SKA – 1999 Third Quarter Results

I.M. Skaugen ASA (IMS) reported a loss of USD 0.9 mill in 3Q99. Year-to-date loss is USD 3.7 mill, as compared to USD 7 mill for the same period last year. The Group reported an EBITDA result of USD 4.7 mill for this quarter, as compared to USD 4.2 mill in 2Q99, and a year-to-date result of USD 11.7 mill, as compared to USD 8.6 mill for the same period in 1998.

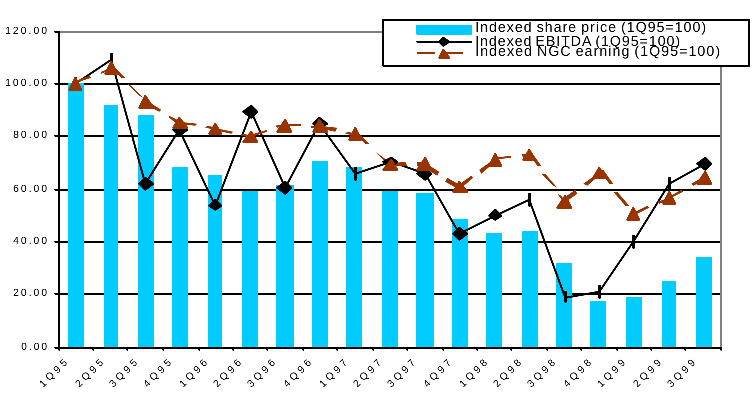
Earnings on an EBITDA basis have shown a positive trend throughout the year, reflecting the underlying conditions. The earnings development is positive in spite of the increased bunkers expenses, while the other expenses are according to plan. The quarterly result has been marked by non-accrued administrative expenses, loss of time in connection with the maintenance of vessels, increased financial expenses in connection with structural projects, offers to shareholders and a small unrealised share portfolio loss.

The underlying conditions indicate therefore that the EBITDA result for 4Q99 might be the best quarter this year.

1999 Third Quarter Highlights

- Signs of a cyclical upturn in the petrochemical industry – driven by improvements in the economy in the Asian region and expectations of improvements in Europe and Latin America. NGC's earnings reflect this.
- The efficiency improvements and cost reductions that we have carried out provide significantly improved margins for the NGC vessels when the market conditions for petrochemical gas transport improve.
- Our service concept is under development and showing results – IMS's business activities are therefore doing better than the operations of our closest competitors.
- We are expecting structural changes in the NGC segment now – these changes will be positive for this industry and NGC.
- Shares in I.M. Skaugen are underpriced compared to their historical pricing and the market in general.
- SPT has a high level of activity and satisfactory profit development with an EBIT margin* of 13%. This should therefore give shares in IMS extra value.

*EBIT in per cent of gross freight revenue.
EBIT – result before net finance and taxes.



Historical pricing of IMS shares indexed against the IMS EBITDA and NGC earnings shows that the share price does not yet reflect the improvements in the EBITDA earnings or the earnings of the NGC vessels

Segment information

USD '000	Consolidated** 3Q99	3Q98	3Q99 Accum	3Q98 Accum	1998	NGC 3Q99	3Q98	3Q99 Accum	3Q98 Accum	1998
Freight revenue on t/c basis	23,820	23,330	76,219	72,565	97,499	8,671	7,209	22,542	26,984	35,651
Vessels' operating cost and t/c hire	-18,131	-20,576	-61,350	-60,919	-82,920	-5,541	-6,160	-17,169	-19,565	-25,965
Unallocated administration costs	-901	-1,310	-3,104	-3,035	-4,501	-378	-655	-1,141	-1,451	-2,384
EBITDA*	4,788	1,444	11,765	8,611	10,078	2,752	394	4,232	5,968	7,302

USD '000	SPT 3Q99	3Q98	3Q99 Accum	3Q98 Accum	1998	China Activities 3Q99	3Q98	3Q99 Accum	3Q98 Accum	1998
Freight revenue on t/c basis	14,548	15,465	51,387	43,332	58,532	601	656	2,290	2,249	3,316
Vessels' operating cost and t/c hire	-11,896	-13,237	-41,702	-38,184	-51,918	-694	-786	-2,479	-2,777	-4,244
Unallocated administration costs	-	-	-	-	-	-152	-	-478	-	-
EBITDA*	2,652	2,228	9,685	5,148	6,614	-245	-130	-667	-528	-928

* EBITDA: Earnings before interest, tax, depreciation and allocations.
** The above segment information does not add up into Group consolidated figures, as activities other than those of the main segments are not shown separately.

NGC: Continued improvement in the market

- **Improved earnings on a t/c basis – USD 251 per month/vessel in 3Q99**
- **Improvements in Asia**
- **Reduction in idle time for the fleet**

NGC posted average earnings on a time charter basis in 3Q99 of USD 251,000 per month/vessel (before deductions for lost time in connection with technical offhire for maintenance/docking). From the very poor 1st quarter (USD 197,000) to the somewhat improved 2Q99 (USD 218,000) we see that the earnings development is slowing improving. The market is still characterised as weak, but there are a number of signs indicating that the improvement is the start of a cyclical upturn with respect to our customers in the petrochemical industry and the transport of products. We assume that the bottom of this cycle was reached in the 1st half of 1999. We are therefore expecting a gradual improvement in the months to come. The Asia segment (40% of the capacity) has shown the greatest earnings improvement and greatest reduction in idle time. Idle time for the entire NGC fleet has been reduced further from 12% in 1Q99 and 9% in 2Q99 to 5% in 3Q99. Another positive sign is the fact that the customers have shown a greater interest in time contracts next year, and they are prepared to pay a somewhat higher price for cargo services. Two important freight contracts have been renewed for 2000 during this quarter at, under the circumstances, more satisfactory rates. The segment is still marked by strong competition. We now expect that consolidation will take place in this segment, and we perceive this as positive for NGC.

Two vessels docked – one vessel upgraded

- **Norgas Sailor upgrade**

Norgas Sailor and Norgas Energy were dry-docked as planned during the period. Norgas Sailor (built in 1976) has undergone an extensive upgrade of its refrigeration capacity in excess of its original capacity. Now the vessel can cool its cargo down while at sea instead of just maintaining the temperature, as was the case before the upgrade. The corresponding work has already been carried out on its sister vessel the Norgas Pilot. The dockings entail USD 0.4 mill in lost income this quarter. There are no scheduled dockings in 4Q98.

Projects like this to upgrade the fleet must be seen in connection with our program and desire to invest in the existing fleet so as to improve our level of service and operational regularity at the same time as achieving the lowest cost level in the industry.

EBITDA result and our "EBIT B/E level" for the NGC vessels

- **Improved EBITDA result in 3Q99**

The NGC segment's earnings on an EBITDA basis were USD 2.7 mill, as compared to USD 1.4 mill in 2Q99 and USD 71,000 in 1Q99. The cost level for the total operating and administrative expenses has been stable throughout the quarter, and we expect therefore that we can achieve a continued reduction in our EBIT break-even level. The most important target figure for us is assumed to be an EBIT B/E level of USD 250,000 per vessel per month for the period (USD 268,000 in '98 and USD 375,000 in 1992).

EBIT basis: Earnings after depreciation for the NGC vessels, but before interest and taxes.
EBITDA: Earnings before interest, taxes, depreciation and allocations.

Market outlook: Improvements in Asia and better product prices provide a foundation for a positive development

- **Increased demand for ethylene**
- **Anticipated growth in transport of petro-chemical gases**

The fundamental conditions and signs that indicated an improvement in the market at the end of the last quarter are stilling showing a positive trend. The improvement in Asia is continuing, and the demand for ethylene is increasing. The growth rate for the consumption of LPG is increasing in all regions except for Europe, and it is particularly high in Asia. Growth in the demand for the transport of all the petrochemical gases (ethylene, propylene, butadiene and VCM) is also anticipated. The strongest growth will be in Asia due to structural conditions. The transport of gas is a cyclical activity, and it is assumed that a cycle lasts from 6 to 7 years on the average. The last bottom year was in 1h1993, and the last peak year was in 1995.

Supply side: Rate of tonnage capacity growth is declining

- **Growth in tonnage at 4.6% for 1999 and 1.8% for 2000**
- **Two 8300 cbm ethylene vessels contracted in China**
- **New building prices have fallen approx. 30% the last 7 years**

The fleet in the segment focusing on the transport of petrochemical gases (which is defined as vessels smaller than 20,700 cbm) may increase by 4.6% in 1999 and 1.8% in 2000. The average age of the vessels in our segment is approximately 13 years, and it is expected that the vessels will have a minimum economic life of 30 years if they are maintained. Two 8,300 cbm vessels with ethylene capacity were contracted in 3Q99. The reported price for the new buildings is USD 22/23 mill per vessel, and with the anticipated supplements the price will probably be around USD 24/25 mill. This is actually very low for this type of vessel and indicates that the newbuilding prices have fallen by around 30% over the last 7 years. We do not anticipate any further fall in the new building prices, but such contracts for new tonnage are not good for the expected market development as long as there is a great deal of overcapacity. It would therefore be very unfortunate if this is the start of a wave of such new contracts.

- **Annual need for tonnage renewal is approx. 5%**

Growth in the demand for cargo services (LPG and petrochemical gases) has historically been around 4-6%, but growth has been much lower in recent years due to the structural conditions. Over time this growth has given an annual estimated need for the renewal of tonnage (assuming an expected economic life for the vessels of 30 years) of approximately 5%. The supply of tonnage in recent years has been much greater than the increase in the demand, but this situation may improve throughout 2000 and 2001, as the current order book is modest and there appears to be renewed growth in demand.

SPT: Another strong quarter

Increased volumes

- **Earnings after 9 months 140% better than *all of* '98**

SPT reported an EBITDA result of USD 2.6 mill in 3Q99. With an EBITDA result of USD 3.5 mill in 2Q99 and USD 3.5 mill in 1Q99 the year-to-date result after 9 months is 140% better than **all** of '98. The somewhat weaker result in the third quarter is primarily due to the increased bunkers expenses and non-accrued administrative expenses. SPT has successfully increased its activities based on service and focusing on safety. SPT sees clear results of its focused efforts, and the Board believes that growth opportunities for SPT still exist in a situation where there is more outsourcing of services from the integrated oil companies.

- **Opportunities for further growth**

Increase in long haul imports

The USA's need to import crude oil is very high now due to the strong US economy. OPEC's production cuts have been advantageous to the lightering market since Mexico's and Venezuela's exports have not grown as much as in earlier years. Long haul imports from Iraq have to a great extent covered this increase. The barrier for entry to the lightering business is high due to the stringent competence and safety requirements and thus there is an inherent ability to operate without accidents.

- **OPEC's cuts have a positive impact on the lightering market**

Weak Aframax market for tankers is an advantage to SPT

The weak Aframax market has provided SPT with somewhat better margins, since SPT charters its tonnage according to its planned needs. Many of the charter parties for chartering in tonnage will be renegotiated this year, and it is expected that this will reduce the costs further. On the other hand it is our policy to pass some of these savings on to our customers through lower prices, and this puts a downward pressure on the lightering rates. SPT operated 7.2 tankers on the average during the quarter. The capacity utilisation for the SPT fleet is still high, the operational regularity is good and the level of service is high. Two important freight contracts were renewed this quarter at rates reflecting the development described here.

- **Renegotiation of charter parties is expected to reduce costs further**

China activities: First in the world to have Chinese crew on LPG/E gas carriers

China strategy

IMS's strategy in China is to develop the market potential for gas transport in a logistically demanding market through the venture company TNGC and to establish an organisation that will contribute to even more cost-effective fleet operations in Asia. We reached a milestone in 3Q99 by being the first in the world to have a full semi-refrigerated gas carrier crew from China. We will have two NGC vessels with full Chinese crews very soon. The crews have been recruited and trained through our cooperation with Wuhan Transportation University in the Hubei Province – Skaugen Training Centre. Princess Carriers has had a full Chinese crew since 1997 as an element in this strategy.

- **Two NGC vessels with Chinese crews after training at our centre in Wuhan**

Huge market for LPG

There is a huge market potential for the domestic distribution of LPG for energy purposes in China. We are involved in the transport of gas on the Yangtze River, which covers an area encompassing five provinces. Over 280 mill people live in this area and are potential consumers of LPG for heating, cooking and lighting. Moreover, there are significant industrial activities in the area. Today the most important energy carrier in the area is brown coal and wood. There is a great need for development of the infrastructure in the area so that it can be easier for individual consumers to change over from brown coal to the far cleaner and more environmentally friendly gas alternative. The Hubei Province, where TNGC operates, had the 5th highest GDP growth in China in 1998 of above 10%. The other provinces that are also important to TNGC all had GDP growth of around 9%.

- **280 mill potential users of LPG**
- **Hubei Province, where TNGC operates, reported GDP growth of above 10% in '98**

Results

- **Weaker EBITDA result from Princess Carriers due to lengthy docking of one of the vessels**

The activities in China, which also encompass very high initial costs for the training centres for our sailing personnel and technical support functions for NGC, among others, reported an overall EBITDA result in 3Q99 of minus USD 245,000, as compared to minus USD 102,000 in 2Q99 and minus USD 320,000 in 1Q99 (minus USD 928,000 for all of '98). TNGC reported an EBITDA result in 3Q99 of USD 34' (USD 10' in 2Q99 and USD 8' in 1Q99). TNGC's new building programme still includes two working boats and three LPG lighters, and it is expected that all of these boats will be delivered by the end of the year. TNGC does not currently have any other investment plans. Princess Carriers (PC) reported an EBITDA result for its 2 units of USD 107' in 3Q99 (USD 273' in 2Q99 and USD 170' in 1Q99). This reduction is due to the fact that one of the company's two vessels has been docked 34 days this quarter. The docking entailed USD 150' in lost income for the quarter.

Key statistics

	Act3Q99	Act2Q99	acc99	Act98
NGC Idle time	5%	9%	9%	5%
NGC Offhire days	7%	7%	6%	5%
NGC Drydockings	2	2	5	8
NGC On-time performance	100%	92%	96%	92%
LPG Orderbook – our segment (vessels delivered/cbm)	3/13,160	17/95,658	22/119,619	20/157,800
LPG Orderbook – our segment (% of LPG Fleet/cbm)	4.2/143,020	2.4/87,120	n/a	n/a
NGC Estimated Fleet Broker Value (USD mill – 100% basis)	118	127	n/a	147 (31.12.)
SPT No. of Full Service Lightering operations	138	150	431	432
SPT No. of Support Lighterings	49	38	144	150
SPT Tanker Operating days	660	771	2181	2271
SPT Daily lightering volume (bbls/d)	1,008,000	1,009,000	1,069,000	817,000
SPT Share of US Seaborne Crude Imports	11.8%	12.6%	12.6%	9.3%
SPT Contract coverage Full Service Lighterings (COA/Total)	94	119	330	344
IMS Share price (end of each quarter - NOK)	49	53	41*	51*

*average of daily share price

Capital and value assessment: Shares in IMS are underpriced

Capital

- **Satisfactory liquidity and unchanged key figures throughout year**
- **Debt ratio of 61% and current ratio of 21%**
- **Book equity is NOK 84 per share**
- **EBITDA/Net financial items is 2.45**

The mortgage debt has been repaid during the quarter in accordance with the agreed repayment profile for the Group's main loan facility. The operative cash flow makes a positive contribution to our liquidity throughout the year. Interest-bearing debt at the end of 3Q99 totalled USD 96 mill and the debt ratio is 61%, which has remained unchanged throughout the year. Debt falling due during the next 12 months represents 9.7% of the total debt. The ratio between current assets and current liabilities is 2.9, and this has remained unchanged throughout the year. The current ratio is 21%. Total liquidity as of the balance sheet date was USD 22.4 mill. This liquidity of USD 22,4 mill is regarded as satisfactory. The book equity totalled USD 68,3 mill or NOK 84 per share at the end of 3Q99. The book equity represents 38% of the total assets. At the end of 3Q99 the ratio between the EBITDA result and the net financial expenses was 2.45 (2.53 for 1H99 and 1.38 for all of 1998).

Value assessment

During 3Q99 the company had an EBITDA result of USD 4.8 mill which annualised equals USD 19.2 mill (USD 10 mill for 1998, USD 16.4 for 1997). We regard this earning level as reflecting the weak cycle for the NGC segment, and a normalised earning level, based on the NGC vessels' historic earnings with today's cost structure, is significantly

higher.
Based on the company’s industrial strategy and focus on creating values for the shareholders through being a leading company with regard to costs and service, we have carried out different types of assessments. We believe that an estimated earnings model is the correct model to use for our type of company. Value assessments by two independent financial institutions; Handelsbanken Markets and DnB Markets, during the summer of 1999 concluded that the estimated value of shares in IMS is between NOK 113 and NOK 165. These value assessments as well as more detailed information on the company’s value assessment is available upon inquiry.

- **Independent financial institutions estimate the value of the IMS share between NOK 113 and NOK 165**

SPT gives the IMS shareholders added value

SPT’s average annual earnings on an EBITDA basis has been around USD 8 mill the last three years (incl. the forecast for all of 1999). Even with a gradual decline to this level from the current earnings level, we can substantiate that the SPT activities alone represent a value of more than USD 40 mill, or approx. NOK 48 per SKA share, to the IMS shareholders. This implies an EBITDA multiple of approximately 5 for this activity.

- **The SPT activities alone give a value of NOK 48 per share**

Broker estimates for vessels only

Three independent broker estimates for 3Q99 showed that the value of the vessels in NGC declined a total of 7% or USD 8,5 mill (13% or USD 18 mill for 1H99). The decline is due to the fact that the estimates for newbuilding prices have once again been revised downwards, and it does not reflect any sale of this type of vessel or the fact that the market is somewhat better. The value of the vessels declined 12% or USD 17 mill in all of 1998. Based on these estimated values for the hypothetical purchase and sale of individual vessels we find that the assets in IMS far exceed the book value per share since we attribute a significant surplus value to the SPT activities.

- **Broker estimates declined by 7% in 3Q99 due to new building price estimates**

Other items

Purchase of own shares

IMS purchased 103,000 of its own shares in 3Q99 at an average price of NOK 53.77. We now own 349,748 of our own shares, which corresponds to 5.27% of the company's shares. The book value of these shares is NOK 13 mill or NOK 37.20 per share. The shares have been charged against the equity capital on the balance sheet.

- **IMS owns 5.27% of its own shares**

Little acceptance for the Montanari offer

Navigazione Montanari SpA of Italy made an offer on 5 July to the shareholders of IMS to purchase shares in the company at a price of NOK 60 with a view to taking over a majority interest. The offer was unexpected and had not in any way been encouraged by us. The Board recommended unanimously that the shareholders not sell their shares. Montanari withdrew its offer after having extended the closing date from 16 to 30 July. Around 600 shareholders, representing only around 3% of the shares accepted the offer made by Montanari.

- **Only around 3% of the shares accepted the offer made by Montanari**

The Board will seek to promote and safeguard the value of the shareholders' assets and will not exclude any alternatives in this connection. In order to be considered, the alternatives must, however, reasonably reflect the underlying values in and outside of the gas segment. The alternatives must also give the shareholders in IMS a fair share of the synergies that can be generated by a sensible, market-oriented and industrially based consolidation in this part of the gas segment.

- **Price of shares in IMS has increased 104% since 1 January 1999**

The price of shares in IMS has increased 104% since 1 January 1999. During this same period the Oslo Stock Exchange's total index has risen 26% and the shipping index has risen 37%.

Oslo, 8 October 1999
Board of Directors, I.M. Skaugen ASA

If you have any questions, please contact Beate Lofseik on telephone +47 23 12 04 00 or by e-mail: beate.lofseik@ngc.no. This press release is also available on the Internet at our website: http://www.skaugen.com.

IMS Consolidated

Statements of Income

USD '000

	1999 1.1-30.9	1998 1.1.-30.9	1999 1.7-30.9	1998 1.7-30.9	1998 1.1-31.12
Gross freight revenue	105,736	97,300	34,294	31,586	129,669
Voyage-related expenses/marketing expenses	(29,517)	(24,378)	(10,474)	(8,257)	(32,170)
Net revenue on T/C-basis	76,219	72,922	23,820	23,329	97,499
T/C-hire	(35,111)	(31,133)	(9,865)	(10,747)	(42,115)
Other operating expenses (vessels/shoreside)	(26,239)	(29,966)	(8,266)	(9,829)	(40,805)
Group administration expenses	(3,104)	(3,044)	(901)	(1,310)	(4,501)
EBITDA (Earnings before interest/taxes/depr.and allocations)	11,765	8,779	4,788	1,443	10,078
Depreciation of vessels	(7,493)	(7,455)	(2,670)	(2,591)	(10,665)
Depreciation of capitalized drydockings etc.	(3,136)	(3,360)	(986)	(1,020)	(4,273)
Operating result before writedowns/gains etc.	1,136	(2,036)	1,132	(2,168)	(4,860)
Writedown of vessels	0	0	0	0	(4,310)
Operating result (EBIT)	1,136	(2,036)	1,132	(2,168)	(9,170)
Financial income	609	1,593	100	393	1,722
Financial expenses	(5,419)	(6,750)	(2,151)	(2,883)	(9,007)
Net result on foreign exchange	(75)	0	0	0	(502)
Net financial income/expenses	(4,885)	(5,157)	(2,051)	(2,490)	(7,787)
Result before taxes	**(3,749)**	**(7,193)**	**(919)**	**(4,658)**	**(16,957)**
Result per share	(0.58)	(1.09)	(0.14)	(0.70)	(2.56)

Balance sheets

USD '000

	30.09.99	30.06.99	1.1.99
Vessels and other fixed assets	140,689	143,051	147,543
Other current assets	14.640	16.215	17.030
Cash and bank deposits	23,434	26,754	33,899
Total assets	**178,763**	**186,020**	**198,472**
Shareholders' equity	68.306	69.963	73.742
Long term debt	96,437	100,837	105,519
Current liabilities, interest bearing	1.290	1.290	3.201
Other current liabilities	12,730	13,930	16,010
Total shareholders' equity and liabilities	**178,763**	**186,020**	**198,472**

I.M. Skaugen ASA (IMS) is engaged in the maritime transport of petrochemical gases, LPG and organic chemicals, in addition to the lightering of crude oil. Our customers are major international players in the oil and petrochemical industry who work on a global basis. In order to serve our customers in the best possible manner we have our own representation in Oslo, Singapore, Shanghai, Wuhan/Jingzhou, Houston and Gent. We also have our own training programme for our sailing personnel in Wuhan, China and St.Petersburg, Russia.
The Group currently operates 31 units consisting of 14 gas carriers in NGC, 2 chemical carriers in Princess Carriers, 1 LPG vessel, 1 lighter for the transport of gas and 1 working boat in TNGC, 8 Aframax tankers and 4 working boats in SPT. 5 units are being built for TNGC.

Focus: Analysis of supply side in NGC's segment

Semi-refrigerated fleet

- **Transport of petrochemical gases represents around 70% of NGC's volume, LPG represents around 30%**

NGC's gas carriers compete primarily in the market for petrochemical gases, and most vessels under 21,000 cbm carry these gases, especially the gas carriers that cool down the cargo with a combination of pressure and cooling (semi-refrigerated type). These vessels all compete for the transport of the four major petrochemical gases: Ethylene, propylene, butadiene and VCM. In addition, they can also participate in the transport of LPG and some other products such as ammonia. Vessels that are larger than 20,700 cbm are not involved to any great extent in the transport of petrochemical gases – they specialise instead in LPG and ammonia, which have other customers and transport routes.

Players

Gas carriers under 20,700 cbm represent a total fleet of approximately 2.65 mill cbm divided between 451 vessels. According to our calculations the competitive fleet is around 1.6 mill cbm (not including tonnage that operates outside the free market). The ethylene fleet accounts for abt 550' cbm or 84 vessels of the total.

- **NGC operates around 100,000 cbm of the ethylene segment**

This fleet can in turn be divided into two segments: 4,000 –12,000 cbm and 12,000 – 20,700 cbm. Ethylene carriers are currently all under 12,000 cbm. We operate around 100,000 cbm in this segment and are therefore one of the largest players in the market.

The smallest part of this size segment transports primarily petrochemical gases and some LPG on a regional distribution basis, and there are many smaller operators. The middle part of this segment, where NGC operates, sails both regionally and interregionally, and it is these vessels that are responsible for most of the ethylene transport. NGC believes that this segment would also be best served by a consolidation, because there are many players, some small, and there would be fewer customers through consolidation. The largest operators in this part of the segment are NGC, Igloo Pool, Unigas Pool, Gaschem Pool, Anth Veder, Lauritzen Kosan, Medgas Pool, Tarquin Pool and Naftomar.

- **Largest player in the 4,000 –12,000 cbm segment is the Igloo Pool**

The largest vessels in petrochemical gas transport have a more global sailing pattern, and AP Møller has contributed to a significant consolidation here, which entails that they now control 60% of the tonnage. Even when the 5 new "Navigator" vessels are delivered from China, AP Møller will have around a 50% share.

- **AP Møller controls 60% of the 12,000 – 20,700 cbm segment**

It appears, however, that the markets for these segments are synchronised with each other, and even to some extent with larger vessels. The "good" and "bad" times occur more or less at the same time.

Fully pressurised vessel

- **Fleet of fully pressurised vessels in Asia is a significant competitive factor**

In recent years a fairly sizeable fleet of vessels with pressure tanks (pressurised type) has evolved, primarily in the Asia region (179 vessels/approx. 650' cbm). This fleet has become a significant competitive factor, primarily, however, in regional distribution in Asia where terminals have been built for this type of vessel. The fleet of vessels with pressure tanks transport most types of products, with the exception of ethylene, but they have less cargo capacity and lower productivity than vessels with semi-refrigerated tanks with the same cargo volume due to the different designs for these two types of vessels. They are, however, easier to build and operate, and they also have a much shorter technical and economic life.

Minimal economies of scale for cargo sizes

- **Limitations with regard to harbours and terminals reduces the economies of scale**

The efficiency philosophy based on volume of scale, i.e. larger vessels and greater cargo volumes, only applies to a limited extent. Significant limitations with regard to the terminal capacity available and harbour restrictions in important places have not made this possible to the same extent as other segments of the transport sector. “Just in time” concepts, little storage capacity at the terminals and an abundant supply of tonnage in all sizes, in addition, of course, to the sharp competition between the ship owners, have made this trend less important.

Maritime transport

- **Only 5% of the world’s ethylene production is transported by maritime vessels**

The volume of petrochemical gases that is transported with vessels is marginal, and such transport is primarily the result of differences with regard to installations and availability between the regions. The volume of ethylene that is transported by sea is for example no more than 5% of the world-wide production, and marginal changes in the supply can have a significant impact on the demand for transport. The transport of products in the USA takes place almost exclusively through a network of pipelines, and thus a very small portion of this volume is transported by vessels to satisfy the demand in the remaining regions of the world. In Europe transport by pipeline represents around 60%, while there is not really any integrated pipeline network in Asia and most of the imbalances are transported by maritime vessels. Growth in the industry in Asia is therefore very important to the transport volume.

Regional transport

- **Long haul transport to Asia has been replaced by a more regional traffic pattern**

Important structural changes in the petrochemical industry have created a new industry of great dimensions in Asia during this decade. The newly established industry produces enough to make the region practically self-sufficient in the products in question, and thus the earlier need to import by vessels to Asia has been reduced considerably. This is the primary reason that a large surplus of tonnage has developed in this segment (primarily, however, for vessels between 12,000 and 20,700 cbm), and the consequences have also spread to smaller vessels such as ours. The advantage of this development, however, is the fact that new and regional distribution has for example emerged in Asia, where there is significant growth potential and our vessels are much more suitable.

Scrapping of vessels

- **Scrapping of vessels is of less importance compared to other shipping markets**

The scrapping of gas carriers due to the advanced age of the vessels is of less importance compared to many other shipping markets. All vessels with semi-refrigerated tanks that follow the mandatory maintenance programmes can have an economic life of more than 30 years. The customers have demanding inspection programmes stipulating that the vessels must be maintained or that they will be deemed as unqualified for such transport. Structural weaknesses in the vessels do not develop since the vessels, hulls and cargo tanks are not exposed to wear from the cargo, which is something that is known from other types of vessels such as crude oil, products and chemicals. The scrap value of the vessels is also an insignificant part of the investment calculations.

We will try to bring relevant analysis together with the quarterly reports. 2q99 we included a presentation of the demand side for the industry which NGC serves, while we this time focus on the supply side.