Chinese Tanker Shipbuilding Capability – Today and in the Future

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1 DEVELOPMENT OF CHINA'S SHIPBUILDING INDUSTRY

Since the economic reform in 1978, China's shipbuilding industry has gained a rapid growth. In 2006, new ship completions were 14.52 million DWT, an increase of 20% compared to 2005. New orders and orderbook for China's shipbuilding industry were 42.51 million DWT and 68.72 million DWT, an increase of 50% and 73% individually. A total of 11.71 million DWT ships were for export, which account for 81% of total completions. Total shipbuilding export value reached 8.11 billion dollars, an increase of 74%.

With the rapid growth of China's shipbuilding industry, China's share in global shipbuilding market increases significantly. In terms of ship completions, China's share has reached 19% (DWT base), Shanghai Waigaoqiao shipyard, Dalian shipbuilding industry have ranked themselves in world shipyards top ten.

Tanker, bulk carrier and containership are the three main products for China's shipbuilding industry, while China has made significant progress in high technology ships. China's shipbuilding industry has gained the order for LNG ships, 10,000 class containership and 300,000 DWT FPSO. China is playing a more important role in global shipbuilding market.

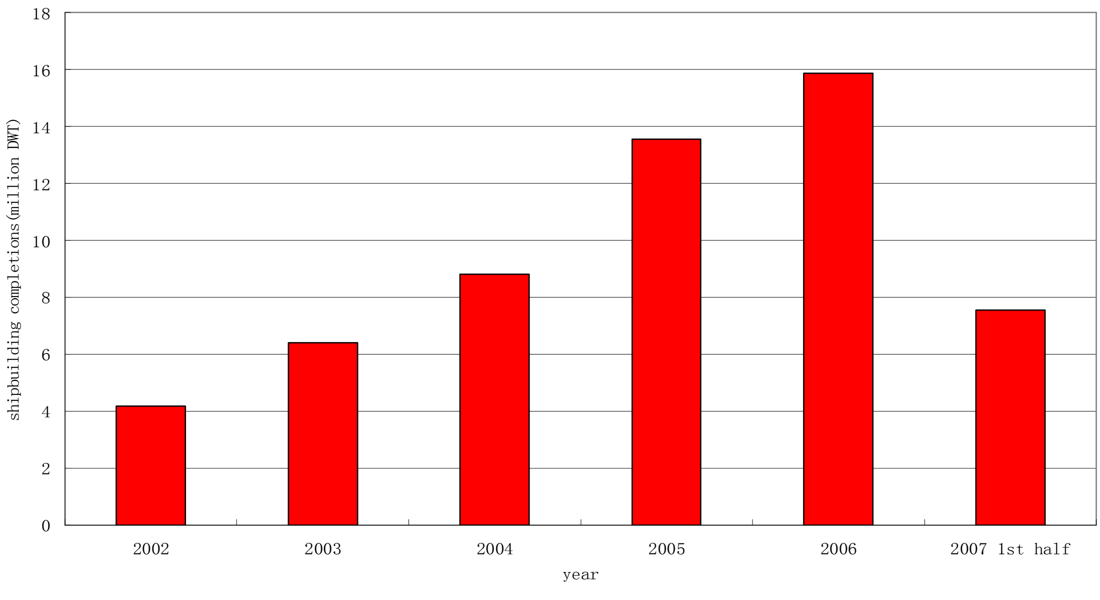

Fig. 1 Shipbuilding completions in China

2 CHINA’S SHIPBUILDING CAPACITY DEVELOPMENT

According to the China shipbuilding yearbook 2007, there are altogether 1310 building berths and 105 building docks in China, but only 4 berths and 9 docks are over 100,000DWT in maximum ship size, which occupy just a proportion of 1%. There are altogether seven 300,000DWT-class building docks in China, a number which falls far behind those in Korea and Japan, even less than those in Hyundai Heavy Industry group only. So the main character of China shipbuilding capacity lies in two aspects: abundance of small and medium-sized building facilities and shortage of large building facilities. The current shipbuilding capacity adds up to about 15 million DWT in China, which also falls far behind that of Korea and Japan(about 30 million DWT individually). China’s shipbuilding capacity lags behind those of Korea and Japan not only in total amount but also in the number of large building facilities.

Table 1 Shipbuilding facilities in China

type	Berth			Dry docks		
	total	>=10,000DWT		total	>=10,000DWT	
		total	>=100,000DWT		total	>=100,000DWT
number	1310	341	4	105	31	9

Source: China shipbuilding yearbook 2006

Table 2 shipbuilding dock/berth with maximum ship type over 100,000DWT in China

	#	Enterprise name	Maximum ship size（DWT）
docks	1	Dalian shipbuilding	300,000
	2		300,000
	3	Hudong Zhonghua shipbuilding	300,000
	4	Shanghai Waigaoqiao shipbuilding	300,000
	5		300,000
	6	Jiangsu new century shipbuilding	300,000
	7		100,000
	8	NACKS	300,000
	9	Yantai Raffels shipbuilding	200,000
berth	1	Jiangsu Dongfang shipbuilding	100,000
	2	Jiangsu Jiangdu shipbuilding	100,000
	3	Dalian shipbuilding	150,000
	4	Bohai shipbuilding	100,000

Source: China shipbuilding yearbook 2006

3 CHINA'S TANKER SHIPBUILDING CAPACITY

As is mentioned, tanker is one of the three main products for China's shipbuilding industry. In order to improve its competitive capability, Chinese shipyards are taking steps to provide better tanker products with better design, higher quality and better performance. China's tanker shipbuilding capacity increases steadily in recent years. In 2006, China completed 1.67 million DWT of crude oil tanker and 2.16 million DWT of product & chemical tanker, which is a slight decrease compared to 2005 because many tanker shipbuilding capacity turned to the building of bulk carriers in the booming bulker market.

Table 3 China's tanker completions

	2004		2005		2006	
	No	DWT*	No	DWT*	No	DWT*
Crude oil tanker(single & double hull)	54	1.19	30	1.85	15	1.67
Product & chemical tanker	45	1.46	90	2.2	55	2.16

*the DWT figures are in million DWT

Now China's shipbuilding industry has the capability of building tanker product ranging from VLCC to handysize tankers. The shipyards of China State Shipbuilding Corporation (CSSC) and China Shipbuilding Industry Corporation (CSIC) are the main tanker shipbuilders, such as Dalian shipbuilding industry, Bohai shipyard, Waigaoqiao shipyard and Hudong Zhonghua shipyard. The new shipbuilding bases which are still under construction have all selected VLCC as their main product. Besides, many local shipyards also have the capability to build tankers, although their tanker products tend to be small-and-medium-sized products. Some local shipyards like New Times Shipbuilding have made great progress in building larger tankers such as suezmax tanker.

Table 4 Main tanker shipyards in China

Ship type	Main shipyards
UL/VLCC	Dalian shipbuilding industry, Jiangnan Changxing, Bohai shipbld, Guangzhou Longxue,Waigaoqiao shipyard
Suezmax tanker	Jiangsu Rong Sheng, New Times S.B., Bohai Shipbld.
Aframax tanker	New Times S.B., Waigaoqiao S/Y, Hudong Zhonghua, Dalian Shipbld. Ind.
Panamax tanker	New Century S/Y, Dalian Shipbld. Ind.,
Handysize tanker	Guangzhou S.Y. Int.,Jinling SY, and etc
Products Tanker (80,000~119,999 dwt)	New Times S.B., Waigaoqiao S/Y, Dalian Shipbld. Ind., Hudong Zhonghua

Products Tanker (60,000~ 79,999 dwt)	New Century S/Y, Dalian Shipbld. Ind.,
Products Tankers (30,000~59,999 dwt)	Guangzhou S.Y. Int., Jinling SY, Bohai Shipbld.,

4 CHINA'S LONG-TERM SHIPBUILDING PLAN

In China, shipbuilding industry is treated as a strategic industry. This is not only because shipbuilding industry is an important defense industry, but also because shipbuilding industry serves as an important role in promoting export and employment. In recent years, world shipbuilding market begins to enjoy its prosperity, as a late comer, it is a good opportunity for China to improve the competitiveness of China shipbuilding industry. In order to improve the market share of China's shipbuilding industry, China's central government has set up a plan to guide the development of the shipbuilding industry. According to this plan, China will try to expand its shipbuilding market share to about 35% toward 2015. To realize this, China will build 3 modern shipbuilding bases in Bohai area, outlet area of Changjiang River and outlet area of Zhujiang River. China will also take steps to improve the self-dependent innovation capability of its shipbuilding industry, the steps include brand strategy in conventional ship market, more value-added ships, development of offshore products, and more R&D investment by shipyards. Productivity improvement will also be the focus for Chinese shipyards, which includes optimization of the shipbuilding process, more digital shipbuilding technologies and improvement in the management level of shipyards.

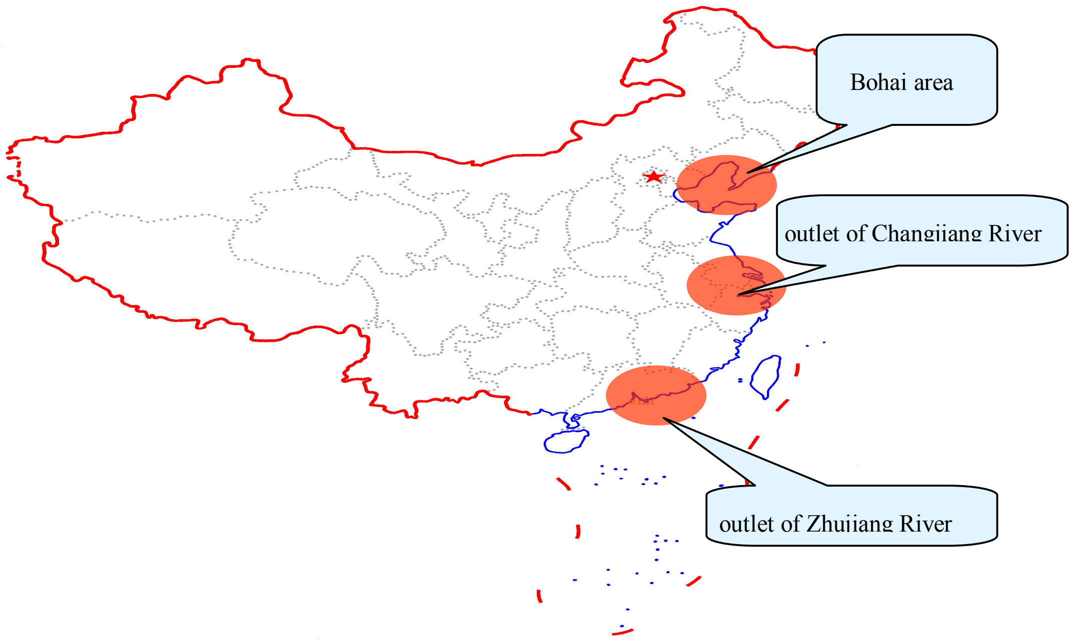

Fig. 2 the three modern shipbuilding bases

5 OUTLOOK OF CHINA'S TANKER SHIPBUILDING CAPACITY

China is exactly the main driving force for world shipping and shipbuilding market. In 2006, China's oil import increased 14.795 million tons, which is nearly the whole increment of world oil import. China's development is of great benefit to world shipping and shipbuilding industry, and serves as a solid base for the development of China's tanker building capability.

Compared with Japanese and Korea shipbuilding industry, Chinese shipbuilding industry still lags behind especially in terms of shipbuilding technology. China is now playing a more important role in world shipbuilding market, China's shipbuilding industry will devote itself into improving the comprehensive competitive capability, meet the new rules and regulations, and thus make contributions for world shipping industry with better tanker products and service.