

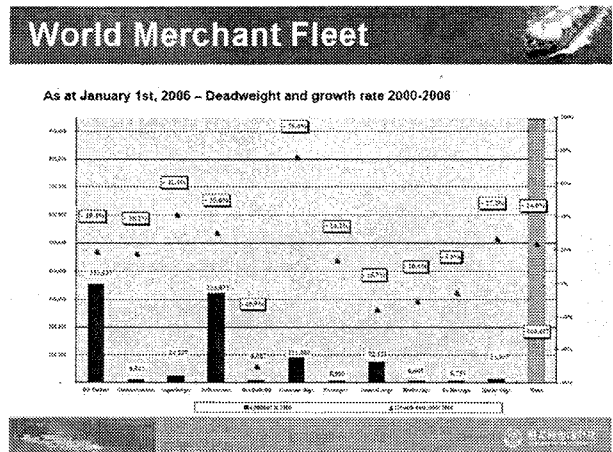
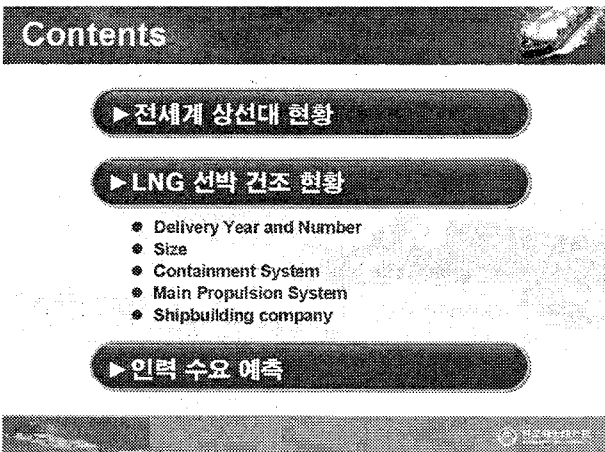
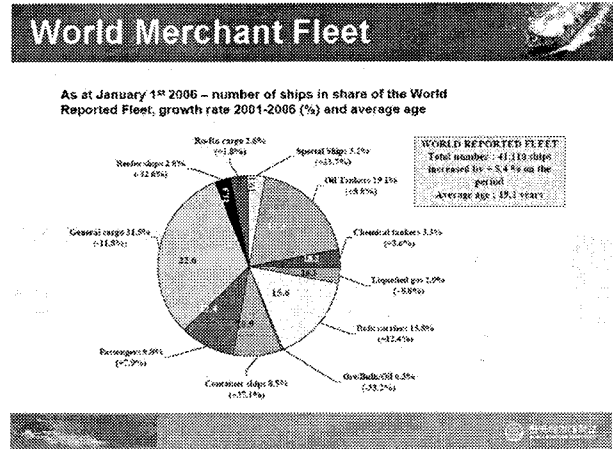
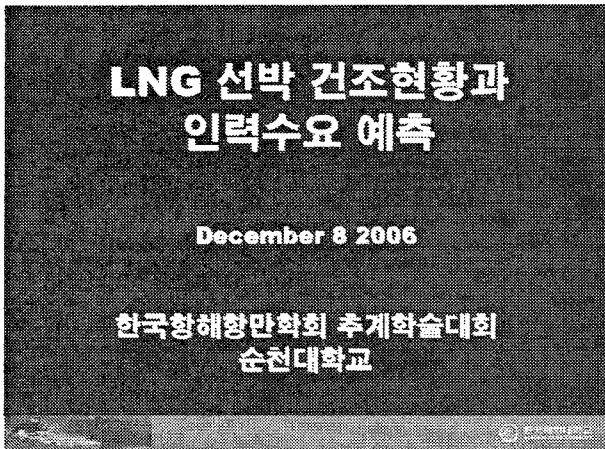
## LNG 선박 건조현황과 인력수요 예측

박진수\*

\*한국해양대학교 항해시스템공학부 교수

**요약** : 최근 LNG 선박의 발주량이 급증함에 따라 LNG 선에 승무할 인력의 심각한 부족이 예상되고 있다. 이러한 LNG 선박에 승무할 인력 특히 고급 사관의 부족은 선박 자체의 안전뿐 아니라 궁극적으로는 LNG 수송체계의 안전에도 큰 영향을 미치게 될 것이다. 이 발표에서는 현재 전세계 상선대의 현황에서 출발하여, 최근 LNG 선박의 발주 현황, LNG 선박에 적용되는 최신 기술 및 엔진 등에 대하여 살펴 본 후에 전세계 LNG 선박 수주 잔량을 근거로 하여 필요 인력을 예측해 본다.

**핵심용어** : 세계 해운현황, LNG 선박 발주현황, Regasification Plant, Reliquefaction Plant, DFDE, SSSR, 인력수요예측



\* 대표저자 : 박진수(중신회원) jspark@hhu.ac.kr

## World Merchant Fleet

**WORLD MERCHANT FLEET - THE TOP TEN COUNTRIES OF MANAGEMENT**  
As of January 1st, 2006 - Rank in 2006 and 2005 and Reported DWT (Rank of Latest data year)

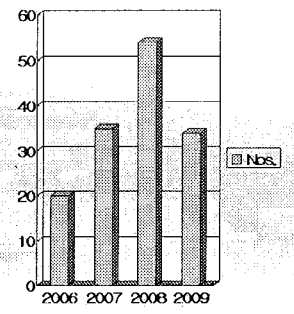
DWT rank 2006 (2005)	Country of Management	Total DWT 1,000 DWT 2006	% share on the Total World Fleet Reported in 2006	Growth rate 2005-2006	Growth rate 1996-2006
1(1)	GREECE	135,411	13.0%	-0.7%	14.7%
2(2)	JAPAN	131,050	12.6%	10.4%	56.1%
3(3)	GERMANY	70,370	7.2%	33.3%	312.4%
4(4)	CHINA P.R of	64,187	7.2%	11.6%	37.5%
5(7)	USA	46,897	4.5%	11.7%	11.8%
6(5)	HONG KONG	45,361	4.4%	11.7%	40.5%
7(5)	NORWAY	43,292	4.2%	3.6%	9.8%
8(9)	KOREA, Rep of	22,421	2.2%	9.6%	45.5%
9(10)	CHINESE TAIPEI	24,119	2.3%	2.0%	70.5%
10(11)	SINGAPORE	12,774	1.2%	0.1%	77.7%
<b>Total Top Ten Countries of Management</b>		<b>634,470</b>	<b>71.6%</b>	<b>7.9%</b>	<b>47.3%</b>
<b>Other Countries</b>		<b>251,260</b>	<b>28.4%</b>	<b>5.0%</b>	<b>15.4%</b>
<b>Total Top Ten Merchant Fleet by Country of Management</b>		<b>885,730</b>	<b>71.1%</b>		<b>48.4%</b>
<b>Total World Merchant Fleet (including fleet for which the Country of Management is Unknown)</b>		<b>885,730</b>			<b>5,767 ships for 52.8 million dwt not reported</b>

## Delivery Year

**Numbers**

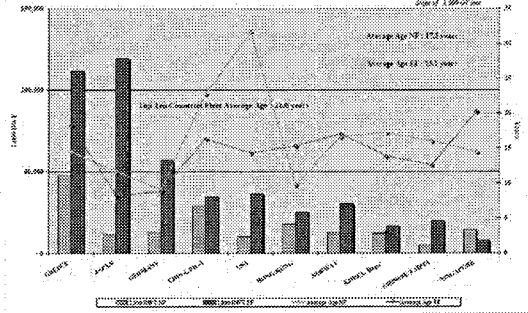
	2006	2007	2008	2009
Nos.	20	35	54	34

Note: More than 143 LNGCs will be delivered by the end of 2009



## World Merchant Fleet

As at January 1st, 2006



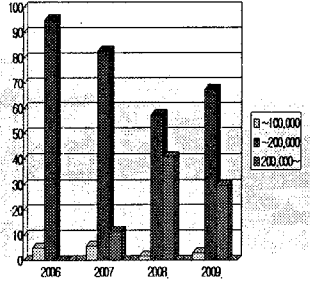
## Size (1,000 Cubic Meters)

**Numbers**

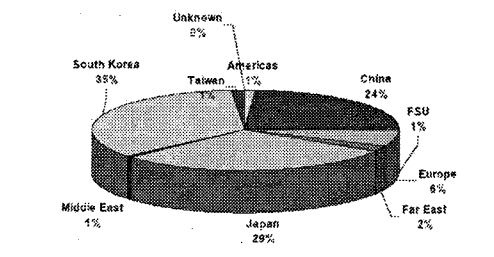
	2006	2007	2008	2009
~100	1	2	1	1
~200	19	28	31	23
200~	0	4	22	10
	20	35	54	34

**Percentage**

	2006	2007	2008	2009
~100	5	8	2	3
~200	95	83	57	68
200~	0	11	41	29



## World Merchant Fleet



Total 275.6 million DWT

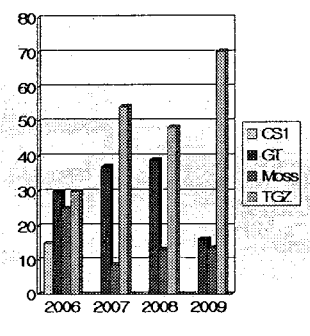
## Containment System

**Numbers**

	2006	2007	2008	2009
CS1	3	0	0	0
GT	6	13	21	6
Moss	5	3	7	5
TGZ	6	19	28	28
	20	35	54	34

**Percentage**

	2006	2007	2008	2009
CS1	15	0	0	0
GT	30	37	39	16
Moss	25	9	13	14
TGZ	30	54	48	70



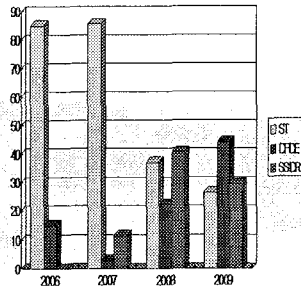
## Main Propulsion System

Numbers

	2006	2007	2008	2009
ST	17	30	20	9
DFDE	3	1	12	15
SSDR	0	4	22	10
	20	35	54	34

Percentage

	2006	2007	2008	2009
ST	85	86	37	27
DFDE	15	3	22	44
SSDR	0	11	41	29



## Necessary Officers

- Number of Officers of an LNG Carrier
  - ◆ Deck Officers: 5 (including Cargo)
  - ◆ Engineer Officers: 5 (including Cargo)
  - ◆ Total: 10
- Estimation of Necessary Officers
  - ◆  $143 \times 10 \times 2.5 = 3,575$
  - ◆ Senior Officers: 2,145 (60%)
  - ◆ Junior Officers: 1,430



## Shipbuilding Company

	Samsung	DSME	Hyundai	Samho	Hanjin	Kawasaki
2006	6	6	1	0	0	3
2007	10	8	9	0	0	2
2008	14	16	9	1	1	4
2009	12	9	5	2	1	0
Total	42	39	23	3	2	9

	MHI	Mitsui	Imabari	Hudong	Atlantique	USC	Izar
2006	1	0	0	0	3	0	0
2007	3	0	1	1	0	1	1
2008	5	1	1	2	0	0	0
2009	1	0	1	2	0	1	0
Total	10	1	3	5	3	2	1



## Others

### ● Class Society

- ◆ LR: 24, ABS: 22, DNV: 13,
- ◆ BV: 4, NK: 3

### ● Flag

### ● Beneficiary Owner

