

EMBRACING A NEW ERA OF WIN-WIN COOPERATION

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ABSTRACT

Since the implementation of reform and the opening up of policy, Chinese dredging enterprises have undertaken a great amount of dredging and reclamation work for ports, navigation channels, irrigation and environmental protection in China. They have also successfully explored the dredging market in Mid East, South America, Africa, South Asia, South-east Asia and Hong Kong-Macao Area, becoming a very important power in the International dredging market. With the progress of society and economic development, the requirement for channel construction & maintenance and environmental protection will be greatly increased, providing China's dredging industry with an unprecedented opportunity. Nowadays, China's dredging enterprises are growing constantly. For example, the design and manufacturing ability for dredging equipment is continuously progressing and the country's dredging ability enjoys a leading role in the World. Meanwhile, China's large dredging projects have also attracted many famous enterprises from abroad to participate in the Chinese market.

With China's entry into the World Trade Organization (WTO), both "to introduce foreign investment and technology" and "to go global" important roles are being played in the development of society. As the industry which introduced the foreign technology relatively early, during 1970s, China's dredging industry bought many dredgers and adopted technology from the countries with a high level of involvement in dredging. Moreover, the dredging industry had also "gone global" relatively early. Since the nineteen eighties, China has been undertaking contract dredging projects in the overseas market.

In the world of today cooperation takes on a more important role than competition. China should actively strengthen International economic & technology cooperation, endeavor to explore the International dredging market and constantly promote its competitive capability in the International market so as to create a new era of win-win cooperation together with other world dredging enterprises.

Key words: China's dredging industry, China's entry into WTO, win-win cooperation

INTRODUCTION

Since China has implemented reform and opened up policy, Chinese dredging enterprises have not only undertaken a large amount of dredging and reclamation works for ports, navigational channels, irrigation and environmental protection projects in China but have also successfully entered the dredging markets of the Middle-east, South America, Africa, South Asia and South-east Asian countries, as well as in the Hong Kong and Macao Regions. The Chinese dredging industry has become an important force in the international dredging market now. Since China entered the WTO five years ago, speedy social advancement and economic development has stimulated a great demand for infrastructure, thus bringing about a booming dredging market in China. The Chinese dredging industry is therefore facing an unprecedented opportunity for development. However, this is not only an opportunity for the

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Chinese dredging industry but also an opportunity for the dredging industry throughout the whole world.

A THRIVING DREDGING MARKET IN CHINA

Capital and Maintenance Dredging for Coastal and Inland River Ports and Navigational Channels

The sustainable and rapid development of China's international trade has whipped up the need for the construction of port infrastructure. According to the plan of the Ministry of Communications, by the year of 2010, the total handling capacity of the coastal ports in China will increase to 4.5 billion tonnes and the container handling capacity will be 140 million TEUs. By the year of 2020, the total handling capacity of the coastal ports will reach 6 billion tonnes and the container handling capacity will be 250 million TEUs.

The pattern of port construction in China is now changing from expanding the existing terminals to building new ones and dredging new channels in unprotected coastal areas. Taking the Yangtze River Estuary Deepwater Channel Regulation Project as an example, the depth of the channel was scheduled to be dredged in three phases, i.e. from 7m to 8.5m, to 10m, and then to 12.5m respectively, so as to accommodate the third and fourth generation container vessels in all weather conditions and the fifth generation container vessels and 100,000 DWT bulk vessels at high tide. Today, Phase I and Phase II of the project have been completed and Phase III will mainly focus on the 170 million m³ of capital dredging and 30 million m³ of annual maintenance dredging afterwards. Another example is the Yangshan Deep-water Harbor, a large offshore harbor area separated from the mainland. In Phase I, 1.25 million m² of land area to form the harbor area was reclaimed using 25 million m³ of material. In Phase II, an area of 430,000 m² was reclaimed using 4 million m³ of material. As the working conditions became increasingly difficult with the distance between the dumping area and the dredging site becoming longer, the use of various types of large-sized dredgers with good performances in high wind and wave conditions, high efficiency of dredging and loading and being capable of working over long distances were required. This has meant that the requirements for dredging technology and equipment became stricter.

There is increasing development of the local economy in the drainage areas of the Yangtze, Pearl, Heilongjiang and Songhuajiang Rivers. In the drainage areas of the Yangtze River, Pearl River and several big lake areas in China, river transport is becoming more and more important thereby imposing a higher requirement on the depth of the navigational channels. The Yangtze River, being the "golden waterway" for shipping, is the busiest navigable river in the world. It plays an important role in the country's economic development, with a cargo movement of one billion tonnes in 2006. However, dozens of shallow channels in the lower reaches still remain in their natural condition, not having been developed, which means that for a long period of time in the future dredging will be required as the main means of ensuring navigation requirements. It is estimated that 16 billion RMB will be invested in the Yangtze River's channel regulation from 2004 to 2020 and that the maintenance dredging demand for ports and channels in the middle and lower stream areas of the Yangtze River will be tens of millions of m³ every year.

The Construction of Coastal Industrial Zones and Coastal Cities

With the growing dependence on imported raw materials by the steel and petrochemical industries in China, the

trend to centralize these industries and their related derived industries in the coastal zones is getting more obvious. As a result, the demand for reclaimed land due to the development needs of these industries in coastal zones and around the port areas will be greatly increased. For example, the Capital Steel Group has invested 1.3 billion RMB for 11.95 km² of land reclamation in the sea at Caofeidian, Tangshan for Phase I alone. The planned final land reclamation area in the sea at Caofeidian, Tangshan, will be over 300 km², equivalent to three times the urban area of Tangshan City itself. There are many other examples such as the Guangzhou Steel Group which will gradually move to Nansha Port over the next 10 years. The Shaoshan Steel Group has decided to build its ten-million tonne steel manufacturing base in Zhanjiang. The Wuhan Steel Group and the Liuzhou Steel Group have started to work together to build their new coastal steel base in Fangchen Port. The Baoshan Steel Group is planning to build its ten-million tonne mill in Zhanjiang City, and the Anshan Steel Group is planning to build its new complex by the sea in the city of Yingkou.

Port expansion plans were also carried out by reclaiming areas, such as the Nansha Harbor Area of the Guangzhou Port, the Yangshan Harbor Area, the Huanghua Harbor Area, the Yantai Phase II Harbor Area, the Qingdao Qianwan Harbor Area and the Guangzhou Xinsha Harbor Area. Some of the port-neighboring industrial zones and airports such as the Jinshan Chemistry Industrial Base, the Huanghua Power Plant, the Macao International Airport and the Hong Kong New Airport were also built on the man-made land formed through dredging-backfilling and reclamation operations. All these promoted great improvements and helped with the development of reclamation technology.

Land reclamation has also contributed a lot to the development of coastal cities. For example, the fast growing Binhai New District in Tianjin City has presently launched the largest land reclamation project in China with a new area of over 50 km², including 33 km² of reclaimed area in the North Harbor section of Tianjin Port and 20 km² in the shoal land of the Nanjiang Coastal Bank in Phase I.

According to the plan of the Shanghai Municipal Government, a total area of 734 km² of land is to be reclaimed from 2000 to 2010, including the Pudong International Airport, Dongtan, both wings of the terminal at Luchao Port, Phase I of the Artificial Island and the reclamation works for the Changxing Island. The two large shipyards of Shanghai, i.e. Jiangnan Shipyard and Hudong Chinese Shipyard, will be moving to the Chongming and Changxing islands.

With the economic development and the speeding up of urbanization in some medium and small-sized cities along the coast, the shortage of land resources will become more and more serious. Therefore, these also are starting to plan for land reclamation in the sea to meet the requirements for the development of new urban areas.

Dredging for Flood Prevention

China has thousands of rivers of which 50,000 have a catchment basin area of more than 100 km² each and 1,500 have a basin area of more than 1,000 km² each. Due to the special natural geographic conditions, soil erosion of rivers becomes a prevailing phenomenon. The total area in China suffering from soil due to water erosion has reached 1.79 million km², resulting in a high content of sand in rivers and soil sediment in rivers and lakes.

According to incomplete statistics, about 1.4 billion tons of mud and sand settles in reservoirs, river channels, lakes and irrigation systems in China every year, and 1.8 billion tons of sand went into estuaries and seas. These sediments mainly settle in the down stream sections of rivers and in sea estuaries. The serious soil and water loss directly leads to deterioration in the performance of flood discharge systems. Therefore, large-scale and continuous dredging to prevent flooding is of paramount importance.

Environmental Control and Ecological Protection

In recent years, the Chinese Government has been paying more and more attention to environmental control and ecological protection and making an increased financial investment. During the period of the 10th Five Year Plan, the Government invested 270 billion RMB for pollution control associated with the “three rivers” and “three lakes” in China. It has become a very important subject for the Chinese dredging industry as it now attaches more importance to environmental protection in dredging operations and utilizes dredging techniques to improve the environment. Dredging for environmental protection has become a new industry in recent years with the quantity of such work increasing. The environmental-protection dredger and related techniques are receiving more and more attention with the number and distribution of environmental protection dredging projects increasing substantially. The development and growth of environmental protection dredging is, therefore, bound to bring new opportunities to China’s dredging industry.

In addition, with further exploitation of offshore resources, new industries such as offshore oil and gas, submarine cables and pipelines and coastal maintenance, are developing and becoming a new market for the dredging industry.

THE PROSPEROUS CHINESE AND GLOBAL DREDGING MARKETS PROVIDE NEW OPPORTUNITIES FOR WIN-WIN COOPERATIONS AMONGST THE DREDGING INDUSTRY WORLDWIDE

After China joined the World Trade Organization (WTO), the emergence of many large dredging projects in China has provided overseas dredging companies with unprecedented opportunities. As a result, many joint venture dredging companies and various ways of cooperating have come into being. For example, the Tianjin Port Authority and Jan De Nul, a Belgium dredging company, established a joint venture company and rented “Vasco da Gama”, the largest trailing suction hopper dredger in the world today, to dredge the channel down to -17 m and reclaim land using the dredged material within the Port of Tianjin. The Tianjin Dredging Company cooperated with Boskalis and Van Oord, two Dutch dredging companies, to dredge the deepwater navigational channels. The Guangzhou Dredging Company cooperated with Dredging International from Belgium to carry out the dredging works for the 250,000 tons navigational channel in the Port of Zhanjiang with the large trailing suction hopper dredger “Nile River”. In addition, some Dutch leading dredging companies such as Van Oord and Boskalis are working together with the Chinese Longwan Group in the dredging projects at Nanhui, Shanghai. Such cooperation shows that the Chinese dredging enterprises have stepped from the scope of domestic cooperation into international cooperation with broader development perspectives. It also shows the positive attitude of the Chinese dredging enterprises towards the changes in the international dredging market and their determination to accelerate their integration into the wave of globalization after China’s entry to the WTO. By the means of “win-win” cooperation, the Chinese

dredging companies are strengthening their collaboration with the advanced international dredging companies and foreign dredging contractors are entering the Chinese market through the establishment of joint venture companies or by leasing out dredging equipment. In so doing, on the one hand foreign dredging contractors are able to fully display their capabilities while on the other hand the Chinese dredging enterprises can improve their performance levels through cooperation. Such cooperation is, therefore, not only a process of market re-allocation and a sharing of the work between International and Chinese enterprises but a way of ensuring “win-win” operations. Of course, the optimal way is the combination of foreign advanced dredging companies and Chinese leading dredging companies, which will be beneficial for both Chinese and foreign companies who will complement each other based on their respective advantages.

The economic development of each nation, especially the construction of the coastal “economic interface” and the speedy development of the shipping industry has created a strong demand for the dredging industry all over the world. The opening up of China has realized and seized this opportunity. The Chinese dredging industry is among the few pioneers to import techniques and equipment from abroad and undertaking foreign/overseas projects. Since China’s reform and opening up, the former China Harbor Engineering Company (Group) (CHEC) has explored and entered the dredging markets in the Middle East, South America, Africa, South Asia and Southeast Asia, as well as in Hong Kong and Macao. CHEC has completed more than one hundred dredging and reclamation projects, acquired good achievements and reputation and became an important force in the international dredging market. For example, CHEC was the main contractor for the artificial island reclamation project of the Macao International Airport. The total volume of excavation and reclamation was 64 million m³, building a land area of 1.152 million m². The quantity of the work ranked the highest for all marine works in China at that time.

The China Communications Construction Company Ltd. (hereinafter referred to as CCCC) was established by merging the previous China Harbor Engineering Company Group and the China Road and Bridge Construction Group. Its main scope of business is the design and construction of large-sized and super large-sized communications infrastructure, of which dredging and reclamation is one of the main business activities. As the leading dredging company in China, CCCC will respond to any call from the international market in order to promote the development of the international dredging industry together with our counterparts and dedicate ourselves to global economic prosperity.

The Enhancement of Competitiveness of the Chinese Dredging Industry in the International Market is the Basis of Cooperation between the Chinese and Foreign Dredging Industries

In the 1970’s, new dredgers were built, both in China and abroad, to accommodate the boom of port construction in China with more dredgers, of all types, purchased in the following years. The largest cutter suction dredger at that time was “Jin Hangjun 215” from the Tianjin Dredging Company, with the power of 10,800 kw and a maximum dredging depth of 30m. In the 1990’s, three trailing suction hopper dredgers were built with capacities of 5000 to 5400m³ with maximum dredging depths of 30 to 45m and equipped with track display systems and DPS. The efficiencies for both dredging and loading were greatly improved and were at a world advanced level at that time. China’s dredging capability was greatly increased by putting these dredgers into operation.

In recent years, the Chinese dredging companies are undergoing asset restructuring and placing more orders for advanced large-sized dredgers. Presently, CCCC Ltd owns more than 210 dredgers and auxiliary vessels of all types with an annual dredging capacity exceeding 200 million m³. The Tianjin Dredging Company signed a contract for designing and building a self-propelled trailing suction hopper dredger with the capacity of 13,500 m³. Besides this, it has also developed and built a cutter suction dredger named “Tianshi”. The Shanghai Dredging Company ordered the worlds most advanced tailing suction hopper dredger and cutter suction dredger “Xin Hai Long” and “Xin Hai Bao”. In addition, the Shanghai Dredging Company also rebuilt three 27,000 ton cargo ships into three 13,000m³ large-sized trailing hopper suction and deep sea sand dredgers named “Xin Hai Xiang”, “Xin Hai Jing” and “Xin Hai Shi”. Together with the 708 Institute of MARIC, the Shanghai Dredging Company designed and built the “Xin Hai Hu” of 13,500m³, a self-propelled trailing hopper suction dredger of 16,888 m³, and the “Xin Hai E” with the total power of 14,600kw. The self-propelled tailing hopper suction dredger “Wan Qing Sha” of 10,028m³ ordered from the Dutch IHC by the Guangzhou Dredging Company has also been put into service. In addition, CCCC Ltd is planning to buy and rebuilt some more large dredgers to meet the dredging demands both at home and abroad.

In the field of inland waterway dredging, the Changjiang Dredging Company ordered a variety of dredgers necessary to undertake the maintenance dredging for the channels of the Yangtze River in different seasons.

Along with this tide of reform and opening up, some Chinese private dredging enterprises started to spring up and develop through the absorbing of qualified personnel, speeding up facility purchasing, equipment leasing and technical improvements.

The fast growth of China’s dredging facilities can be attributed to the guideline of “walking on two legs”, i.e. to import the necessary large-sized dredging equipment, adopt and assimilate foreign advanced techniques on the one hand and to actively explore and keep going with independent innovation on the other hand. After years of effort, the level of research and manufacture of dredging facilities in China has made an important breakthrough and taken on a certain scale. The small-and-medium sized dredging facilities developed and constructed in China have already reached a level using advanced techniques, and have covered almost all types of international dredging facilities. They have, to some extent, met the demands of the domestic dredging market and stepped into the international markets. The design and building of large-sized dredgers has also realized a historical breakthrough which means a scientific research team has taken shape consisting of designers and builders for different types of dredgers together with management personnel. There are also a number of medium-scale dredger building shipyards and auxiliary facility manufacturers. These provide the important technical and physical foundations for the rapid progress of the Chinese dredging industry.

China’s reform and policy of opening up the industry has promoted the development of the Chinese dredging industry with the development of the Chinese dredging industry breeding its own strength to cooperate with advanced dredging companies in the international market.

Mutual Supplement and “Win-win” Cooperation are the Inevitable Trend of International Dredging Development

The booming worldwide economy, especially the economic globalization, has brought about competition without national boundaries and increased the instability from competition. The major issue posed to the dredging enterprises of all countries is how to now grasp the opportunity brought about by the global industrial structural readjustment and the new circle shift of international industries. Also, how to accelerate the development of the dredging industry so as to share the fruits in the dredging market caused by the shift of the international industries. The best solution is to avoid mutual depletion and turn malignant competition into complementary “win-win” cooperation so as to find the best way for joint development.

Some famous dredging enterprises from the developed countries have reached a common view with the Chinese dredging enterprises through their long-term cooperation. They have established a fairly ideal cooperative mode and thereby proposed a mutual development plan in the dredging markets of third world countries. For instance, the Dutch company Boskalis suggested that the Chinese maritime construction forces could make use of its own advantages in the form of “win-win cooperation” to contract related projects in the international market. The famous Belgium dredging company Jan de Nul proposed that the Chinese dredging companies and European dredging companies could jointly develop the international market. The Chinese dredging companies will definitely act positively in regard to cooperation such as this.

CONCLUSION

In conclusion, the dredging enterprises of all countries should make common efforts to turn the non-orderly competition into orderly competition and to turn malignant competition into double-win cooperation. The Chinese dredging enterprises are willing to join hands with their dredging counterparts from all counties in order to enhance international cooperation and deepen the development of a harmonious International dredging market and greet a new era of “win-win” cooperation.

