













PORT OF SHENZHEN

An Interview with Shenzhen's Deputy Director General, Transport Commission, Ma Yong Zhi

Currently one of the busiest ports in southern mainland China, the Port of Shenzhen is diversifying business and focusing on expanding its network to address shifts in manufacturing and related cargo volumes. Its location in the Guangdong Province — adjacent to Hong Kong, divided by the Kowloon Peninsula — provides a strong link for trade with mainland China as well as abroad through the Pearl River Delta system. The port consists of four primary terminals — Yantian International Container Terminal, Shekou Container Terminal, Chiwan Container Terminal and Da Chan Bay Terminal One.



The Journal of Commerce interviewed Ma Yong Zhi, deputy director general of Shenzhen's transport commission.

In a recent interview with The Journal of Commerce, Ma Yong Zhi, deputy director general, transport commission of Shenzhen, discussed the port's specific plans for growth and provided his outlook on trade in the region.

WHAT ARE YOUR PLANS TO ATTRACT NEW CARGO VOLUMES SO THE PORT OF SHENZHEN CAN CONTINUE TO

GROW? Shenzhen Port is experiencing a transformation. In the past, we used to focus principally on exports. Now, we are focusing more on the import business. Part of the reason is that this will help achieve a balance of empty containers and fully loaded containers for the shipping companies. Increasing import business will help reduce costs for shipping companies because fewer empty boxes will need to be brought in from other locations.

HOW ARE YOU USING RAIL TO EXPAND THE MARKET FOR

THE SHENZHEN PORT? Shifts in manufacturing affecting the Pearl River Delta region have been a challenge for Shenzhen Port in recent years. We have been focusing intensely on how to address this issue and achieve a positive outcome for the port and terminals. An important response is sea-railway multimodal transportation, which allows Shenzhen to attract cargoes from inland regions in China.

We are launching more fixed-time trains to more cities within inland China. We currently have 15 fixed-time rail lines to different cities in inland China. This is not a new area for us — since 2004, we have had sea-railway multimodal transportation in Shenzhen. But now we have started to cooperate with more inland cities, including Nanchang, Changsha, Wuhan, Chengdu, Chongqing — all of the South China cities.

In 2009, Shenzhen began offering financial subsidies to support the port and shipping industries with the support of Chengdu, Kunming and Dongguan. This initiative is designed to create not only more volume for the Port of Shenzhen, but also greater environmental benefits because rail use is much greener than other forms of transportation. So, if a loaded box is transported from other cities, we will offer subsidies. Since 2009, we have given 15.72 million RMB in subsidies to freight operators.

We plan to provide more financial subsidies to certain heavy machinery and auto manufacturers. We would like to attract them to come to Shenzhen and make it their export port and gateway to go abroad. We are also encouraging our terminal operators to cooperate with inland cities and companies to support the development of dry ports in inland China into making Shenzhen their export gateway. And the governments from both Shenzhen and inland cities are launching policies to support companies in achieving improvements in customs clearance.

IS EXPANDING WATERBORNE FEEDER NETWORKS PART

OF SHENZHEN'S STRATEGY? Yes. The terminal operators are expanding feeder line transportation in the PRD region. Feeder lines move containers to and from Shenzhen terminals to many other ports within the PRD region, connecting with Europe and North America services. There are currently 32 smaller feeder terminals within the PRD region.



HOW DO LOGISTICS PARKS AND CUSTOMS IMPROVEMENT

FIT INTO THE PICTURE? We are developing our logistics parks to allow them to attract cargo owners and exporters and importers with the idea of them basing their distribution and processing centers in Shenzhen. The government is working with the customs administration to build a new comprehensive customs clearance center in Shenzhen in the near future. For example, one service in the new customs center will provide faster handling for international transshipments to other countries. So, generally speaking, we are trying to create a better environment for the customers, better than other cities and other ports.

ARE THERE PLANS TO EXPAND THE PORT? The Shenzhen port needs to increase its throughput capacity. Yantian International Container Terminal is building its western operation area, which will be complete by the end of next year. They will have two new berths. Also, we are working on the second phase of the Da Chan Bay port area, which will be started in 2013. The reason we are increasing the capacity of Shenzhen port is not only due to the demand of the market, but because the big shipping companies want to develop their business in Shenzhen. New research into market changes affecting the PRD region tells us that we will still see new development and new throughput volumes in the region every year, but the increase is slowing down. For Shenzhen, in recent years, we have only seen a 2 to 3 percent increase from 2009 until now. We recognize that we still have new development and more demand from the market for the PRD region, so we have to invest in building new berths to attract shipping companies and more cargoes to come to Shenzhen.

HOW WOULD YOU DESCRIBE THE COMPETITIVE LANDSCAPE AMONG TERMINALS IN THE PRD REGION?

Competition does exist in the PRD region, but each and every terminal has different characteristics. For Hong

SHENZHEN PORT INKS 5-YEAR DEAL TO HOST TOWASIA CONFERENCE

On March 5, John Day, CEO of UBM Global Trade, and Ma Yong Zhi, deputy director general of the transport commission of Shenzhen, signed a new agreement that The Journal of Commerce TPM Asia conference will be hosted by China's Shenzhen Port through 2016.

TPM Asia and Shenzhen Port have both seen increases over the past several years, in container volume for Shenzhen Port and participating attendees at TPM Asia. In 2011, TPM Asia successfully attracted more than 600 senior-level executives from the world's leading transportation and logistics companies to discuss issues of container shipping, including Asia-Europe, intra-Asia and trans-Pacific trade.

TPM Asia will be held during Shenzhen Maritime Transport week, alongside CILF, the China International Logistics Fair that attracts more than 40,000 visitors, including the Shenzhen sister ports. Platinum sponsors of TPM Asia include the four Shenzhen terminals — Yantian International Container Terminal, Shekou Container Terminal, Chiwan Container Terminal and Da Chan Bay Terminal One.

Kong, the focus is on the import business because it's a free port, and their focus is on high-end cargoes. They also have a lot of barge traffic and international transshipments. For Shenzhen, our profile is mainly focused on exports to new and emerging markets. Exports to emerging markets are mainly handled by the eastern area of Shenzhen. The western terminals also have a lot of barges and feeders moving to and from other PRD areas. Guangzhou handles more domestic China cargo. For 20 years, the three ports have had their own advantages, but considering the whole region, the market is stable. In Shenzhen, we are focused on liners using Shenzhen Port as their base port. But it really depends on the shipping companies. They will decide what port to choose. We would like to attract shipping companies to stay at Shenzhen, because we have new cargoes every year, but it will depend on the shipping companies to decide where they will send their cargoes.



YANTIAN INTERNATIONAL CONTAINER TERMINALS



As a leading port for mega-vessels in southern China, YICT has 16 container berths, including nine deep-water berths that can accommodate 10,000-plus-TEU vessels, a 17.4-meter-deep port basin, a two-way approach channel and 24/7 terminal services. All together, these make YICT an attractive container hub for customers from around the world.

Currently, YICT has a total of 73 gate lanes available including 41 in-gate lanes and 32 out-gate lanes.

DUAL-HOIST QUAY CRANES LEAD THE INDUSTRY WITH HIGH EFFICIENCY

YICT is equipped with 27 dual-hoist quay cranes, which are among the most cutting-edge container-handling equipment in the world. They can lift two 40-foot containers or four 20-foot containers at the same time. YICT's average application rate of dual-hoist quay cranes has reached 40 percent and even more than 50 percent in the case of unloading, which reflects the best performance in the industry.

IT WELL SUPPORTS PRODUCTION

In 2011, all 16 container berths of YICT were put into full-load operation; the handling capacity of its gatehouse reached a record high; the total throughput of the terminal was up to 10.26 million TEUs. All of these presented a real test to the IT system. Remarkably, it was up to the challenge, recording an excellent performance by achieving 99.998 percent stability and 730 days of no unscheduled downtime.

YICT, with perpetual efforts to sharpen its competitive edge in facilities, technologies and services, will continue to serve as a key exporter of industry expertise and a facilitator of global trade.



MEGA-VESSELS COME FROM ACROSS THE GLOBE

The YICT berthing-on-arrival rate of container vessels — that is, the rate that, after entering the anchoring area, a vessel can be directly berthed at the port without having to wait — reached over 90 percent in 2011, a world-class standard. The number of large container vessels that called YICT in 2011 accounted for 58.78 percent of those that called at Shenzhen and 35 percent of the whole of South China. In addition, the capacity of YICT's gatehouse reached a record high. On Sept. 28, 2011, the gatehouse handled 23,554 containers, setting a new record for daily gate moves.

SHEKOU CONTAINER TERMINAL



Diversity and expansion across Shekou Container Terminal is the key to adapting to the changing business environment. With the migration of manufacturing to more distant points within China, Shenzhen's first dedicated container terminal, founded in 1989 and boasting nine berths and 33 quay cranes, is establishing transport and logistics connections with far-flung regions to its state-of-the-art marine terminal in western Shenzhen. The company is also diversifying into activities such as cold-chain and bonded logistics warehousing, part of a broader, global trend of marine terminal operators expanding beyond basic terminal operations to support broader supply chain goals of customers. Yet it is facing intense competition from other ports within the Pearl River Delta region, so it must strive to keep its services at a world-class level of quality to keep customers happy and continuing to move containers through SCT.

A strength of SCT, which is jointly invested in and owned by China Merchants Holdings and Modern Terminals, is its intra-Asia focus. Of 89 weekly services at SCT, approximately half are intra-Asia. With intra-Asia trade growing rapidly, this positioning has helped immunize SCT from the broader economic challenges of Europe and the U.S., where east-west services reflect the economic challenges of the developed world. And with intra-Asia trade no longer composed of just small container ships, but rather 10,000-plus-TEU ships moving on major intra-Asia corridors, this market generates huge volumes. "Intra-Asia trade is on track for fast growth. SCT, with extensive intra-Asia service callings, plays a very important role in the regional economy." said Erik Yim, managing director of SCT. Of course, SCT is also balancing its mix of services by attracting more longhaul services to the developed and new emerging market.

Part of the strategy for SCT and its major shareholder China Merchants is to make investments in feeder terminals in the Pearl River Delta, including in Chu Kong Transshipment and Logistics Co. Currently, SCT has feeder connections to more than 21 cities and 51 river ports in the PRD region. Shekou's feeder network currently extends to 98 percent of PRD ports and now is being expanded to the broader, pan-PRD South China region, including such locations as Hainan Island.

Expanding rail is part of another key objective — searail transportation. Currently there are two services per week from the Hunan Province capital Changsha, which require 30 hours of transit time. This service has been con-



verted to a joint venture with local partners and with the support of the Hunan Province government.

"We will copy such a model in other areas to accommodate other cargoes moving to and from inland ports," Yim said. The Changha-Shekou rail service provides flexibility to Changsha shippers whose only previously viable option was to ship via inland waterway to Shanghai. In the winter months the barges would often encounter low water levels on the Yangtze River, requiring local factories to use high-cost trucking. By routing cargo via Shekou, shippers reduce transit time by 7 to 10 days to the Middle East. According to Yim, there is more demand for rail than current service can handle. But as rail infrastructure for freight is expanded as passenger track is upgraded, this will mean more services to Shekou. "With the traditional passenger railway services speeded up, it creates room for the containers; before there was no room for containers on the railway," Yim said. "If railway conditions can be more improved, we will go to a daily service. We hope that within two years we can have a daily service."

Another area of approaching improvement is customs clearance. Measures such as 24/7 customs clearance and cross-terminal allocation will provide further improvements, increasing the speed of clearance for shippers.

As the operator of China's first "low-carbon demonstration terminals" appointed by the Ministry of Transport of the People's Republic of China, SCT is keen on energy saving and reducing carbon emissions and has received nationwide notice for its use of an electric rubber-tire gantry crane fleet and alternative marine power.



Chiwan Container Terminal

赤湾集装箱码头

CHIWAN CONTAINER TERMINAL



Chiwan Container Terminal has taken the lead in creating a world-class facility that is at the same time safe, efficient, green, accessible and customer friendly. Through investments in hardware, technology and people, CCT is achieving this lofty vision.

What CCT is doing on the environmental front is a case in point of its ambitions. It is replacing its entire truck fleet, some 400 units, to liquefied natural gas within the next three to five years, starting with the installation of LNG-filling stations onsite at the terminal.

Another example can be seen in its safety initiatives such as installing a terminal-wide RFID system this year that will allow for real-time identification of the location of every worker on the terminal at any given moment. Thus, a crane operator would know the location of workers beneath the crane, which can prevent accidents during the loading or unloading of ships.

Combined with new LED lighting installed throughout the terminal, this system is intended to significantly increase safety at CCT, said Mick Pan, executive deputy general manager.

A major South China marine terminal that handled 5.5 million TEUs last year, CCT has nine berths and 35 post-Panamax cranes able to handle a maximum of 22 containers across, including 16 twin-lift cranes to improve berth productivity.

CCT has also sought more efficient ways to run its terminal. One method is automation of its fleet of more than 100 rubber-tire gantry cranes, so that a single worker can control more than one RTG at a time. "CCT is the first terminal to

build an automatic RTG system," Pan said. Its completion of the ISO 9000, 14000 and 28000 quality standards is testament to the progress CCT has made in its management systems and overall quality.

As much as CCT is improving its yard operations to be more safe and efficient, it is also investing in software to improve its services to shippers. Its new terminal operating system, CMPort, will allow shippers to log on from a computer or mobile device and find information on the status of the container.

"People are using mobile phones more than they are using computers," Pan said.

To make the terminal more user-friendly, CCT utilizes an enduser team that provides value-added services to consignees.

"If consignees need any warehouse consolidation needs; if they are having operational questions or have any inquiries regarding new customs or other government policies, or information about western Shenzhen ports in general, they can contact the end-user team, and they will get the help they need," Pan said.

CCT is also integrating itself into the logistics process of end-users through its close proximity to the Qian Hai Wan Free Trade Port, where facilities offer services such as consolidation, warehousing and bonded value-added services. The new set-up, Qian Hai Modern Service Zone, a joint project of Hong Kong and Shenzhen, is intended to help the South China region evolve from the low-end assembly-type manufacturing that helped build it, to more technologically advanced manufacturing, finance and modern service.

Da Chan Bay Terminal One 大铲湾码头(一期)

DA CHAN BAY TERMINAL ONE

The initial idea of west Shenzhen's newest terminal, Da Chan Bay Terminal One, was formulated in 2005, in response to the growing demand for terminal services in the Pearl River Delta. Over the next six years, the project moved through development stages to become a state-of-the-art facility that welcomed its first carrier services in May 2008, shortly after construction was completed. Since then, Da Chan Bay has continued to grow its market presence by serving many of the world's top container shipping companies.

Throughput is expanding quickly, well on the way to meet the Phase 1 design container-handling capacity of 2.5 million 20-foot-equivalent units. In 2011, throughput was approximately 1 million TEUs, up from 86,000 TEUs in 2008.

Customers are drawn to Da Chan Bay for its competitive combination of advantages including:

- Strategic geographical position in the western Pearl River Delta.
- Extensive network of 18 barge and feeder operators.
- The only on-dock cold storage and inspection capability in Shenzhen.
- Dual-hoist tandem-quay cranes that are 30 percent more productive than regular cranes.
- X-ray inspection and radiation-detection equipment.
- Expedited 10-day VAT processing.

As manufacturers in the PRD are moving to north and west to reduce labor cost, hinterland infrastructure and access to port locations has become more vital. Da Chan Bay is currently reaching farther into the hinterland from the Guangxi province and looking to connect to other provinces, such as Hunan, Hubei and Jiangxi, in the future, utilizing its concept of an "inland gate," which virtually "extends" the terminal's gate to feeder terminals or other areas of its network.

Da Chan Bay is also improving its extensive barge network across the western Pearl River Delta to provide additional inland transportation value to shippers and consignees.

A key differentiator for Da Chan Bay is its Zero-Defect Start Up methodology for attracting new customers. The program provides informational seminars in Shenzhen for cargo carriers and their beneficial cargo owner customers to attend that are designed to answer questions around Da Chan Bay operations, customs procedures and documentation requirements. Zero-Defect Start Up also addresses the commercial benefits of moving through Da Chan Bay to ensure a smooth and error-free transition to the port. Its commercial team frequently visits BCOs and their manufacturing locations to personally address questions or issues

and develop communication and trust. This attention to detail and relationships is testament to the management belief that, ultimately, it is the individuals that work at Da Chan Bay that set the terminal apart from the competition.

Da Chan Bay is capable of handling the largest vessel in the world today. The terminal boasts 100 percent dual-hoist, tandem-lift quay cranes that can simultaneously handle two 40-foot containers or four 20-foot containers, have a total laden weight of 80 metric tons, outreach of 67 meters across 24 containers and rail gauge of 35 meters, allowing eight truck lanes. These cranes support high productivity and have won awards for energy savings; Da Chan Bay's use of 100 percent e-RTGs has significantly reduced carbon dioxide emissions.



A commitment to supply chain sustainability is an integral part of the organization's culture and decision-making. The terminal was the first in the world to adopt a full fleet of electric rubber-tire gantry cranes — which reduce energy consumption by 75 percent and exhaust emissions by 90 percent — and Da Chan Bay's buildings were designed and constructed to achieve maximum energy efficiency. Da Chan Bay's environmental protection committee produces, implements and improves the company's policies such as initiatives including:

- Use of liquefied petroleum gas powered forklift trucks for improved air quality.
- Operation of two wastewater-processing stations to ensure wastewater reaches the required environmental standards before reintroduction.
- The design and construction of all buildings on site to meet the National Design Standard for the Energy Efficiency of Public Buildings.

Da Chan Bay represents the future of the Pearl River Delta in terms of operation expansion. Its focus for the years ahead is on new business acquisition, market growth and providing flawless execution on behalf of its customers.

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