

Key component of world's longest cross-sea bridge installed



The 55-kilometer bridge connecting Zhuhai in Guangdong province with Hong Kong and Macao is under construction on April 29, 2017. [Photo/Xinhua]

Chinese engineers installed a 6,000-ton key structure of the world's longest cross-sea bridge linking Hong Kong, Zhuhai and Macao.

The wedge, 12-meter-long and weighing more than 25 Airbus A380 jets, was lowered to connect the immersed tubes of the underground tunnel of the bridge, said Lin Ming, chief engineer of the island and tunnel section of the bridge.

The 55-kilometer bridge connects Zhuhai in Guangdong Province with Hong Kong and Macao. It includes a 22.9-km bridge and 6.7-km underground tunnel.

Before the wedge was installed on Tuesday, 33 immersed tubes, each 180 meters long and weighing 80,000 tons, had been installed.

"There is only one wedge for a tunnel, and we cannot afford to fail in its installation. It took two years to prepare for today," said Chen Yue, director of the engineers' office of the bridge's island and tunnel section. The installation procedure took about six hours.

"The margin of error for the wedge is 1.5 centimeters. We have to measure precisely the influence of wind, current and buoyancy force," said Lin.

"It is like putting a needle through a hole – a truly unprecedented event in

the history of transportation," Lin said.

A gigantic crane, which was transformed from a tanker, was used to hoist the wedge, lowering it to the desired destination between the underwater tubes.

The wedge will be welded and finished by June, Lin said.

By the end of the year, the bridge will be open to traffic, said Zhu Yongling, director of the bridge management bureau.

Construction began in December of 2009 at Zhuhai. The Y-shaped bridge starts from Lantau Island in Hong Kong with branches to Zhuhai and Macao.

The bridge will cut travel time from Hong Kong to both Zhuhai and Macao from three hours on the road to a 30-minute drive.