

PILOTAGE ADVISORY COMMITTEE

Study on the Next Generation of Large Containerships and its Impact on the Port of Hong Kong

Purpose

The purpose of this paper is to provide members with a general picture of the captioned Study on the future trend of containerships in a new era of globalization, and evaluating its impact on the Port of Hong Kong.

Background

2. The world of container shipping is changing rapidly, and container ports need to appreciate what the changes are in order to plan ahead for the future. One notable and important change is the deployment of ever larger containerships by major carriers with a view to achieving better economies of scale. To enable Hong Kong to remain competitive, and consolidate its current status as a major hub port in the Asia Pacific region, it is imperative that Hong Kong should ensure its infrastructure and facilities are able to receive the future generation of mega-containerships. In this context, the primary purpose of this study is to identify the potential impacts of the next generation of mega-containerships on Hong Kong and to recommend strategies to enhance our competitiveness in this region.

Objectives of the Study

3. The objectives of this study are:

☞ To assess the global development of the container trade;

☞ To identify the current trend of the world fleet of container vessels and its implications on Hong Kong up to 2011;

- ✍✍ To reveal the latest distribution in the size of container ships visiting Hong Kong;
- ✍✍ To compare Hong Kong against its regional counterparts in terms of its ability to fulfill the fundamentals of a mega-hub; and
- ✍✍ To make recommendations as to what Hong Kong should do in response to the anticipated development of the container shipping sector.

Study Methodology

4. The study involves an extensive review of contemporary literature on the trends of container shipping supplemented by interviews with container terminal operators and major shipping lines.

Findings

5. The findings of the study are summarized as follows:
 - ✍✍ Container throughputs at leading container ports in Asia (e.g. Tokyo, Busan, Kaohsiung, Singapore, Shanghai, Yantian, Hong Kong etc.) had registered continuous increases over the period between 1997 and 2000. In terms of growth rates, Mainland China, in particular Shanghai, is undisputedly a high growth area in recent years.
 - ✍✍ The world container fleet has been growing rapidly over the last decade in tandem with the growth in container trade on a global basis. A total of 106 post-Panamax vessels of over 5000 TEU are expected to come on stream between 2001 and 2004, and industry experts also projected that the sizes of containerships are expected to gradually increase in the coming decade.
 - ✍✍ It appears that the biggest impacts arising from the growth in vessel sizes are mainly associated with the water depth (both in approach channels and at alongside berths) and the outreach of container cranes.
 - ✍✍ The arrival of mega-containerships also gives rise to a series of knock-on effects leading to demands for greater productivity from quayside and

landside operations, including storage capacity and intermodal connections of container ports as well as higher container-handling rate at ports.

✍✍ Hong Kong is currently ahead of many other large container ports in terms of productivity and turn around time in serving the latest generation of large containerships. This explains why almost all the existing post-Panamax vessels in the world fleet had called in Hong Kong between 2000 and 2001. The challenge in meeting the design parameters of the future generation of large containerships is to maintain continuous improvements on port infrastructure (both hardware and software) and other supporting services in attracting vessels to continue to make Hong Kong as a hub of their choice.

Conclusions

6. It is concluded that:

✍✍ The trend for larger containerships will continue. The present indications are that a sizable fleet of 10,000 to 12,000 TEU ships will come on stream between 2005 and 2010. As for ships of 15,000 TEU or more, their advent is uncertain at present.

✍✍ In terms of quay length, Hong Kong is capable of receiving the next generation of vessels.

✍✍ The current alongside water depths at Kwai Chung are adequate to meet the navigational requirements of large containerships currently in service as well as those expected to come into operation within the next few years. As for future five-digit containerships, given their draft is still uncertain, there is a need to regularly review their development in terms of physical dimensions so that dredging can be planned in good time to meet their operational limit conditions.

✍✍ The proportion of future five-digit containerships is expected to account for a small percentage of the total containerships calling at Hong Kong based on current distribution of containerships visiting Hong Kong in terms of sizes.

There will be fewer, but much larger, shipping lines as they continue to merge and form alliances with a view to aggregating cargo and achieving economies of scale.

The existing quayside cranes will need to be upgraded or replaced in order to serve the coming generation of large vessels capable of stowing more than 22 boxes abreast on deck.

The future mega-containerships would continue to visit Hong Kong insofar as Hong Kong is able to maintain its high efficiency in container handling operations.

Recommendations

7. To maintain Hong Kong's competitive edge, the followings are recommended:

To maintain a water depth of 15.5m in the approach channels and alongside berth to meet future requirement up to 2005. However, there is a need to regularly review the future generation of five-digit containerships so as to ensure timely provision of the required depth of water.

To ensure that berths of future container terminals are capable of accommodating large containerships of 350m LOA and 60m beam.

To upgrade quay cranes in order to serve large containership with 60m beam.

To continue to improve and upgrade vessel safety system in order to ensure safe and efficient passage of the next generation of containerships visiting Hong Kong.

To continue to improve our IT infrastructure.

To continue to improve our provision of feeder services and road networks to/from our potent cargo-generating hinterland with a view to expediting cargo movements.

☞To ensure timely scheduling of berthing operations so as to facilitate just-in-time berthing of vessels in collaboration with all concerned stakeholders.

☞To promote mutual understanding with our neighboring ports on the Mainland in order to help create a collaborative environment that is conducive to the development of container trade in the Pearl River Delta ports.

☞To update this study at a reasonable interval in order to help keeping abreast of the latest trends in container shipping.

Advice Sought

8. Members' views and/or comments on this Study are welcome.

Presentation

9. This paper will be presented by Mr. C.Y. TSANG, Senior Marine Officer of the Marine Department.

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