

Tugs & Offshore Support Vessels Asia 2010, Kuala Lumpur, Oct 07-08, 2010



The Market Drivers and Strategic Outlook of TOSV Market

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TOSV – Overview

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Market Drivers – TOSV Industry



	Rise of Oil Price	Rise of E&P	Rise in Offshore Rigs	TOSV
Demand Drivers	Sudden rise in the oil prices and future uncertainty over price	✓High oil prices made it viable to invest to find newer reserves in the oceans.	More rigs are required to meet the rise in E&P activity	
Impact	<ul style="list-style-type: none"> ✓More blocks are awarded by government for E&P ✓High oil prices encouraged both exporters and importers of oil to look for more oil in ocean 	<ul style="list-style-type: none"> ✓Both state owned as well as private firms made aggressive plans to explore newer fields, develop fields which were discovered earlier but was not viable at lower oil prices 	<ul style="list-style-type: none"> ✓Several Drilling companies, investors and speculators ordered rigs to meet the demand created by large scale investment on E&P activity 	TOSV is the derived demand proportional to increase in production platform and offshore rigs
Current Scenario	Oil prices have stabilized in the region of US\$ 75 to US\$ 80 per barrel. It has not induced drive to explore as it did earlier	<ul style="list-style-type: none"> ✓The impact of financial crisis is still not over. There are issues on availability of funds. Very few offshore oil & gas projects which were shelved are being pursued 	<ul style="list-style-type: none"> ✓Large scale ordering has created oversupply in market. More rigs are likely to be delivered 	More vessels are chasing fewer projects

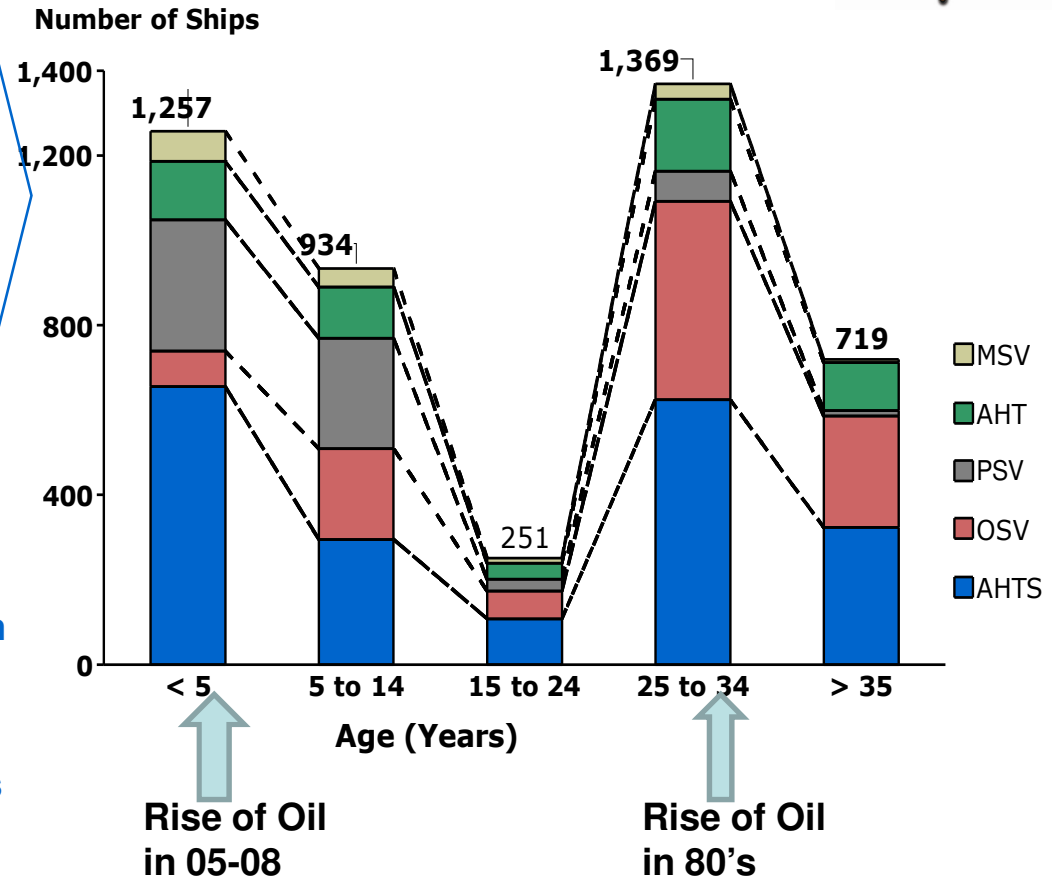
Towage & Offshore Supply Vessels Industry - Overview



Type	Total
AHTS	2005
OSV	1094
PSV	681
AHT	580
MSV	170
Others	2269
Total	6799

Major Category (TOSV), namely AHTS, OSV, PSV, AHT, MSV are about 4500

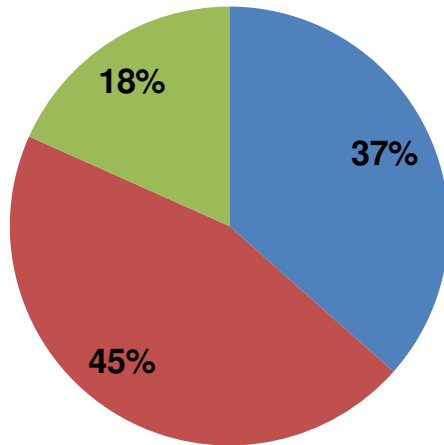
- More than 60% of the offshore fleet is dominated by AHTS, OSV, PSV, AHT,
- Rest constitute vessels such as construction barges, pipe laying barges, crew boats, Accommodation barges, etc
- Last 5 years has seen all time high deliveries
- Dominance of PSV has increased in last 15 years and OSV diminished
- PSV is replacing OSV segment
- MSV – Demand is increasing for specific projects as it can be put to multiple tasks simultaneously



AHTSV – Trends, Growth & Future

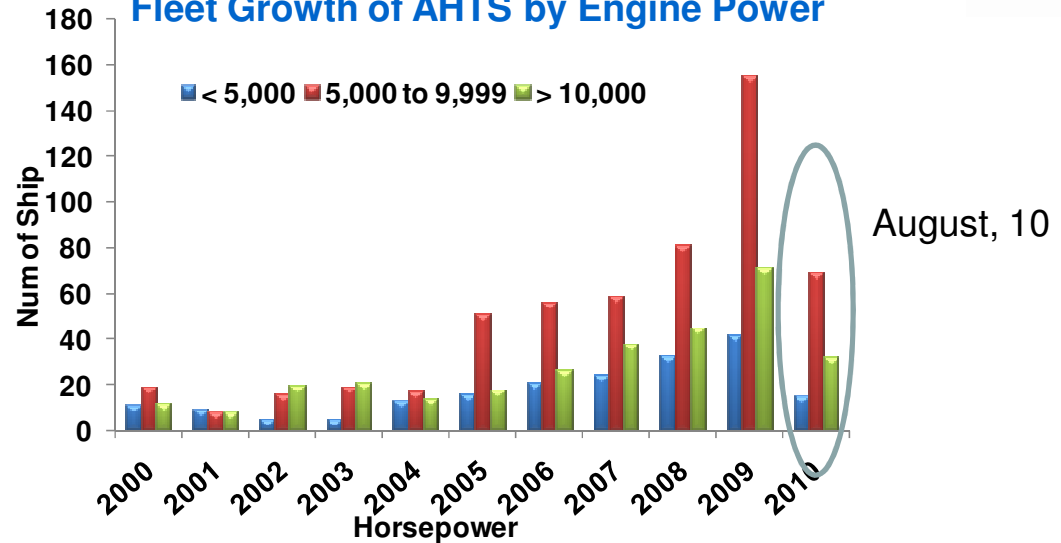


Engine Power of existing AHT/AHTS

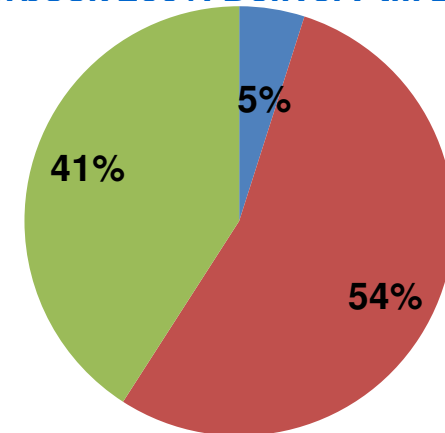


■ < 5,000 ■ 5,000 to 9,999 ■ > 10,000

Fleet Growth of AHTS by Engine Power



Orderbook 260+. Delivery till 2012



■ < 5,000 ■ 5,000 to 9,999 ■ > 10,000

- 37% less than 5,000 HP
- Higher powered vessels added in last 10 yrs
- Close to 600 AHTS added in last 10 years
 - More than 50% between 5,000 HP to 10,000 HP
 - 33% above 10,000 HP
- 95% scheduled delivery, above 5,000 HP

Chartering - shift towards higher capacity vessels. Why?

Data Sources: Clarksons

www.mantrana.in

Shift to Higher Capacity Assets



1. Exploration is Moving to Deeper waters
2. High Engine Power AHTS in current scenario is required
 - To handle Heavier Anchors
 - Require more power to two rigs
 - Requires higher speed
3. Current generation AHTS also requires
 - High Carrying Capacity (2000 DWT to 4000 DWT)
 - Multiple functions – Fire fighting,

MOST Important – Charterers Prefer it, Demand it.

Why SO?

Economics works in favour of High powered AHTS

Chartering Oil & Gas Companies perspective – A Case Study



Two Smaller AHTS



One Large AHTS



For Same Task (Jackup Rig Towing)

Net Cost to Charter one large AHTSV is lower than two smaller AHTSV

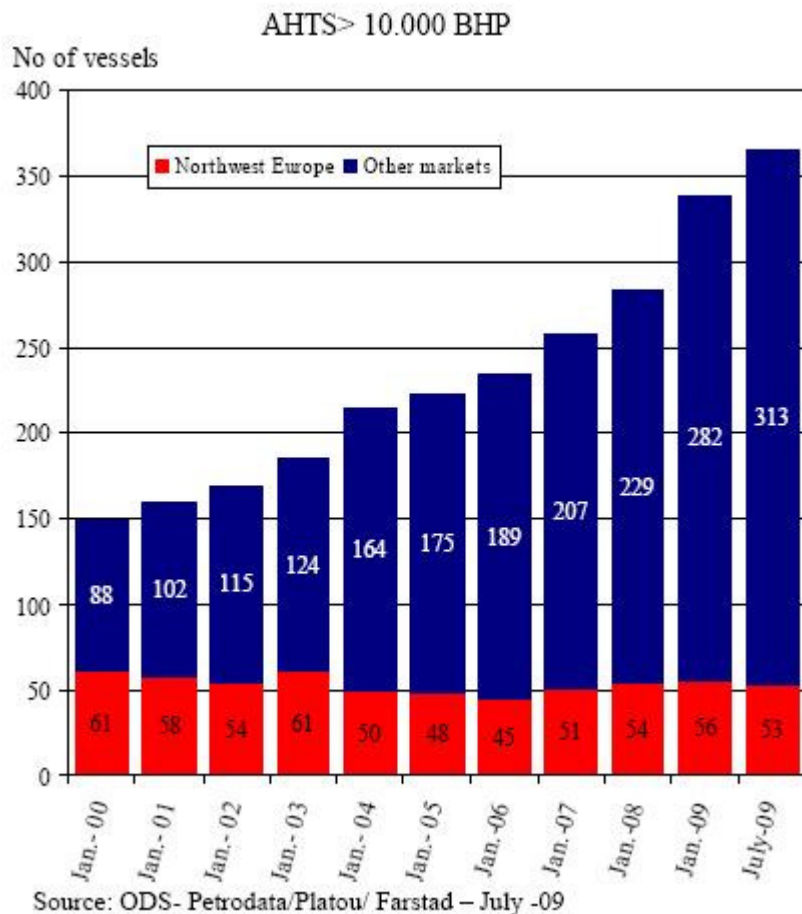
Chartering - Oil & Gas Companies perspective – A Case Study



(For Rig Towing)

- **Multiple vessels of smaller capacity requires more power**
- **Higher Power require higher fuel consumption by Engines**
- **Auxiliaries – Diesel Consumption high**
- **Multiple Vessels have equipments & machinery of their own**
- **Crew Expense - Double**
- **Net GRT of multiple vessel is higher compared to Single Vessel, more outflow as port dues, taxes, etc**

AHTS – Chartering Trends Across Geography

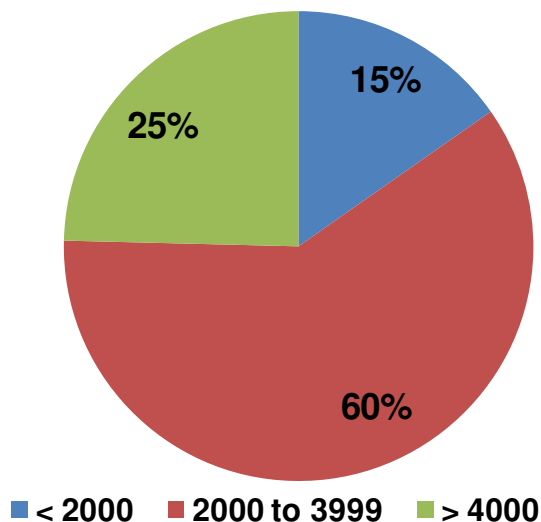


- High Power AHTS were mostly used in North Sea
- Growing acceptance across geography due to increase in deepwater activity
- Major Deployment
 - Gulf of Mexico
 - Indian Ocean
 - Pacific Ocean
 - Brazil
- High power AHTS trend likely to remain intact
- In addition to High engine power, they have large deck space, Dynamic Positioning, Firefighting, etc

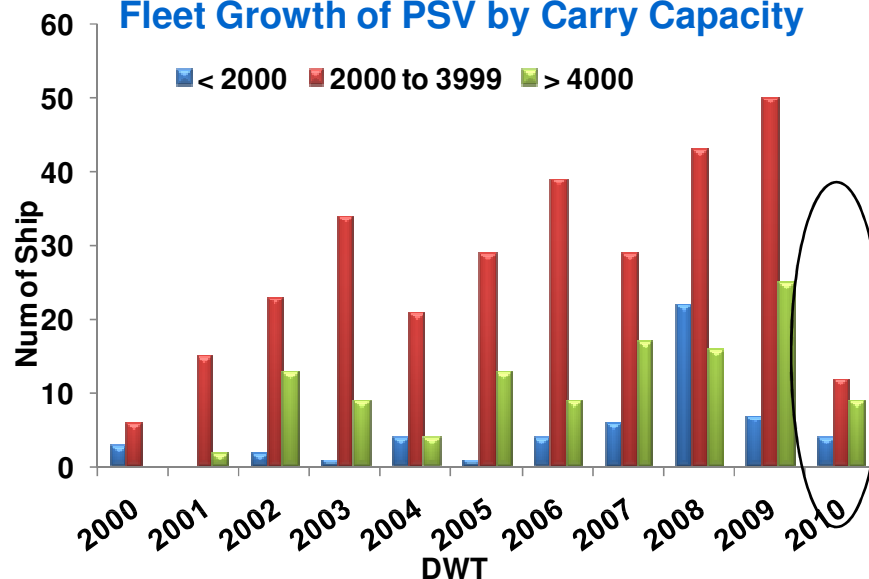
PSV – Trends & Growth



Carrying Capacity of PSV

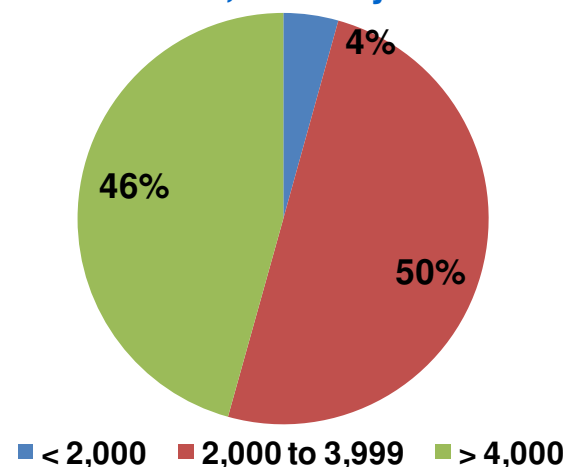


Fleet Growth of PSV by Carry Capacity



Aug, 2010

Orderbook 160+, Delivery till 2012



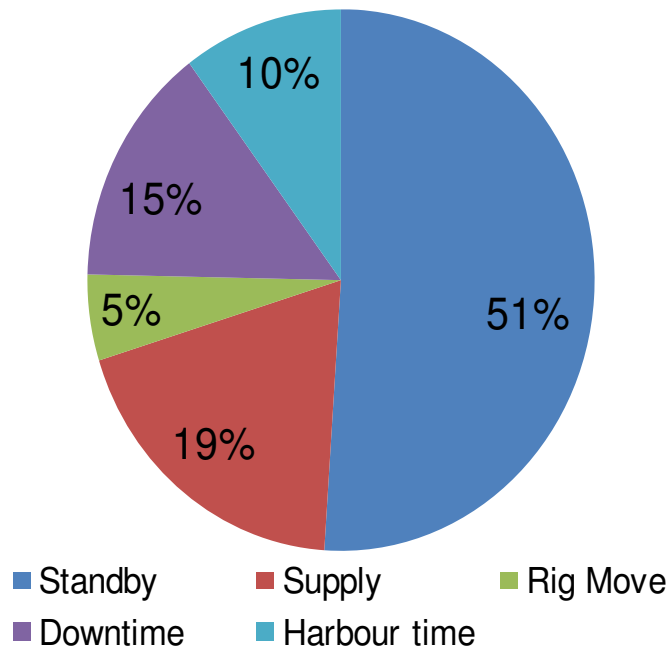
- PSV has become predominant since 2000
- Total Fleet about 700
- Three Fourth fleet less than 15 yrs
- Used to Support Deepwater Drilling
- Supports Production Platforms
- More than 60% of fleet between 2,000 DWT to 4,000

**Demand for PSV increasing.
Why Should the need for PSV be there at all?**

Case Study – Need for PSV



AHTS in Mumbai offshore in late 90's



Source: CAG

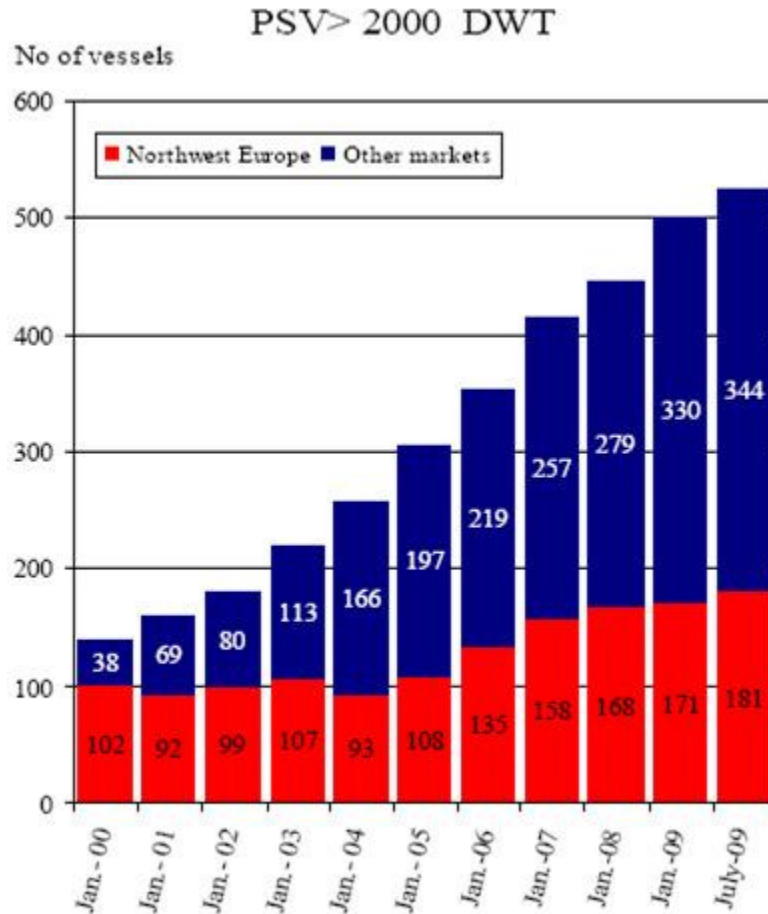
Average of Deployment Statistics for AHTS in Mumbai Offshore

- 51% was standby time
- 34% time deployment was specific to the purpose an AHTS is designed for
 - Rig Move
 - Supply
 - Harbour Time – Cargo Loading & Discharge

PSV – Trends & Growth



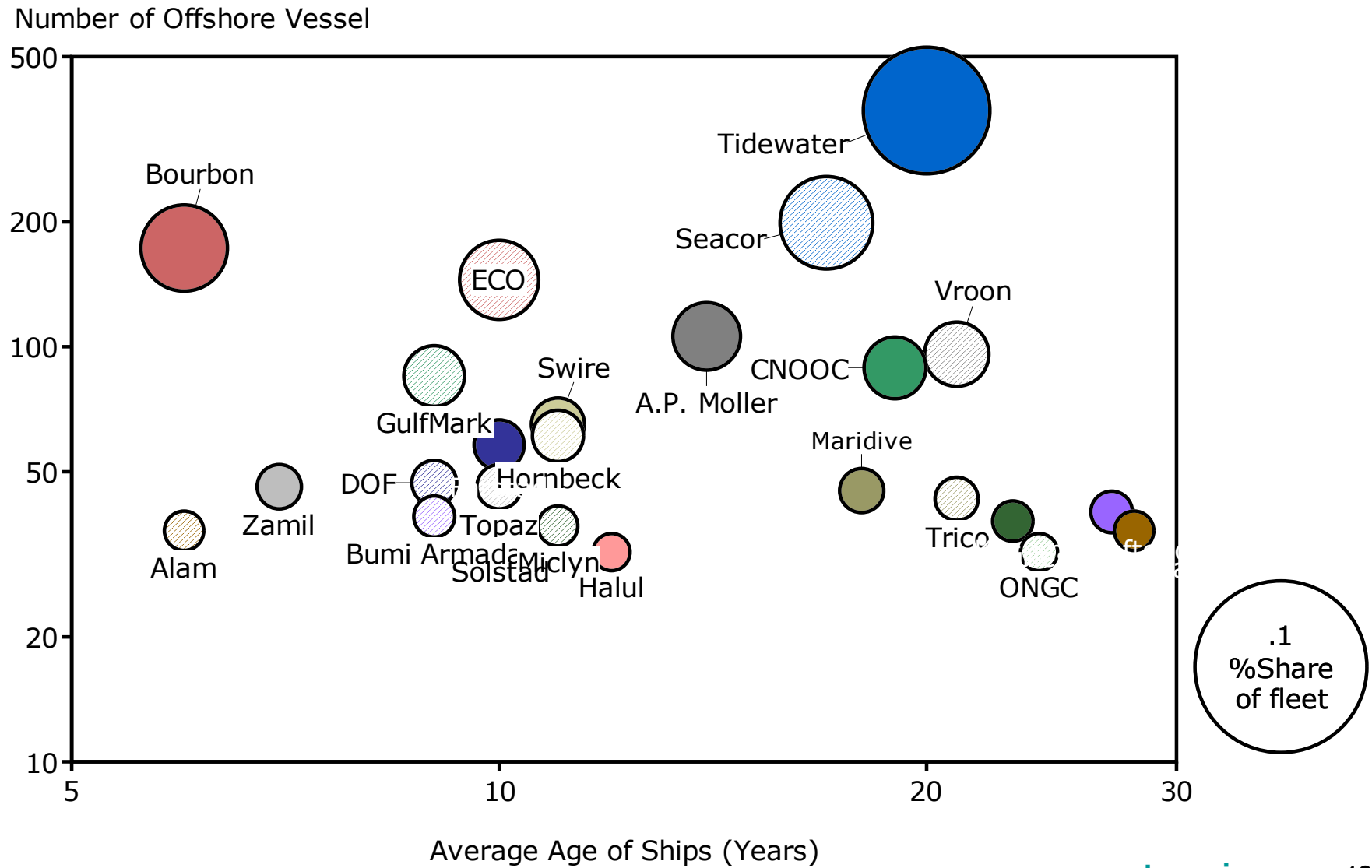
Fleet Growth o PSV by Carry Capacity



Source: ODS- Petrodata/Platou/ Farstad – July -09

- Large DWT were mostly used in North Sea
- Growing acceptance across geography due to increase in deepwater activity
- Major Deployment
 - Gulf of Mexico
 - Indian Ocean
 - Pacific Ocean
 - Brazil
- These vessels have large deck area, undertake pressure tanks for storage for Cement, Mud, etc

Market Share of Major TOSV Companies - Globally



Conclusion - TOSV market at Crossroads



- **High end assets are entering market**
 - Every new AHTS or PSV is capable to replace 2 or more than 2 older ships of similar size
 - Large supply has been built up in past years
 - Most of the ships have multi-utility functions
- **TOSV is still a fragmented market**
 - With rise of asset price the barriers to entry has increased
 - Still there are several 1 boat owner companies with less financial appetite
- **Charters are looking for high end assets for specific purpose**
- **Even though, the investments in Offshore Oil & Gas sector is rising**
 - Award of new exploration blocks
 - Commissioning of new fields
 - Replacement of older production installation
- **There appears to be an oversupply in the market**
 - More TOSV assets would be chasing fewer opportunities
 - Ships with multi functional requirements would be preferred over others.

About Mantrana



- Undertakes research & consultancy on the Indian Maritime Sector
- Undertakes economic advisory on the following maritime segments
 - √ Offshore Drilling & Logistics Sector
 - √ Shipbuilding
 - √ Shipping
 - √ Ports & Logistics
- Following are key services provided by Mantrana Team
 - √ Market Study
 - √ Project Feasibility Study
 - √ Business Plan
 - √ Bid Advisory
 - √ Due Diligence for investment



Thank you for your Attention

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