THE STUDY ABOUT A STRATEGY OF GLOBAL CONTAINER TERMINAL OPERATORS

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Abstract: The oligopoly by mergers and acquisitions or Alliances progresses in liner market. At the same time, Industry reorganization by mergers and acquisitions and the oligopoly are going in the world container terminal industry.

Purchased P&O Port by Dubai Port World (DPW) and recent announcement of tie-ups PSA and Hutchison, such active movements proved above. An investment to container terminals becomes active especially in China. There are two reasons of investing to container terminals. One is secured terminal for own container vessels by liner companies. The other is because terminal business itself profitable.

This study discusses the current situation of container terminal business and the strategy of the Global Terminal Operators. A background of oligopoly in container terminal industry must be also discussed.

Key Word: Global Terminal Operator, Oligopoly, M&A, Privatization, BOT

1. INTRODUCTION

The oligopoly progresses by mergers and acquisitions as well as alliance instead of freight conference in the liner industry. Mergers and acquisitions are also active in the world container terminal industry, and an investment to a container terminal continues in prospect of demand for container transportation, suddenly spread especially in China. The goal of this examine is clarifying a strategy and a future trend of Global Terminal Operators and world terminal industry. Drewry Shipping Consultants calls the world or global scale of terminal operators as “Global Terminal Operators” on their Annual Review. In this paper, also use “Global Terminal Operator” as follows.

The paper proceeds as follows; the first of the part presents the current conditions of

world terminal industry. The second part classified Global Terminal Operators.
The third part, it discusses the background of oligopoly by a few Global Terminal Operators and the business expansion methods. Then I take up the upsizing of a containership and measurement by a container terminal. Final section is conclusion at the moment of the study.

Here, I report progress in the way of this study so that there is the part which a study goes continuously and is still investigating.

2. THE PRESENT CONDITONS OF WORLD CONTAINER TERMINAL INDUSTRY

55% of world containers are handled in 2004 by top ten terminal operators. Hutchison Port Holdings (HPH) handled container 47,800,000TEU in 2004 had the top share of 13.3%. Then share follows AP Moller Terminal (APMT) 9.5%, PSA 9.3%, DPW 9.2%, and COSCO 3.7%. These big 5 operators share was 41.3% in total. By 22 Global Terminal Operators, which manage and administrate container terminal world scale, have 65% share all over the world (Table 1).

Global Terminal Operators share shows high ratio at the terminal so called Hub-Ports, such as Singapore, Hong Kong, Shanghai, Rotterdam, and so on.

Most of terminals which equip with the super gantry crane suitable for supers post panamax size containership like 10,000TEU type are administered by a few Global Terminal Operators. The share by Global Terminal Operators increases by an investment to new terminals, not only development but also mergers and acquisitions. The oligopoly progresses by a few Global Terminal Operators.

Global Terminal Operators are positive to invest container terminal expansion, according to the announced expansion program, container handling capacity will in crease by 50% until 2010 by top 5 Global Terminal Operators. In case of top 10 Global Terminal Operators, the increase ratio is approximately similar 1.5 times.

Table 1.Global Container Terminal Operators

rank	name operator	throughput (2004)		capacity (2004)	capacity plan (2010)
		Million TEU	Share (%)	Million TEU	Million TEU
1	HPH	47.8	13.3%	53.9	71.9
2	APMT	34.0	9.5%	43.6	68.7
3	DP World	33.3	9.3%	40.8	59.3
4	PSA	33.1	9.2%	39.4	64.6
5	COSCO	13.3	3.7%	15.7	32.9
6	EUROGATE	11.5	3.2%	14.0	19.4
7	EVERGREEN	8.1	2.3%	9.1	14.1

8	SSA Marine	6.7	1.9%	8.5	9.9
9	MSC	5.7	1.6%	7.1	16.5
10	HHLA	5.6	1.6%	6.9	9.8
11	APL	5.3	1.5%	6.0	6.7
12	HANJIN	4.4	1.2%	5.4	10.9
13	NYK	4.4	1.2%	6.6	6.6
14	OOCL	3.6	1.0%	4.1	6.7
15	MOL	3.6	1.0%	3.8	3.8
16	DRAGODOS	3.1	0.9%	4.5	7.1
17	K LINE	2.6	0.7%	3.3	4.1
18	TCB	2.4	0.7%	4.4	4.5
19	ICTSI	1.9	0.5%	2.9	4.1
20	YANG MING	1.7	0.4%	1.5	2.4
21	HYUNDAI	1.2	0.3%	1.1	5.1
22	CMA CGM	1.2	0.3%	2.1	5.1
Global Operators Total		234.5	65.1%	284.7	434.2

DPW including CSXWT & P&O Ports (including terminal in USA)
APMT including P&ONL
Data: Drewry Shipping Consultants

3. A CLASSIFICATION OF GLOBAL TERMINAL OPERATOR

3.1 A Classification by parent company

Global Terminal Operators can be classified by 2 categories by their parent companies. One is the Global Terminal Operator who has port operation or stevedoring company as parent, and the other is whose parent is liner shipping company. An operator affiliated with a liner company is possible to divide by 2 more. The first one is the terminal operator whose main purpose is to support liner business as core of parent company.

A Global Terminal Operator of most affiliated with liner company is a business for the first classification that is support of a parent company. There are a lot of cases which support of container transportation which limits the business to U.S.A. and East Asia in an original purpose to support and help container shipping for parent company's core business. Hanjin and Hyundai (Korea), Yang Ming (Taiwan), OOCL (Hong Kong) and Kawasaki Kisen (Japan) are the examples of this classification. For these companies, terminal business is placed as "cost center".

The second is to offer service to third party as well as supporting parent core business. The company of this category manages the terminal business as independent and evaluates it "profit center". APMT and NYK are given for a Global Terminal Operator

classified in the second obviously. The second category must be minority or exception for the moment. NYK is counted in second category, purchased Ceres Terminal and expanding terminal business itself.

Table 2.Classification of Global Terminal Operators

Classification	Charactaristics Points	Owner	Compnaies
Started with Stevedores	Primary business is port operations and stevedoring "profit center"	Public (Government or Port Authority)	PSA, DPW(P&O Ports), HHLA
		Private	HPH, Eurogate, SSA Marine, Dragados, Grup TCB, ICTSI
Started with Container Carriers	Main business is container shipping and investment to container terminals is supporting this core activity. "cost center"	Public (Government or Port Authority)	-
		Private	CMA-CMG, Evergreen, APL, Hanjin, Kline, MISC, MOL, Yang Ming, Hyundai(HMM)
	Parent company is container shipping, but establish terminal business independently which handle third party business as well as in-house traffic	Public (Government or Port Authority)	COSCO Pacific
		Private	APMT, NYK

Data: by T. Mori

Note: APMT has clear distinction between the terminal operating business and the parent company liner business

A Global Terminal Operator who placed own business as "profit center" has worldwide expanse, but there are own strong presence and not. APMT resists North America. HPH begins Hong Kong and establishes the presence that is strong in the Far East and North Europe and Central America, the Caribbean. PSA presents a terminal business around Southeast Asia around local Singapore. In addition, P&O Ports was

succeed in DPW which I put in affiliation by having built a strong base in Australia and Southern Asia opening a network in deep Southern Asia of a connection with the local Middle East. APMT concentrates power on Middle East, Africa and Central and South America not to mention China while further expansion, reinforcement more in North America. COSCO is establishing the presence in China and MSC in North Europe and Mediterranean Sea by their own schedule. A common point is to be active in a terminal investment in China which anticipated demand, spread rapidly. In Japan, ICTSI invested and joined operation in Naha, Okinawa and PSA participated to Hibikinada Container Terminal, Kita Kyushu, but are hard to say that is succeeded.

3.2 A classification by management forms

A Global Terminal Operator can classify it by the management form again. These are owned or administrated by public sector like a government or a port authority, and a private enterprise. Representatives of an operator administered possession by a government or a port authority are PSA (Singapore) and DPW (UAE). PSA is the affiliation in investment company Temasek, a holding company owned by the Singapore Government. DPA (Dubai Port Authority) and DPI (Dubai Port International) together and started a terminal business by a name of DPW positively recently. Following the purchase of 2005 CSXWT, then purchased P&O Ports in 2006 and grew rapidly and now ranked to Top 3 Global Terminal Operator. HHLA, which Hamburg City owns, belongs to this classification. In this way most of operators started from port operation business are owned by a government or a port authority. For a Global Terminal Operator affiliated with a liner company, as well as owned by public sector, Chinese COSCO Pacific is given.

On the other hand, most of operators are belonging to private sector, like HPH, Eurogate, SSA Marine and ICTSI etc.

4. THE PROGRESS OF THE OLIGOPOLY IN THE CONTAINER TERMINAL INDUSTRY

4.1 Mergers and Acquisitions strategy

According to the aforesaid, world container handling share is occupied 45% by top 5 Global Terminal Operators and by top ten occupied 55%, and 65% share by 22 Global Terminal Operators. Above all, HPH, APMT, DPA and PSA, these 4 companies are especially active in business expansion. APMT, DPW, PSA surpass in the scale and the number of mergers and acquisitions in 2005. In addition, they are aggressive in investment, and it is anticipated that the scale becomes about 1.5 times as for 4 Global Terminal Operators capacity by 2010. It is anticipated that the oligopoly by Global Terminal Operators progresses more and more.

Mergers and acquisitions become the mainstream as a business expansion strategy. DPW purchased CSXWT in 2005 and P & O Ports in 2006. DPW rapidly growth as Global Terminal Operator and is force to enter top 3 now. NYK is going to serve as expansion of a terminal business, reinforcement by the purchase of Ceres Terminal, too. Many mergers and acquisitions were shown by APMT in 2005 (Table -3), but there are also many mergers and acquisitions by APMT in 2004. APMT raised shareholding ratio of Suez Canal Container Terminal (Egypt) and Gioia Tauro (Italy), and 40% share acquired of Douala (Cameroon) in 2004. Positive investments by APMT continue.

Table 3.Business Expansion by Global Terminal Operators 2005

Global Operator	M&A	内　容
APM Terminals	Vridi Container terminal Abidjan, Ivory Cost	acquired 40% stocks
APM Terminals	Port of Mina Salman, Bahrain	Acquired admin. & Operation right, Mina Salman Terminal
APM Terminals	Gujarat Pipavav Terminal, Yemen	acquired 47% stocks
APM Terminals	Terminal de Conteineres do Vale do Itajai S/A (Teconvi), Itajai, Southern Brazil	acquired 50% stocks of Terminal Operating Company
APM Terminals	Apapa Container Terminal, Lagos, Nigeria	Acquired 25 years Terminal Admin. & Operation right
PSA	HIT Terminal, Hong Kong	20% stocks transferred by HIT
PSA	COSCO-HIT Terminal Hong Kong	10% stocks transferred by Cosco-HIT
PSA	Terminal 3, Hong Kong	Acquired 33.3% stocks
PSA	Terminal 8 Wset, Hong Kong	Acquired 54.2% stocks
DPW	Aden Container Terminal, Yemen	Development & Operating Contract concluded
DPW	Rajeev Gandhi Container Terminal, Cochin, India	Acquired admin. & Operation right
DPW	Fujairah Container Terminal, UAE	Acquired 30 years Terminal Admin. & Operation right
DPW	CSXWT Terminal Portfolio	Acquired management right of CSX World Terminal
CMA/CGM	Zeebrugge OCHZ Terminal	Acquired 35% stocks
ICTSI	Toamasina Terminal, Madagascal	Acquired 20 years Terminal Admin. & Operation right

Data：Drewry Shipping Consultants　　DPW-including DPA and DPI

Table 4. Container Terminals operating by DP World、PSA、HPH

地域	国	DP World(P&O Ports)	DP World	PSA	ＨＰＨ
East Asia	Russia	Vostocyny			
	China	Qingdao Shekou	Tianjin * Yantai * Hong Kong *	Dalian Tianjin Fuzhou Guangzou Hong Kong	Hong Kong Shanghai Yantian Xiamen Zhuhai Ningbo Shantou
	Korea		Pusan Newport	Pusan Inchon	Pusan Gwangyang
	Japan			Kitakyushu	
South East Asia	Philippines	Manila			
	Thialand	Laem Chabang		Laem Chabang	Laem Chabang
	Brunei			Muara	
	Singapore			Singapore	
	Indonesia	Surabaya			Tanjun Priok
	Malaysia				Port Klang
	Myanmar				Thilawa
West Asia	India	Chennai Nhava Sheva Mundra Port Qasim	Visakhapatnam Cochin	Tuticorin	
	Pakistan				Karachi
	Sri Lanka	Colombo			
Middle East	UAE		Jebel Ali Port Rasid		
	Saudi Arabia		Jeddah		Damman
Oceania	Australia	Brisbane Sydney Melbourne Fremantle	Adelaide *		
Europe	Netherlands			Rotterdam	Rotterdam
	Belgium	Antwerp		Antwerp Zeebrugge	
	France	Le Havre Fos Marseille			
	Italy			Genoa Venice	
	Portugal			Sines	
	UK	Tilbury Southampton			Felixstowe Thamesport Harwick
	Rumania		Constantza		
Africa	Djibouti		Djibouti		
	Mozambique	Maputo			
	Tanzania				Dar es Salaam
North America	USA	New York/New Jersey Philadelphia Baltimore Miami New Orleans			
	Canada	Vancouver			
South America	Dominica Rep		Puerto Caucedo *		
	Venezuela		Puerto Cabello *		
	Bahamas				Free Port
	Panama				Cristobal
	Mexico				Ensenada
					Veracruiz
					Manzanillo
					Lazano Sardenas
	Argentina	Buenos Aires			Buenos Aires

Data: Mitsui O.S.K. Lines, Drewry Shipping Consultant

4-2 Methods of Container Terminal Business expansion

According to two examples of mergers and acquisitions by DPW, it is clear that mergers and acquisitions are the quickest means for business expansion. However, there are the places must develop from now on by countries or governments. It means that it cannot always use technique to purchase an existing institution. The growth of containers in China is remarkable and terminal business must be profitable. According to "Containerlisation International, March 2006", Shanghai recorded container handling volume 1,810 million TEU and Shenzen 1,620 million TEU in 2005. Shanghai's handling volume expects 2,650 million TEU in 2007 which will be more than Singapore and Hong Kong and it will be top. Like China, some countries has regulation and joint development with a government or a port authority are performed, too. Here, the place where plural Global Terminal Operators push forward development jointly is thought to be a government or a port authority. In this way various techniques is used for business expansion. Effective methods of terminal expansions are privatization and BOT as well as M&A.

The method of expanding terminal business by privatization is to purchase a terminal and the institution or the administration matter from a government or a port authority at an opportunity of privatization. In 2004, Malta Freeport was privatized, and CMA-CGM which was the greatest user bought it. Management consigns it to P&O Ports, and the institution is used sequentially afterwards in a general user. In an example of 2005, APMT acquires Nigerian Apapa Container Terminal, the administration right of Port of Mina Salman of Bahrain. It is a method it does not acquire the assets all in privatization to attract attention here, and to acquire only the terminal administration right. There are examples such as the administration right acquisition of 30 years of Fujairah Container Terminal by DPW and administration right acquisition for 20 years of Toamasina Terminal of Madagascar by ICTSI. In addition, in late years It expects Turkey as traffic of an increasing container and an Iraq gate way, Turkey expresses privatization of Izmir, Mersin, Iskenderun.

The second method is BOT (Build, Operate and Transfer). BOT is the scheme of utilizing private capital. Construction by private company with own fund (Built), then administrate and operate (Operate), finally transfer the constructed facility to government after collecting investment (Transfer). By adopting a BOT (Built, Operate and Transfer) scheme, a government / a port authority can keep the proprietary rights in the long term and at the same time inviting foreign capital and technology is possible as well. Such an example is seen in HPH in an expansion program in Laem Chabang (Thailand) and APMT in American Greenfield.

4.3 A background of the oligopoly in the container terminal industry

A tendency of the oligopoly continues. The oligopoly is progressing not only terminal industry but also liner shipping and other industries, too.

The unification of global market after end of cold war between the East and the West is the progressing background of the oligopoly. The globalization of economy promoted expansion of further trade and expansion of a market. China with 1.3 billion populations, also Russia and India, then in total 3 billion populations entered into a market. Outsourcing and an off shore ring progressed for a capital saving to lead the market which spread, and this began circulation to accelerate further globalization. Friction between nations and a wall go to minimization under global economy. Global enterprises produce where the cheapest cost and sell at the highest price and R & D where many excellent manpower live. Logistics supports such a global economy and global activities. Especially, liner shipping supports international logistics and distributions. Liner shipping companies expand the service scale and improve the quality to meet needs of a shipper.

Alliance in Liner Shipping, the meaning is to materialize the improvement of service quality and scale expansion at the same time with minimum cost. But a weak point of alliance is that decision making takes time as much as members increase. Because of the weak point, there are liner companies choosing mergers and acquisitions not alliance. It is the reason that alliance and mergers and acquisitions activate in liner shipping. Such a movement happens in not only the liner industry but also iron and steel, a car, chemistry in every industry. It is not an exception in a terminal business either.

To win the competition and to rule over a market under global economy, terminal operator must extend a business scale and increase service quality. An enormous amount is necessary for investment and R&D. The shortest method is mergers and acquisitions. The greatest merit gets a necessary thing immediately that is a saving of time of construction of a terminal is to be possible. An existing customer holds the terminal, and there does not need to be a thing suffering from oversupply. As a result, it extends a share and gets power to influence a market.

Another background of expansion of investment to terminal business can support the container transportation that continues increasing under global economy. It was a serious delay of a containership at Los Angeles and Long Beach in autumn, 2004. The situation that, however, was similar in each European port.The meaning that liner companies concentrate power on keeping terminal due to secure terminal for own containership. The congestion at Los Angels and Long Beach in 2004 was the trigger. This means that demand of a terminal continues in future, and it is to have proved that the future of a terminal business is promising the profitable business continuously.

5. FUTURE TREND OF CONTAINER TERMINAL BUSINESS

5. 1 Development of containership upsizing

40 years ago, it is 1966 that Sea Land put the containership into overseas transportation. The first ship was “Gateway City”, remodeling containership and had

loading container capacity with 226 (35 feet container). In 1988, APL launched 4300TEU type containership C-10. It is so called over-panamax or post-panamax, which size was exceeded the size passing through Panama Canal. After C-10, as for the containership, post-panamax size became the mainstream, and, after this, upsizing of a containership was accelerated. The containership that 10,000TEU loading is possible appears soon. The loading capacity improved more than 20 times greatly for 40 years.

In 2003, a large quantity of containerships were placed an order under good business results and favorable condition of ocean freight. Order of a particularly large-scale containership gets a lot of looks. More than 40% of ordered containerships were 8,000TEU size in 2003. These large-size containerships are completed successively in 2006. Dockyards until 2008 are approximately fully occupied, and, as for the quantity of loading capacity, increase of yearly average 13% is anticipated from 2006 to 2008.

Table 5.Changing Containership-size in Europe/Asia and Trans Pacific Trade Lanes

Asia / Europe		Year	Trans Pacific	
Sea Land (Gateway City '57)	35'x226	1966		
		1967	Matson	24'x465
		1968	NYK(Hakone Maru)	752TEU
			MOL(America Maru)	716TEU
TRIO GROUP	2,100-3,000TEU	1971		
		1973	Verazano Bridge	2,068TEU
		1980/84	Maersk	2,100-3,000TEU
		1981	APL	2,284TEU
		1982	APL	2,750TEU
		1984/85	USL ECON Ship	4,148TEU
TRIO GROUP and Others	3,500-3,700TEU	1988	APL *Over Panamax(C10)	4,300TEU
Nedlloyd *Hutch coverless	3,568TEU	1991		
CGM/MISC *Over Panamax	4,427TEU	1991-92		
Nedlloyd *Hutch coverless *Over Panamax	4,112TEU	1994-95		
NYK	4,800TEU	1995	OOCL	4,950TEU
MOL	4,750TEU			
Maersk	6,000TEU	1996	COSCO	5,250TEU
HYUNDAI	5,550TEU		EMC	5,364TEU
Maersk	6,600TEU*	1997		
P&O Nedlloyd	6,674TEU	1998		
		1999	NYK	6,208TEU
			Maersk Sealand	6,600TEU*
Hapag-Lloyd	7,179TEU	2001		
OOCL	8,063TEU	2003	P&O Nedlloyd	6,674TEU

Data: Mitsui O.S.K. Lines, Research Office

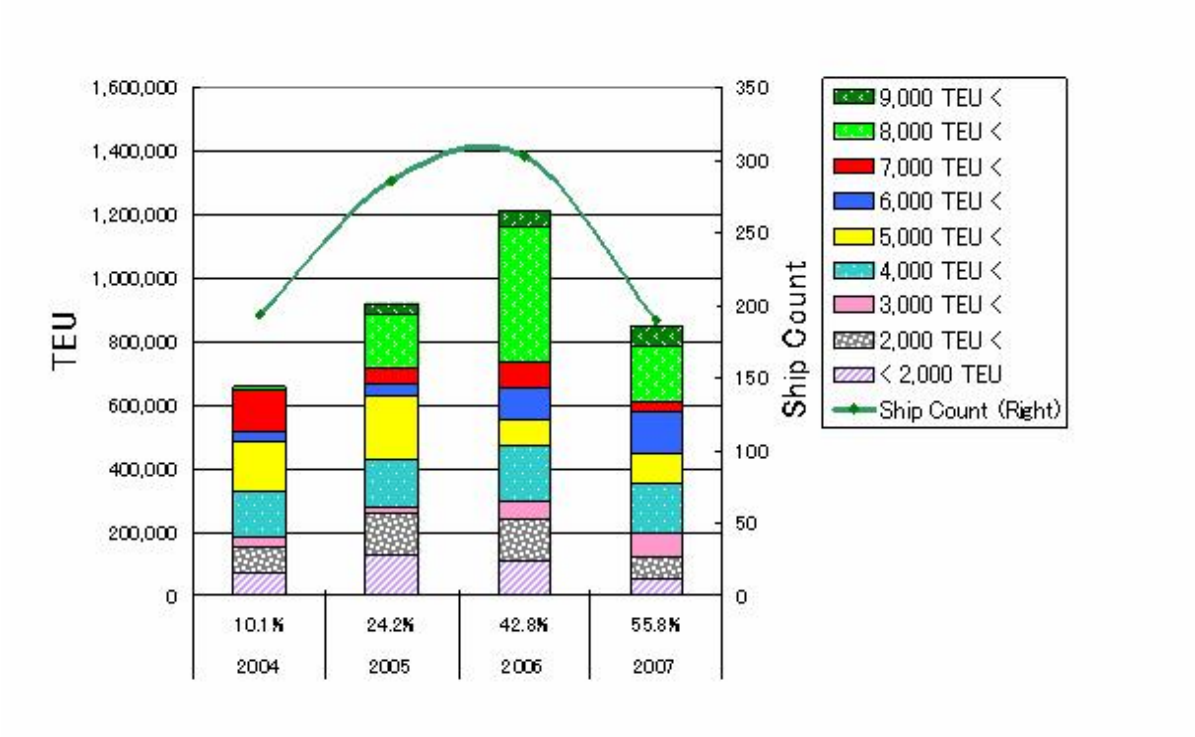

Figure 1.Containerships Ordered

Data: Mitsui O.S.K. Lines, Research Office
Note: Percentage is increasing ratio based on 2003 (=6,530,000TEU)

5.2 Measurement of a Container Terminal with containership upsizing

Lots of large size containerships, more than 8,000TEU, anticipate to lunch after 2006. At the same time, handling of the container cargo continuously increases again. At the main ports, maintenance and expansion of a container terminal were hurried. China and Southeast Asian countries, these are adding to the roll not only the world's factory but also a market. The maintenance of container terminals are pushed forward even in U.S. west coast ports which caused big confusion in 2004. There is the thing which it is assumed that there is a limit in U.S. west coast, and started terminal construction of at east coast. For example, Mitsui O.S.K. Lines started construction of a container terminal in Jacksonville. In terminal maintenance, security of depth of the quay as 15 meters, the equipment of a gantry crane with 18 row lengths in order to support containerships of 8,000TEU or 10,000TEU type in main ports.

5.3 Container supply and demand prospects

According to the aforesaid, the completion of large-size containerships more than 8,000TEU occurs successively after 2006. As a result, in main routes of Asia / European

route, North America route, as for the supply of loading capacity, large increase more than yearly average 10% is anticipated. Piers, Drewry and some Japanese main liner companies forecast the demand and supply increase 2 digits for these 3 years. This means that demand for container terminals are increases continuously more and more.

Table 6.World main Ports Terminals Draft & G/C for over 8000TEU containership

		Port	Terminal	G/C	MAX Draft (m)	Possiblility	
						G/C	Depth
2003 Top20 Ports	1	Hong Kong	HIT(Terminal9)	22 × 9	15.5	○	○
	2	Singapore	Tnajong Pagar	18	14.6	○	×
			Keppel	18	14.6	○	×
			Pasir Panjang	18 × 24	15.0	○	○
	3	Shanghai	WGQ	18	14.2	○	×
	4	Shenzhen	Yantian(YICT[PhaseⅢ])	23 × 18	16.0	○	○
			Shekou(SCT[PhaseⅡ])	20 × 8	17.0	○	○
			Chiwan(CCT[PhaseⅡ])	22 × 17	16.0	○	○
	5	Busan	PECT	18	15.0	○	○
			HBCT	SP × 3 × 10	15.0	○	○
			GANMAN(HGCT)	SP × 4	15.0	○	○
	6	Kaosiung	APL(68/69)	18 × 2 、16 × 4 、13 × 1	14.0	○	×
			HMM(75)	17 × 3	14.0	×	×
	7	Los Angels	TraPac	18 × 1 、15 × 4	13.7	○	×
	8	Rotterdam	ECT Delta Terminal	× 23	16.6	○	○
	9	Hamburg	Burchardkai Terminal	SP × 3	16.5	○	○
	10	Antwerp	Delwaide Dock Terminal		16.1		○
	11	Dubai	Jebel Ali	SP × 6	14.0	○	×
	12	Port Klang	KCT North	SP 、PP	15.0	○	○
			KMT West	SP × 20	15.0	○	○
	13	Long Beach	CUT(HMM)	18 × 3 、16 × 2	14.6	○	×
	14	Qingdao	QQCT	SP × 24	15.0	○	○
	15	NY/NJ	H.HOOK	15 × 4 、13 × 2 、12 × 1	12.2	×	×
	16	Tanjung Pelepas	Phase Ⅰ＋Phase Ⅱ	22 × 10 、18 × 14	16.0	○	○
	17	Tokyo	TICT	18 × 3 、17 × 3	15.0	○	○
	18	Bremen/Bremerhaven	Eurogate Container Terminal	PP × 7 × 12	14.5	×	×
	19	Laem Chabang	Tips	13 × 3	14.0	×	×
			ESCO	15 × 1 、13 × 2	14.0	×	×
			A2	PP × 3	14.0	×	×
	20	Gioia Tauro	Medcenter	20 × 4 、18 × 6 、17 × 18	15.5	○	○
Others		Yokohama	YICT	16 × 2 、15 × 1	15.0	×	○
		Nagoya	NCB	17 × 2 、16 × 2 、13 × 2	12.0	×	×
		Kobe	KICT	16 × 5	15.0	×	○
		Hakata	アイランドシティ	17 × 2 、16 × 2	14.0	×	×
		Kwanyang	HMM	18 × 10	16.0	○	○
		Seattle	Terminal5	17 × 5	15.0	○	○
		Oakland	TraPac	18 × 1 、16 × 2	12.8	×	×
		Tacoma	WUT	18 × 4	15.5	○	○
		Portland	T6	PP × 2	12.2	×	×
		Vancouver	Delta Port	20 × 2 、18 × 4	15.9	○	○
		Norfolk	NIT	22	12.5	○	×
		Charlston	Wando	SP × 4 、PP × 4 、P × 2	13.7	○	×

SP= Super Post Panamax, PP=Post Panamax, P=Panamax

Objects=Top 20 Ports

Max Draft 15m (at quay) & Gantry Cranes with 18 row lengths necessary for 8000TEU container vessel.

Data: Mitsui O.S.K. Lines, Research Office

6. CONCLUSION

It is expected that excellent demand of container cargo movements will continue in future. In addition, large-size containerships more than 8,000TEU type are completed in sequence. Even if there is it, as for the some waves, it is anticipated that an active stage continues as for the container transportation for the time being by supply and demand both sides. In other words it means that there are firm needs to container terminals continuously.

It is a business to be able to anticipate high profit for Global Terminal Operators, whichever the main purpose is supporting liner business or terminal business itself. Then positive investment is expected. Actually, a profit rate of a container terminal is high. Profit rates such as HPH, PSA or ICTSI exceed 30%. P&O Ports, Eurogate, a little bit less than said companies, and it is 15.5%, 11.3% each (2004). Profit of a terminal business of NYK is extremely bad, but rather this will be an exception. Charm a certain investment ahead for a Global Terminal Operator affiliated with port operation or stevedoring, there is already now a large quantity of containers or can anticipate increase of containers in the near future. Interesting part is China where rapidly increase containers. Other interesting part for investment is future containers anticipated to increase, but enough terminal facilities at the present. For example, they are Southern Asia or Central and South American ports.

On the other hand, Global Terminal Operators affiliated liner shipping has intension to maintain and expand terminals that it is necessary to never happen to wait more than ten days at outside port of Los Angels or Long Beach which happened in 2004. Therefore, as for the terminal business affiliated with a shipping company, it is important to secure container terminal at main trade lanes, like U.S., Europe and Far East Asia.

The strategy of COSCO as ranked as No.5 has to be paid attention as well as top 4 Global Terminal Operators, HPH, APMT, DPW and PSA. There is a big difference between top group and COSCO. Top group has share more than 9% each, but COSCO's share is 3.7% for the moment. COSCO's participation in planning to a new terminal-centered in the country in China is a plan to raise the handling ability to 2 times by 2010. China Shipping which a name is not yet over as a Global Terminal Operator. However, backed by lots of containers from China, China Shipping has possibility to join Global Terminal Operators in the near future. MSC is interesting, too. MSC became one of the biggest liner companies within very short periods. It has its container fleet following to Maersk Sealand. For the mean time, MSC expands a terminal business mainly on North Europe and the Mediterranean Sea, but the pace is slow in comparison with expanding speed of a container fleet now. But it is worth to pay attention it how MSC evaluates and changes terminal business.

Recently, the construction of container terminal is not easy for land or an environmental problem in main developed nations such as U.S. or Europe. Rather I anticipate that an investment goes to new areas of China, Turkey, Central and South America.

For the time being, HPH, PSA, APMT, and DPW have strong presence continuously in the industry. It is anticipated that the oligopoly progresses. It is not so far that the share by above 4 exceeds 50%. What you should pay attention to is a share of second group which are next to above 4 companies.

On the other hand, rather slow mutual cooperation becomes important. Antwerp International Terminal (AIT), which started the container handling in December, 2005 is nominated for an example. A terminal is administered jointly by 3 companies, Kawasaki Kisen/Yang Ming/Hanjin (except COSCO of CKYH group) and PSA-HNN (PSA Hesse-Noord Natie NV is PSA affiliate in Belgium). In this case, PSA can secure customers and shipping companies can keep influential terminal at Europe main port. As result, an interest is to have agreed. It is expected a terminal business in future if with many opportunities when common enterprises of various combinations such as Global Terminal Operators and Liner companies and a government or a port authority are chosen as a strategy.

It is the world where cooperation coexists with competition.

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