Fostering 'Blue Ocean' Growth

Passing port automation milestone

World's largest automated container terminal starts operations in Shanghai, with control system technology that sets new standards

The fourth phase of Shanghai Port's Yangshan Port project commences operation. The automated terminal represents China's breaking of the monopoly of global suppliers in port automation solutions. XU CONGJUN / FOR CHINA DAILY

By WANG YING in Shanghai
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A fully automated container terminal involving a total investment of 14 billion yuan ($2.15 billion) has started operating at Shanghai's Yangshan Port, which means China has broken the monopoly of global suppliers in port automation solutions.

The automated terminal, or the fourth phase of the Yangshan Port project — part of Shanghai Port — has been designed to handle a maximum of 6.3 million TEUs (20-foot equivalent units), making it the largest automation port worldwide to date. Its unique energy consumption structure should result in zero carbon dioxide or other emissions while allowing savings of up to 70 percent.

The new facility has increased the annual capacity of Shanghai Port to more than 40 million TEUs and marks a new development phase for Shanghai International Port Group, said Yan Jun, SIPG president.

According to Yan, the automatic port intellectual production management control system, or TOS system, performs as the brain of the brand new port that covers an area of 2.23 million square meters. The system was researched and developed independently by the 200-plus R&D staff of SIPG.

"Before the establishment of the automation port, which is also the final part of the Port of Shanghai, there were around 20 automation ports in the world, all adopting automation port systems designed and developed by global suppliers," said Yan.

To master the core technology of port automation solutions, an R&D team was formed three years ago. It succeeded in establishing 12 standards, which are likely to become the Chinese automation port standards in the future.

Compared to its counterparts, the greatest advantage of the Yangshan-version TOS system is that it allows port machinery to perform loading and unloading at the same time, according to Yan.

"It was also worth mentioning that all of the port machinery was provided by Shanghai Zhenhua Heavy Industry Co (ZPMC), with 100 percent Chinese intellectual property rights," said Yan.

Shanghai Zhenhua Heavy Industry, the world's largest port machinery manufacturer, plans in the next decade to make automated container terminals a new growth engine of the company, said Song Hailiang, chairman of ZPMC and vice-president of China Communications Construction Co, during an earlier interview.

The future of terminals lies in unmanned technology. Through remote control, intelligent container terminals will have better performance and lower operational costs than traditional ones, added Song.

"The experience learned from developing and operating the automation port will help us to acquire a full set of intellectual property rights, so as to make duplication of the port possible," said Yan.

Currently, SIPG and ZPMC are looking forward to forming a commercialized operation model for automation port development, and some port operators are already showing an interest in their facilities.

Two decades ago, the Port of Shanghai was the only one in the Yangtze River Delta region on the list of the world's top 100 ports. Back then, the number of containers it handled accounted for less than 2 percent of the global volume.

Thanks to years of efforts in policy support and innovative development, the Port of Shanghai surpassed the Port of Singapore to become the world's largest container port in 2010. It has retained the title since then, and saw its container operating volume rise for seven consecutive years. A total of 37.13 million TEU containers were dealt with by the Port of Shanghai throughout 2016.

From January to November of 2017, SIPG handled 520 million metric tons of cargo, up 10 percent year-on-year, and operated 36.88 million TEUs of containers during the same period, up 8.3 percent, marking a new record.

Fostering 'blue ocean' growth

Expert says Belt and Road creates new markets at home and abroad while focusing on cooperation

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The Belt and Road Initiative could be seen as China's Blue Ocean Strategy for international cooperation, according to an expert.

Speaking during the Global Entrepreneurship Community Summit on Dec 13 in Kuala Lumpur, Koh King Kee, director of the China Belt and Road Desk at accountancy and advisory firm Baker Tilly Malaysia, said the China-led trade and infrastructure initiative is the country's adoption of the Blue Ocean Strategy.

"It creates new markets and focuses on the big picture of development to promote win-win cooperation," Koh told *China Daily Asia Weekly*.

Blue Ocean Strategy is a marketing theory from a 2005 book by W Chan Kim and Renee Mauborgne of the INSEAD business school, which describes how successful businesses capture uncontested market space in "blue oceans" and render competition irrelevant.

"The Belt and Road Initiative is an economic cooperation platform, it is not an agreement or a trading bloc," said Koh. "It is based in but not limited to countries along the Belt and Road. Everyone can be part of it."

He said the initiative's infrastructure programs, though mostly undertaken by Chinese State-owned enterprises, allow local and international players to participate as suppliers or service providers.

One example is a major Belt and Road infrastructure project in Malaysia, the 688-km East Coast Rail Link (ECRL). The project is expected to benefit local contractors and engineering consulting firms through subcontracts totaling 16.5 billion ringgit ($4.1 billion), according to Xinhua.

Koh King Kee, director of the China Belt and Road Desk at accountancy and advisory firm Baker Tilly Malaysia.

"China prefers partner countries to partially fund their own infrastructure projects," said Koh, referring to ECRL. "Malaysia financed 15 percent of the project cost through *sukuk* (Islamic bonds), which open opportunities for financial institutions and related services."

Koh said Baker Tilly is the only firm of its kind in Malaysia to establish a Belt and Road desk as it focuses on the long-term impact to be generated by the initiative.

The company is working closely with Baker Tilly China to help companies from both countries discover business opportunities through the Belt and Road.

Currently, the company is in talks with the Shanghai Stock Exchange to promote Belt and Road-related panda bonds, or yuan-denominated bonds from non-Chinese issuers, in Malaysia to encourage qualified corporations to raise funds in China.

In addition, Koh said there will be more opportunities from the technology industry as China is at the forefront of the Fourth Industrial Revolution. As Chinese companies are eager to go global, he expects more tech firms to expand their business and bring their experience along the Belt and Road, especially in countries like Malaysia that face a shortage of labor.

He said many people tend to misunderstand the initiative as something geopolitical. "China promotes the Belt and Road Initiative not because it thinks the geopolitics come first," said Koh. "It is more of a consequence, or a side benefit. China does not want to disrupt the existing financial or economic world.

"The Belt and Road project brings benefits to everyone, and we should look at it with an open and inclusive mind."