

CCTV news: shield machine is known as the "king of construction machinery", and its technical level is an important indicator of a country's underground construction equipment manufacturing level. When the technology of shield machine in the West has developed for more than a hundred years, China has not yet produced a shield machine of its own. After more than 10 years of exploration and research and development, China's shield technology has gradually taken the lead in the world. At present, it not only meets 90% of the domestic market demand, but also develops the international market, accounting for 1 / 3 of the global market share. On May 10, the world's first full face Hard Rock TBM with small turning for mining was offline in the shield assembly workshop of equipment group.

This is the shield assembly workshop of China Railway Equipment Group in Zhengzhou, Henan Province. Four shield machines known as the "underground aircraft carrier" are neatly parked on the production station of the workshop. The workers are busy shuttling among them and are ready to be shipped to the whole country. Liu Yunlong, who is in charge of the production management center, said that the normal working face of the shield machine is only tens of meters under the ground, and the equipment can work under the working condition of hundreds of meters deep, which they have never tried before.

This is the test site of domestic main bearing, and chief engineer Jia Lianhui is testing the domestic main bearing which has just completed the 10000 hour test. The main bearing is the "heart" of the shield machine. Because of its complex structure, high stability, high technology content and difficult processing, there are few enterprises in the world that can develop the main bearing of the shield machine, and its technology has been monopolized by foreign countries. Since July 2015, China railway engineering equipment has cooperated with Luoyang bearing and Zhengzhou Machinery Research Institute to build a test platform, carry out industrial tests and develop domestic main bearings.

The state further increased investment in infrastructure and started several major projects at the beginning of the year, driving the order growth of shield machines. From January to March 2020, the newly signed orders of China railway equipment increased by 22.37% year on year. A shield machine is often hundreds of meters long, weighs thousands of tons, tens of thousands of parts.