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Yong-fu Sun: a Brief Biography

Yong-fu Sun

Professor-Engineer

Chairman of the Chinese Railway Society

Professor Yong-fu Sun was born in Chang'an County of Shaanxi Province in February 1941. He graduated from Changsha Railway Institute (Central South University since 2000) in 1962.

Professor Sun is a professorate senior engineer and an expert in the fields of railway construction. After his hard work and innovation, he has established himself as a leading figure in railway engineering fields.



Professor Sun has been devoting himself to the promotion of railway construction for many years. His contributions over the past years have been unprecedented, making him become a member of the Chinese Academy of Engineering (in 2005). Besides, he was a member of the Tenth and Eleventh National Committee of Chinese People's Political Consultative Conference (CPPCC), and a represent to the ninth National People's Congress. He took an active part in the CPPCC activities, reacted to public opinions passionately, and put forward suggestions to accelerate the construction of high speed railways, and to promote the sustainable development of national economy.

Professor Sun has long been taking the responsibility for the technology and management of railway construction. He paid attention to the reform of the system of railway construction and has been advocating the new system which follows the new trend of social development since he was elected as the vice minister of the Ministry of Railways (China Railway since 2013) in 1984. Guided by system engineering theory, he came up with the new ideas of railway construction to improve regional and national economy. And his new ideas brought fresh air, not only to the railway construction research, but also to the actual railway construction in China.

Professor Sun chaired the construction of the Hengyang–Guangzhou Railway Line in the south, the Datong–Qinhuangdao Railway Line in the north, and the railway lines in the east areas, and all these large-scale construction projects turned out to be successful and fruitful. He presided over the Beijing–Kowloon Railway Line construction, which become a particular achievement in his life. And he led the construction of the Baoji–Zhongwei Railway Line and the Houma–Yueshan Railway Line.

Apart from construction of such great lines as the Beijing–Kowloon Railway, Professor Sun has presided over several important research or design projects concerning railway construction. His ability to design and manage railway construction by using system engineering theory makes him popular in the Chinese enterprises. He created new technologies that enable railway building in mountain areas; he developed whole heavy-load transport equipment successfully; and he advocated research and construction of high-speed railways and formulated relevant standards.

His research, which contributes much to Chinese economic development, covers many fields, including system technology, economy and social development. He constantly challenges himself and drives himself out of academic comfort zones. In order to cope with emerging new technological trends, he is already ready to modify his research

directions, with an open mind and with great passion.

Professor Sun presided over the construction of the Qinghai–Tibet which began in 2001. He put forward the general guidelines for its construction and set five specific control targets for the whole construction progress, concerning quality, environmental conservation, health and safety, time and investment. Professor Sun smoothed out “the three great problems” with the frozen soil, the ecological fragility, and the oxygen deficit of the highland areas, with the design and management idea of “cooling the ground and protecting the frozen soil”. Professor Sun, with his new ideas, and his diligence, contributed much to the construction of the Qinghai–Tibet railway, a world-class highland railway.

As an expert of railway engineering and railway engineering management, he is admired by his colleagues for his profound knowledge, active thinking, broad vision, and unique creativity. He has published a series of articles and books concerning railway engineering and railway construction in China, including: *The History of China's Railway Construction*; *The Double Hengyang–Guangzhou Railway*; *The Beijing–Kowloon Railway*; *The Qinghai–Tibet Railway Innovation and Practice*; *The Beijing–Kowloon Railway's Important Function for Transportation and Economic Development*; *The High-speed Railway: Successes or Challenges*; *The Essays on Railway Construction and Management*.

Professor Sun enjoyed high reputation in the academic communities of China and of the world. And he is a master, erudite, kind, gentle and wise, to the younger generations of engineers, technologists and scientists.