What's new??

MHI-MME Activities

June 2016, Athens

Comprehensive Product Portfolio of MHI-MME

2S Engines

Turbochargers

Propellers

Steam Turbines

Steam Propulsion Plants

Offshore Boilers and Turbines

Waste Heat Recovery Systems

Auxiliary Boilers

Steering Gears

Fin Stabilizers

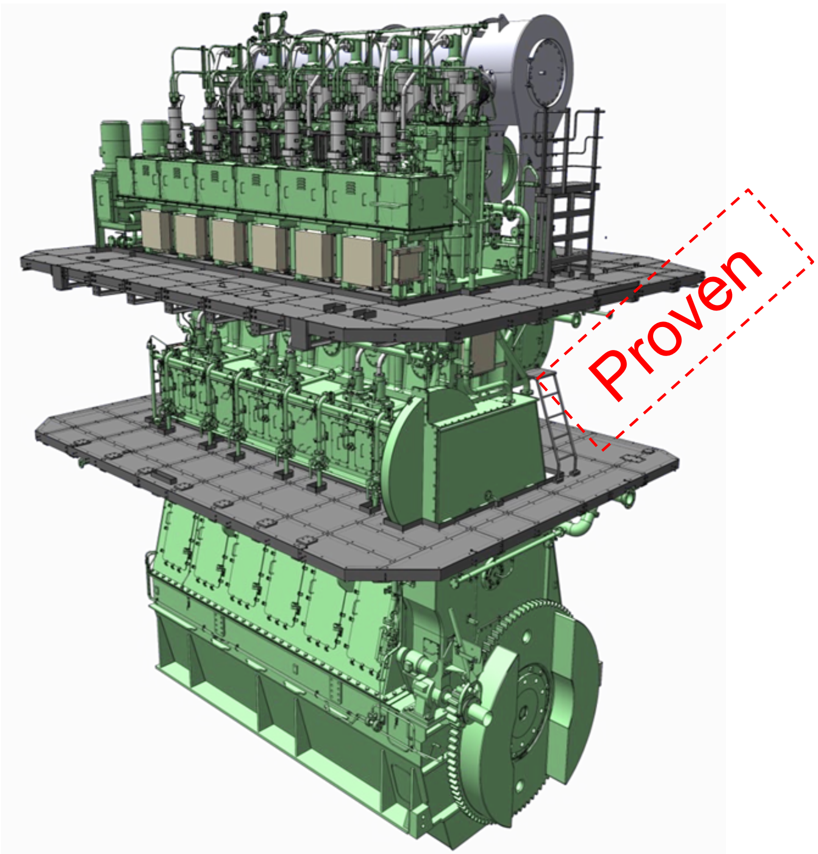
Deck Cranes

Deck Machinery

Cargo Oil Pumps

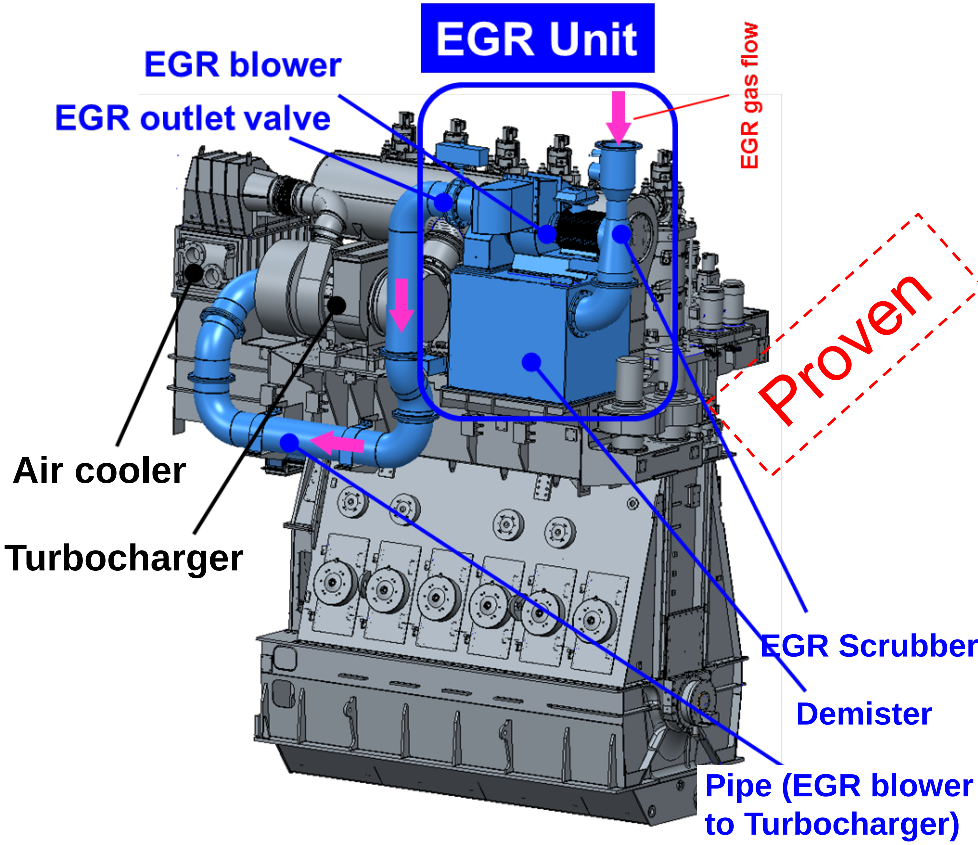
Water Jet Pumps

State of the Art UE Engine
6UEC50LSH-Eco-C2



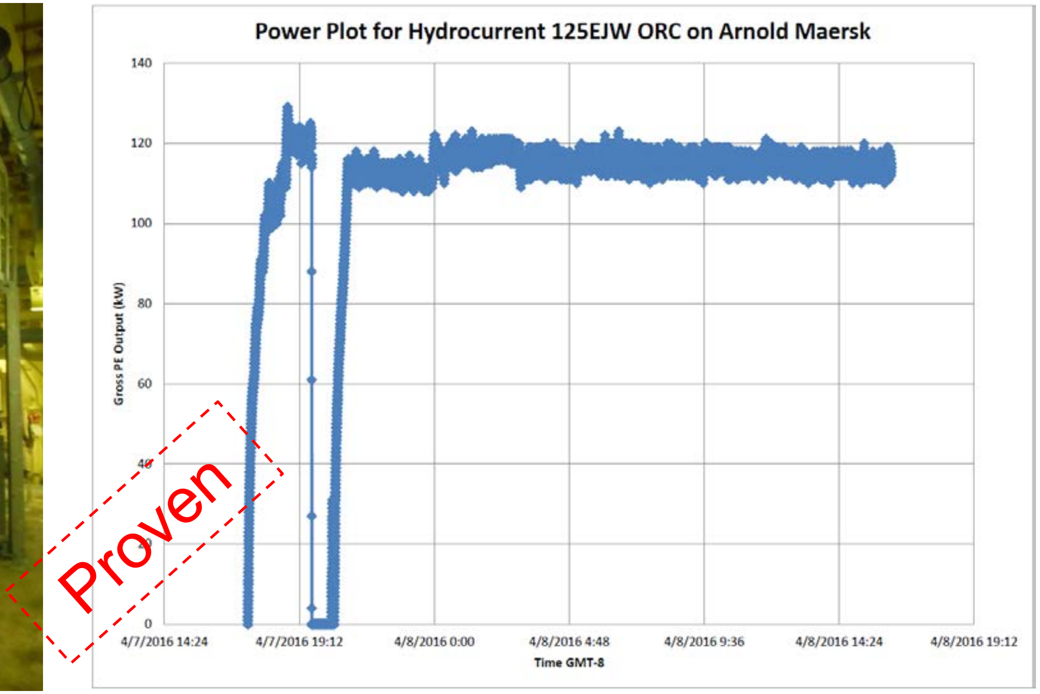
Overview of latest UEC Engine type UEC50LSH for MRT, CT, 34-60BC, etc.

Solution for Tier III regulation
Low Pressure EGR System



Overview of 6UEC45LSE-Eco-B2 with Low Pressure EGR System

Solution for CO_2 reduction
and fuel oil cost saving
ORC (Organic Rankine Cycle) System



Overview of ORC System on board
(125kW Unit)

Licensees of MHI-MME

China

UE engine
- QMD
- YMD
- ZYHM

Steering Gear, Deck Crane, Deck Machinery
- JMHI

Aux Boiler
- JHT

Gen Turbine
- JQT

Propeller
- CZZH

Vietnam

UE engine
- SBIC （BDD）

Japan

UE engine
- Kobe Diesel
- Akasaka Diesel
- Ube Techno Eng

Korea

UE engine
- HHI

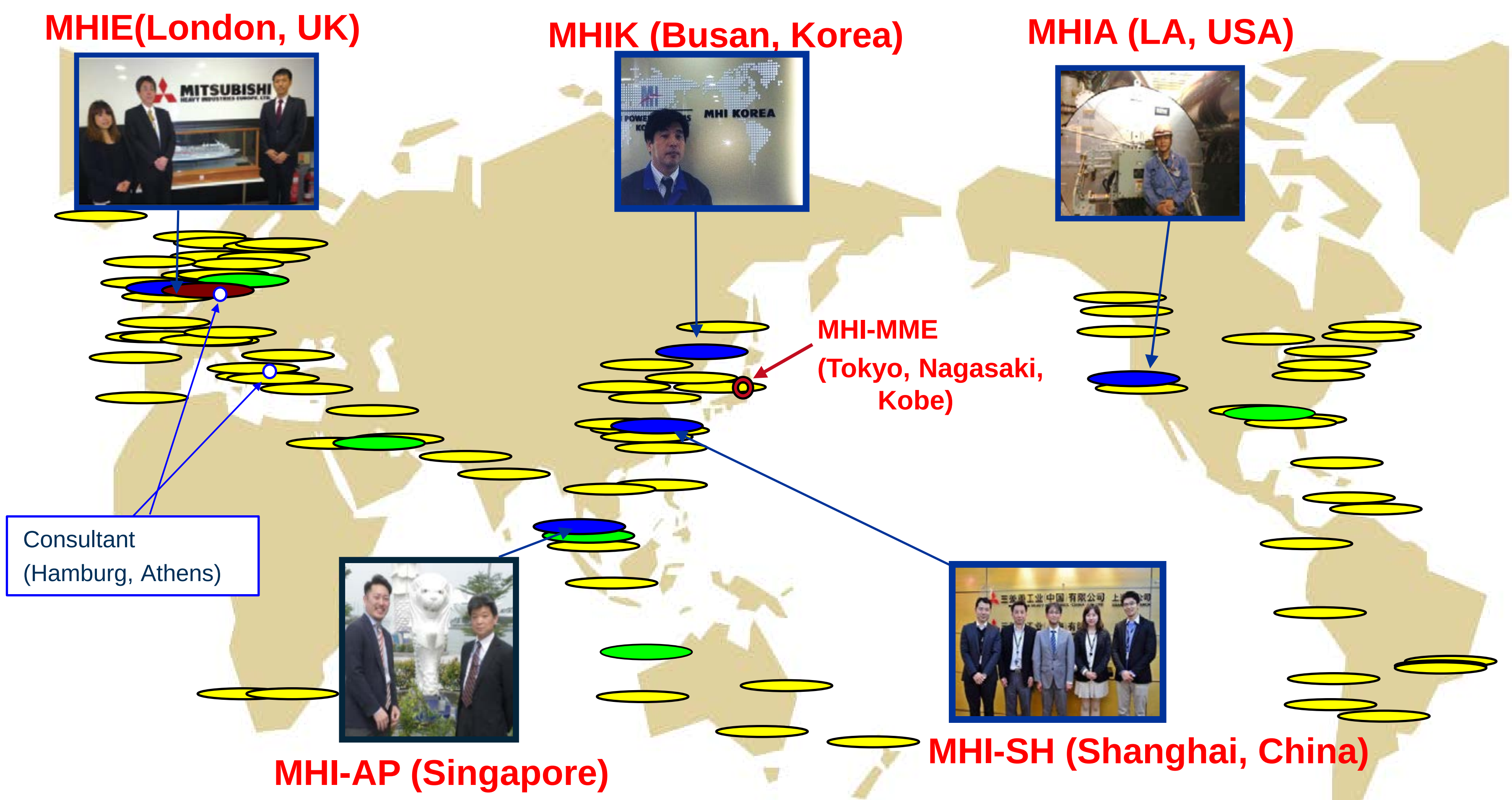
MET Turbocharger
- HHI
- Doosan Engine
- STX Heavy

Main Turbine
- HHI

Steering Gear
- Yoowon

Deck Crane
- SPP

Global Network



MHI A/S Field Engineer Local Office
(London / UK) (Singapore) (LA/US)
(Shanghai / China) (Busan / Korea)

Parts Depot Center
(Hamburg, Germany) (Dubai, UAE)
(Singapore)

MHI (A/S Service Station)
Maintenance Partners (Belguim)

World-wide Service Location
(Authorized Repair Agencies)

What’s new??

Market status and Japanese Shipping/Shipbuilding Status

June 2016, Athens

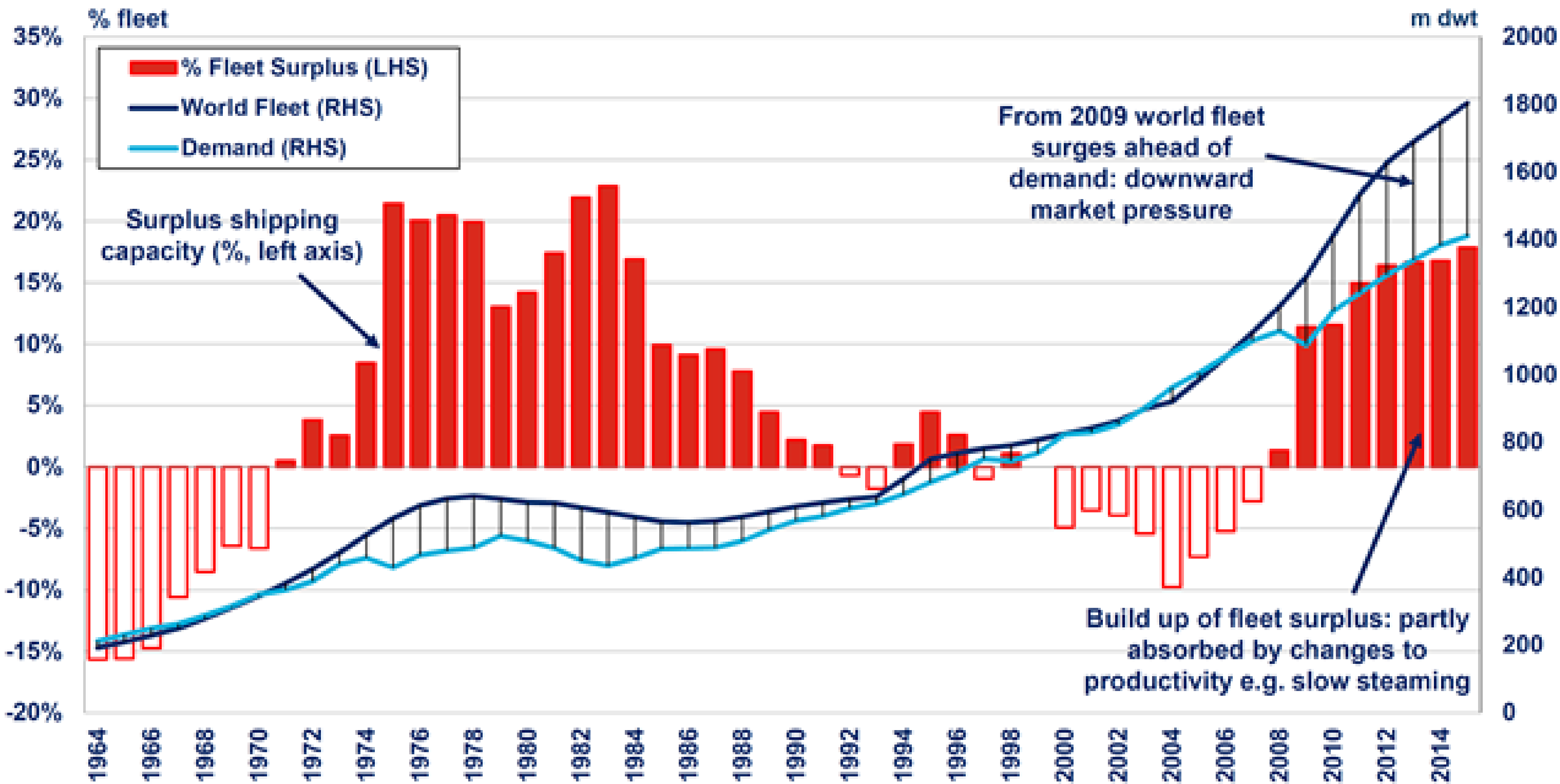
Headaches for global market players

- Stagnant Global Economy
- Low ClarkSea Index
- Depreciation of Assets
- Increases in Vessel Lay-ups
- Over Supply and Weak Ordering
- Over Building Capacity
- Environmental Regulation Timeline

“The Thinker”
(“Le Penseur”)

Global Shipping Market Overview

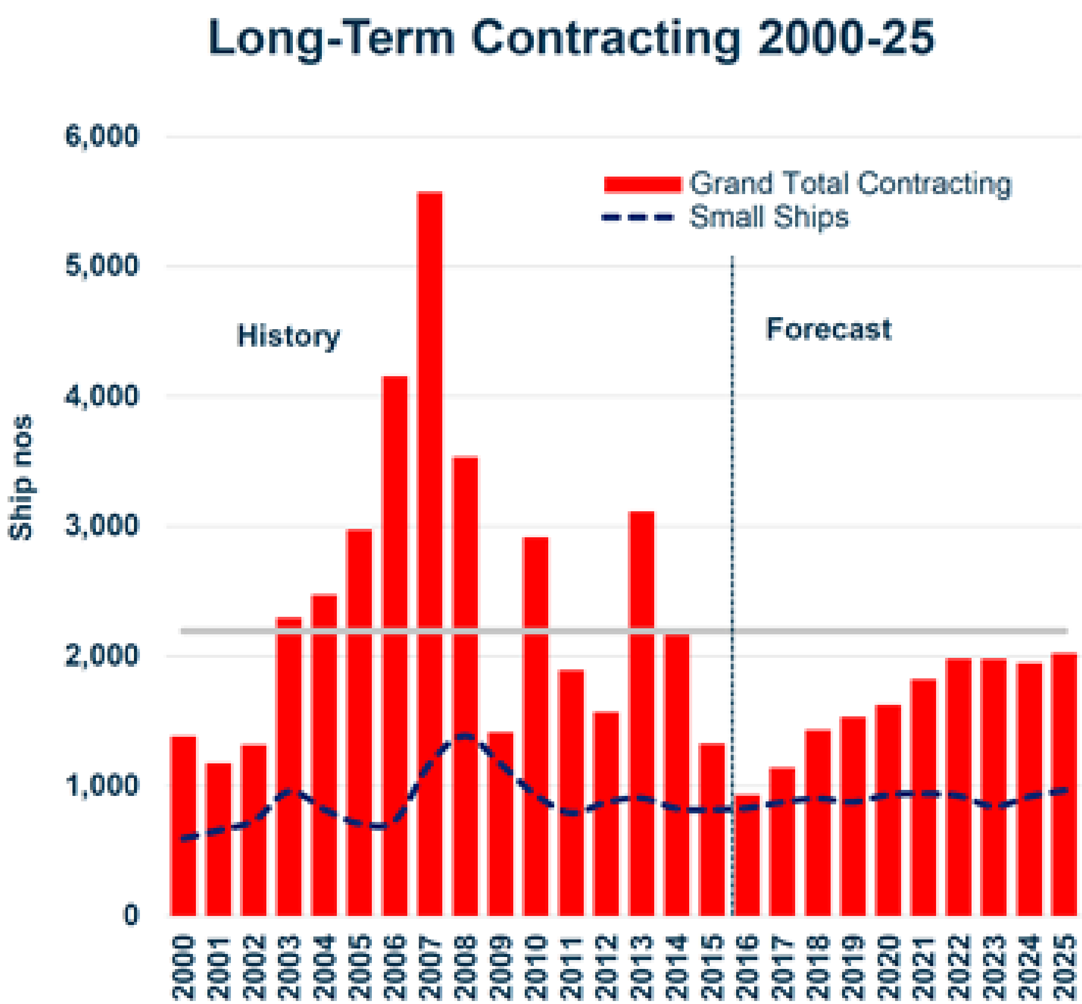
World Fleet, Supply-Demand Balance



Source: Clarksons Research

Global Shipbuilding status

Historical Contract & Forecast (No. of vessels > 2000GT)



Source : Clarkson Research

- Shipbuilding contracts in 2016 and 2017 is estimated to be in historical low level. (Less than 1,000 vessels in 2016)
- Contracting remains below the historical average throughout the forecast period.
  (less than 2,000 vessels p.a.)

Above negative situation will be equally fair to all shipbuilding regions.

Global Shipbuilding status

Historical Deliveries (No. of vessels > 2000GT by region)

(Including Cruise, Offshore, Dredgers)

	2011	2012	2013	2014	2015		
Japan	487 (100)	467 (96)	395 (81)	392 (80)	401 (82)	21%	Steady and stable, smallest decline
Korea	546 (100)	461 (84)	386 (71)	321 (59)	354 (65)	18%	Loosing market, suffering financial problems
China	1426 (100)	1372 (96)	909 (64)	745 (52)	747 (52)	39%	Loosing market, under allignment of over capa.
Others	628 (100)	591 (94)	536 (85)	489 (78)	426 (68)	22%	No expansion in Brazil, Vietnam, Turkey, India
Total	3087	2891	2226	1947	1928	100%	
	100%	94%	72%	63%	62%		

Source : Clarkson Research

Historical Deliveries (No. of vessels > 2000GT by region)

(Excluding Cruise, Offshore, Dredgers)

	2011	2012	2013	2014	2015		
Japan	478 (100)	457 (96)	381 (80)	372 (78)	387 (81)	27%	Share jumps up in ocean going merchant vessels
Korea	514 (100)	448 (87)	374 (73)	285 (55)	332 (65)	23%	Loosing market, suffering financial problems
China	1229 (100)	1205 (98)	743 (60)	558 (45)	574 (47)	39%	Loosing market, under allignment of over capa.
Others	357 (100)	318 (89)	217 (61)	180 (50)	164 (46)	11%	Including Japanese & Korean overseas yards
Total	2578	2428	1715	1395	1457	100%	
	100%	94%	67%	54%	57%		

Source : Clarkson Research

Global Shipbuilding status

Deliveries vs New Orders (No. of vessels > 2000GT by region)

Deliveries vs New Orders on 2015 (Including Cruise, Offshore, Dredgers)

	Deliveries		New Orders		
Japan	401 (100)	21%	363 (91)	27%	No change in the position as the most stable region.
Korea	354 (100)	18%	276 (78)	21%	Accelerating consolidation and "entering court receivership".
China	747 (100)	39%	459 (61)	35%	Concentrating to big state owned yards and accelerating consolidation.
Others	426 (100)	22%	229 (54)	17%	Still far away to find out the fourth new region as the leading shipbuilder.
Total	1928 (100)	100%	1327 (69)	100%	Quite low market level and expected to be worse in new orders of 2016 and 2017

Source : Clarkson Research

Steadiness of Japanese Shipbuilding

Strong fundamentals

- Stable economy and trades(Import/Export)
- Stable shipowners, operators and investors
- Stable technology providers and suppliers (Established maritime cluster)

Opportunities

- Ex-nuclear policy
- Less orders in offshore sectors
- Less orders of vessels in speculation

Top Owners by Location (million GT)

Owners based in the top 10 'owner zones' account for a combined fleet of 604m GT, representing 49% of the total fleet.

Owners based in the top 20 control 758m GT, accounting for almost two thirds of world capacity.

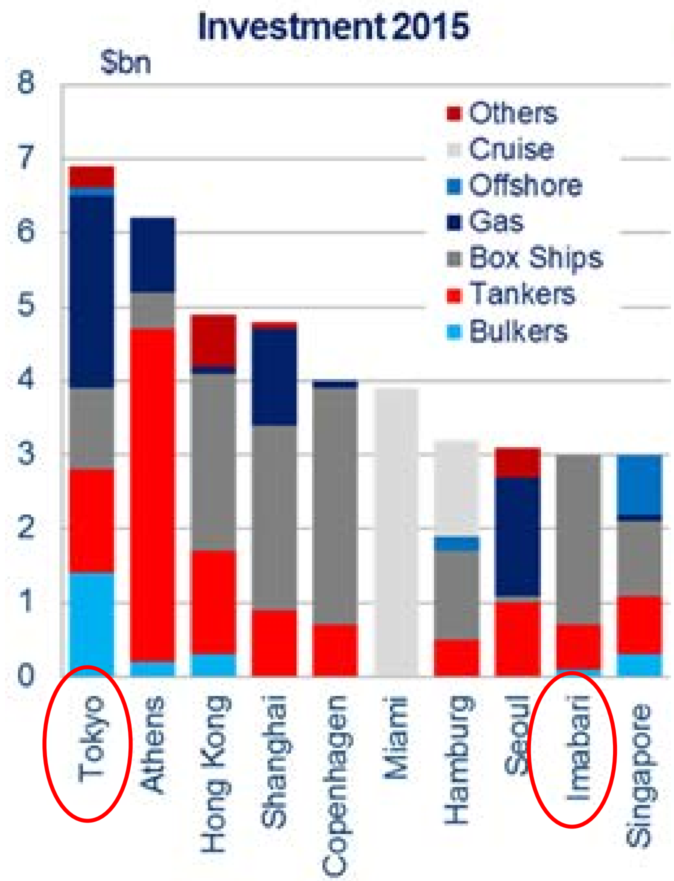
Athens is by far the largest 'owner zone', with companies based here controlling a combined fleet of 173m GT.

The second largest zone is Tokyo (97m GT) followed by Hamburg (70m GT) and Hong Kong (60m GT).

Source : Clarkson Research

Steadiness of Japanese Shipbuilding

Top Investors by Location (billionUS$)



Owner Zone	Bulkers	Tankers	Box Ships	Gas	Offshore	Cruise	Others	2015 Total	Share Global Total
Tokyo	1.4	1.4	1.1	2.6	0.1		0.3	**6.9**	*9%*
Athens	0.2	4.5	0.5	1				**6.2**	*8%*
Hong Kong	0.3	1.4	2.4	0.1			0.7	**5.0**	*6%*
Shanghai		0.9	2.5	1.3			0.1	**4.8**	*6%*
Copenhagen		0.7	3.2	0.1				**4.0**	*5%*
Miami						3.9		**3.9**	*5%*
Hamburg		0.5	1.2		0.2	1.3		**3.2**	*4%*
Seoul		1	0.1	1.6			0.4	**3.1**	*4%*
Imabari	0.1	0.6	2.3					**3.1**	*4%*
Singapore	0.3	0.8	1	0.1	0.8			**2.9**	*4%*
Top-10 Share	*34%*	*55%*	*79%*	*65%*	*14%*	*72%*	*26%*		*56%*
Other	66%	45%	21%	35%	86%	28%	74%		*44%*
Total $bn	**6.7**	**21.3**	**18.2**	**10.4**	**7.8**	**7.2**	**5.7**	**77.3**	

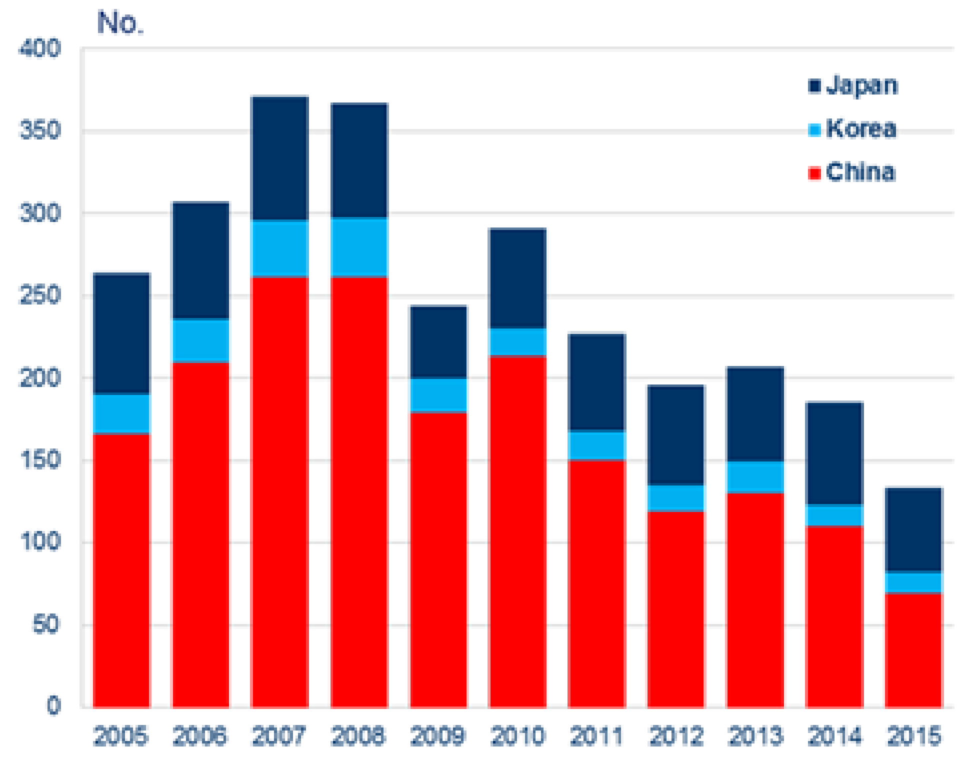
Source : Clarkson Research

Number of Yards to Win at least One Contract

Number of Yards to Win at Least One Contract

	China	Korea	Japan
2005	166	24	74
2006	209	27	71
2007	261	35	75
2008	261	36	70
2009	179	21	44
2010	213	17	61
2011	150	18	59
2012	119	16	61
2013	130	19	58
2014	110	13	62
2015	69	13	51

NB: the above analysis is based on yard name and does not take into account changes in ownership, as such there may be some minor duplication on a facility-by-facility basis. This analysis does not include data on vessels below 1,000 GT.



Source : Clarkson Research

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