,263	119,677	8,610	14,812	16,573	85,022	103,847

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