

Yi Liu, Rong Wang

Rui-yu Yin: a Brief Biography

Rui-yu Yin

Professor

University of Science & Technology Beijing

Professor Rui-yu Yin was born in Suzhou of Jiangsu Province in July 1935. He graduated from University of Science & Technology Beijing in 1957 and became one of the first elected members of the Chinese Academy of Engineering (CAE) in 1994.

Professor Yin successively held such technological and administrative posts as chief engineer and vice general manager of Tangshan Iron and Steel Company, director of the Metallurgical Industry Department of Hebei Provincial Government, chief engineer and vice minister of the Ministry of Metallurgical Industry, president of China Iron & Steel Research Institute Group (CISRI), chairman of the Chemical, Metallurgical and Material Engineering Division of the CAE, and Chairman of the Engineering Management Division of the CAE. And he is now honorary president of CISRI, professor and doctoral supervisor at University of Science & Technology Beijing and Northeastern University.

He has long been working in the metallurgical enterprises, research institutes and national industrial sectors engaged in technology, production, economic management and industry development. And he has been studying the development strategies for metallurgical science and technology as well as steel industry, focusing much, in the 1990s, on engineering technologies and theories, trying to work out the strategies for advancement of China's steel technology and its orderly implementation.

His research, which plays an important role in Chinese steel industry, covers many fields, including system analysis of integrated steel production, technical ideas and theoretical analysis of steel models and structural optimization, future direction of the iron and steel industry, and assessment of technology and economy.

He has done a lot of work in engineering and theoretical research and has been devoting himself to the promotion of management engineering. Moreover, he applies his theories to project management and social economic problems. His contributions have been unprecedented, especially the judgment of the Chinese steel industry strategy in the 1990s which prompt rapid and yet sustainable development of China's steel industry. He made national breakthroughs of the crucial technology. He put forth a series of theoretical ideas and practical processes such as steel manufacturing process of multi-dimensional material flow control, steel manufacturing process analysis and integration, structural steel plant optimization and development, green manufacturing and circular economy for steel industry.

He worked as the chief scientist of National Science and Technology Ascension Program "Basic Research Smelting Reduction Techniques". He presided over several priority research projects funded by the National Natural Science Foundation of China, such as "Research on Efficient Billet Casting Systemic Technology". He has gained fruitful achievements in the study of the development of continuous casting technology, steel production flow analysis, multi-dimensional steel manufacturing process control system. He is committed to the researches on the methods, techniques and tools of knowledge science and knowledge management and never stops the pace of the development of



corresponding metallurgical system.

He is the author of four books, including *Philosophy of Engineering* (Higher Education Press, 2007), *Metallurgical Process Engineering* (Metallurgical Industry Press, 2009), for which he won the National Science and Technology Progress Award in 1999, *Theory of Engineering Evolution* (Higher Education Press, 2011). His most recent book, *Theory and Methods of Metallurgical Process Integration* (Metallurgical Industry Press, 2013), presents an overall examination of the rules for innovative steel manufacturing process.

His outstanding achievements and contributions to China won him a lot of prizes. His honors include the first-class Ministry of Metallurgical Science and Technology Progress Award, the second-class National Science and Technology Progress Award, the 1998–1999 Guanghai Engineering Science and Technology Award, and the Ho Leung Ho Lee Science & Technology Progress Award in 2008, the Wei Shoukun Metallurgy Award in 2012. And he was elected to the Honorary Member of The Iron and Steel Institute of Japan (ISIJ) in 2002.

He is modest and agreeable, and indifferent to fame. As an adjunct professor at universities, he has fostered a group of young scientists.