

# The South Manchuria Railway and Its Allied Constructions

By DR. J. A. L. WADDELL\*, M. W. S. E.

*Here is an instance where a railway is being operated at a profit, producing sufficient revenue to finance varied public works and industrial operations during the period of development of great national resources. The author is an experienced observer and gives an interesting picture of the remarkable engineering and economics resulting in the conversion of a war-torn area into a thriving, prosperous territory that will some day take a prominent place in world commerce. Engineers have had a prominent role in this development.*

EDITOR.

NEAR THE END of last September, my official duties in China took me as far north as the city of Mukden, where, according to an arrangement of two or three months' standing, I immediately became the guest of the South Manchuria Railway Company, with the intention of making an informal inspection of its line and its numerous accessory works. Being somewhat pressed for time, I did not travel north to Harbin, as I should have liked, but had to content myself with seeing the cities of Mukden, Dairen, and Port Arthur and inspecting from an observation car the railway between the first two of those places.

During the preceding summer the principal engineer of the company, M. Fukuda, had traveled specially to Shanghai, in order to spend a few days with me, and had brought with him a formal invitation from his company for me to travel through South Manchuria as its guest, which invitation I had accepted provisionally, because of the uncertainty of my future movements.

Mr. Fukuda, who had received three years' training in bridgework in my Kansas City office, nearly a quarter of a century previously, and who had afterwards visited me in my New York office, traveled with me in South Manchuria, and most courteously showed me practically everything of major interest, and incidentally gave me two days' shooting on woodcock and quail in the hills around Port Arthur.

While I had known in a general way that the Japanese, for the last two decades, had been doing some good development work in South Manchuria, I had had no adequate conception of its extent or thoroughness, nor of the method adopted for financing the construction. To say that I was surprised does not begin to express my astonishment at what I saw and heard, especially when I learned that essentially all of the said development was accomplished by either the expenditure of a portion (possibly one half) of the net earnings of the railroad, or by loans based upon its credit.

The reason for the large surplus of earnings is explained by an analysis of an official diagram, which indicates that, for the year 1927, the percentages of values of exports and imports were, respectively, 60 and 40. For twenty-one years, however, the corresponding figures averaged 54 and 46, fourteen of these years showing the exports predominating.

In 1905 Japan fell heir to the concession of this line, originally granted by China to Russia, after she had given the latter a good drubbing in the Russo-Japanese war.

The extent of Japan's holdings in the Kwantung Peninsula and the South Manchuria Railway Company's lines, amounting in length to about seven hundred miles, are shown on the accompanying map (Fig. 1). The original lease for these holdings was confirmed by China in 1905 and was extended in 1915 up to the year 1997, the area covered in the lease being only 1,400 square miles—about 0.4 per cent of the total area of Manchuria.

\*Honorary Technical Advisor to the Ministry of Railways of the National Government of China.