Ship Recycling: The last pillar of shipping

Where do old ships go?

- Indian subcontinent
  - India, Bangladesh and Pakistan
- China
- Turkey

Where do old ships go?

INDIA

• Continues to lead the Ship Recycling industry in both numbers and green capacity.

• 37% of the yards are fully ISO Certified.

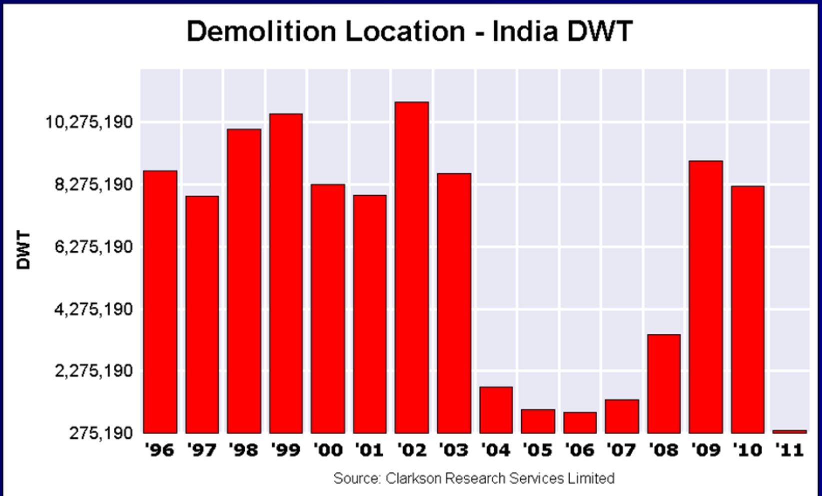
• A number of western and Japanese development banks and NGOs working towards increasing the country's green recycling capacity.

Coastal Location: Arabian Sea, Gulf of Khambat, West Coast, India

Latitude: 21 29.5' N

Longitude: 72 21.3' E

Yards: 180+



GREEN RECYCLING: About 65-70 yards (37%) are fully ISO Certified.

BENEFITS:

• Leading Number of Ship Recycling Facilities – excess 100!
• Market Maker / Leader
• Experienced Recyclers.
• Top price levels for Specialized Vessels
• Premium for Bunkers, Non-Ferrous Items, Certain Machinery Items Such as Main Engine, Generators, etc.
• Wide Variety of Buyers. Buyers range from ULCC buyers to the smallest fishing trawlers. Everything goes!

DISADVANTAGES:

Beaching Tides

BEST MARKET FOR…

Specialized High Value Vessels such as
ROROS , Reefers , Passenger Ships (leading market)
Dry Vessels
6,000 LWT

Where do old ships go?

BANGLADESH

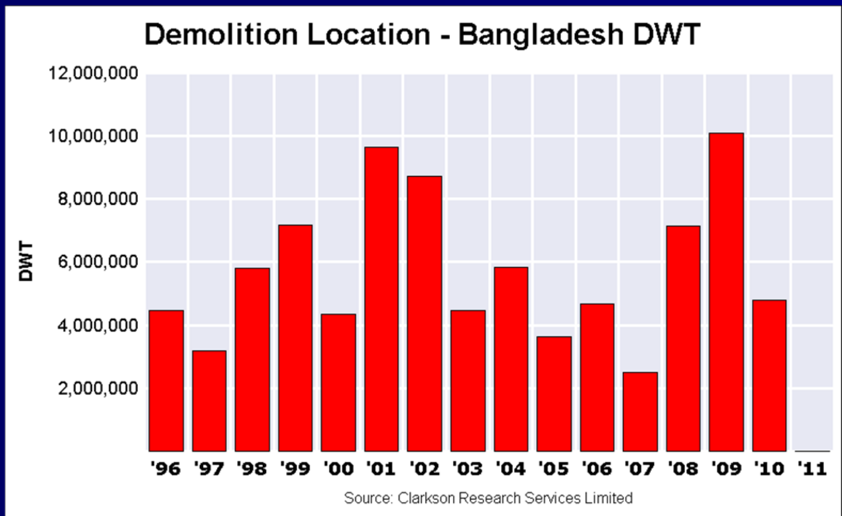
- Embroiled in a legal battle between environmental lawyers (BELA) and local ship recyclers (BSBA) .
- No clear direction by the Government.
- Drip-feed of clearances to re-open granted .

Coastal Location: Bay of Bengal

Latitude: 22 26 N

Longitude: 91 44' E

Yards: 80+



GREEN RECYCLING:
Recently 3 yards have achieved ISO Certifications. However, due local environ-legal issues, market virtually closed.

BENEFITS:
- Leading Recycler of Tankers
- A very competitive market for VLCCs and ULCCs
- Excellent option for Ships opening up on East Coast of India and further East.

DISADVANTAGES:
Short Beaching Tide windows with wide gaps between tides
D/A cost slightly higher than India
Low prices for Dry Tonnage

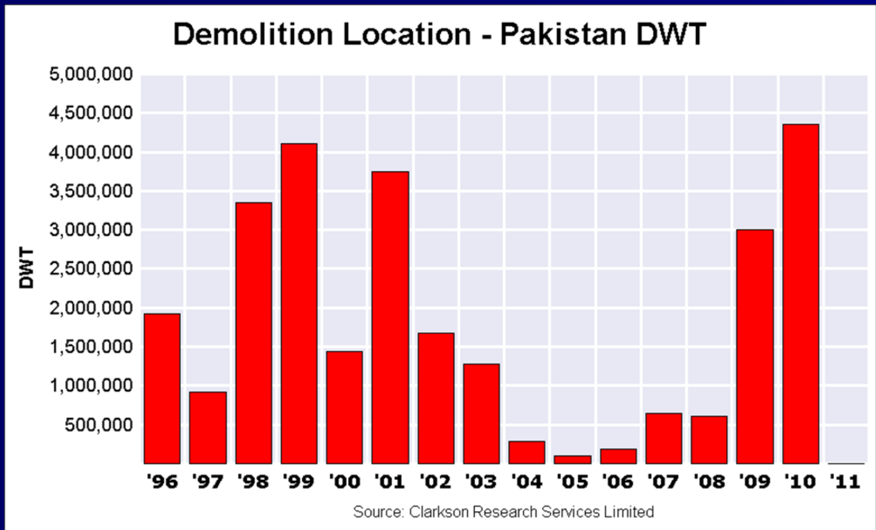
BEST MARKET FOR…
Tankers 12000 LWT and above

Where do old ships go?

PAKISTAN

• 2010 has been the best year for the recycling industry.
• World Bank currently working to increase the capacity of ship recyclers and of regulators in complying with the IMO Convention.

Coastal Location:	Arabian Sea
Latitude:	24 48′ N
Longitude:	66 59′ E
Yards:	127 (50 active)



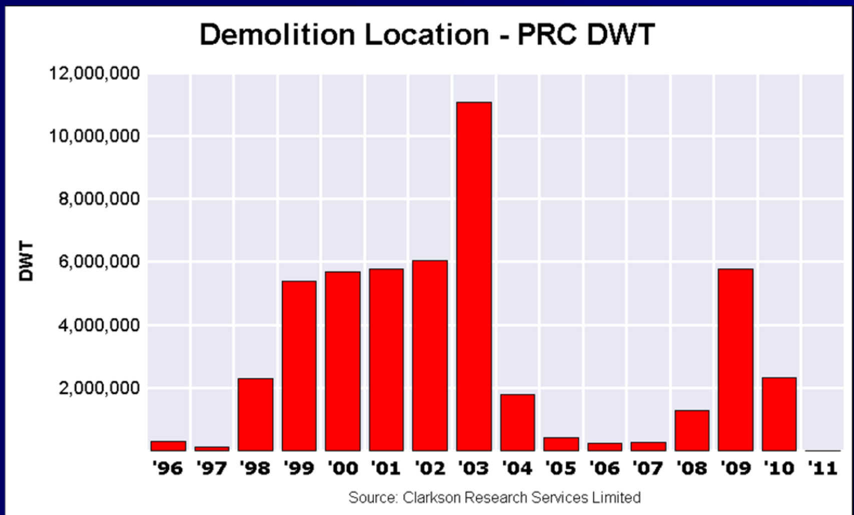
GREEN RECYCLING:
Only 1 yard having ISO Certifications.
BENEFITS:
• Prompt Delivery Due to No Beaching Tides
• Low D/A
DISADVANTAGES:
Specialized Vessels
BEST MARKET FOR…
• Tankers
• Small LDT Under Tow Vessels

Where do old ships go?

CHINA

Latitude: 113 4' E
Longitude: 22 19' N

• 2010 has seen a massive decline in volume of vessels recycled.
• Has been a choice for owners wanting green recycling, but with India catching up fast, competition is getting tougher as more and more owners opening up to India for their green recycling needs.



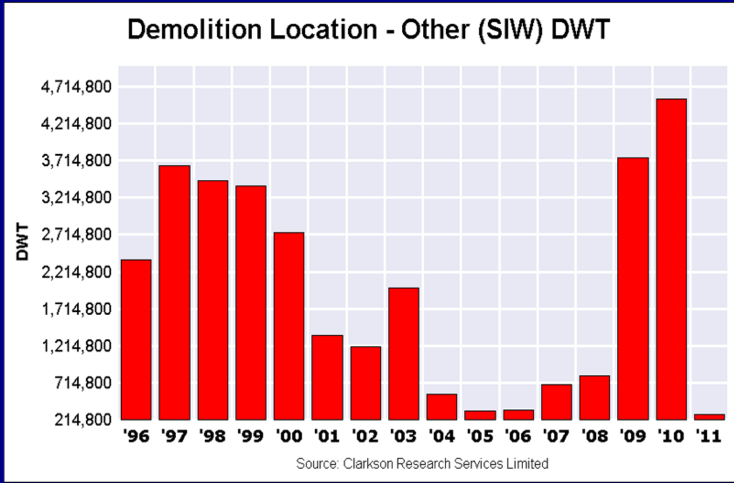
GREEN RECYCLING:
15 Yards having ISO Certifications.
BENEFITS:
•Very Competitive prices for tankers
•Gas free for Man Entry Only
•More efficient recycling than the India Sub-Continent
•Large appetite for Large Ships (VLCCs and ULCCs)
DISADVANTAGES:
•High D/A Costs
•Poor prices for Dry Tonnage
•Not a keen buyer of Specialized Ships
BEST MARKET FOR…
•VLCC's and ULCC's

Where do old ships go?

TURKEY

GREEN RECYCLING:
25 ship recycling yards.
Turkey signed Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships.
The only recycling country to have ratified the convention to date.
BENEFITS:
• Member of OECD
DISADVANTAGES:
• Can take smaller LDT
BEST MARKET FOR…
• Vessels located in the Medi and Americas and not economical for them to move to East of Suez.

• 2010 has seen a sizeable rise in volume of vessels recycled outside China & Subcontinent.
• Turkey is an automatic choice for Government vessels in the EU region that by law require recycling only in the OECD region.



Source: Clarkson Research Services Limited

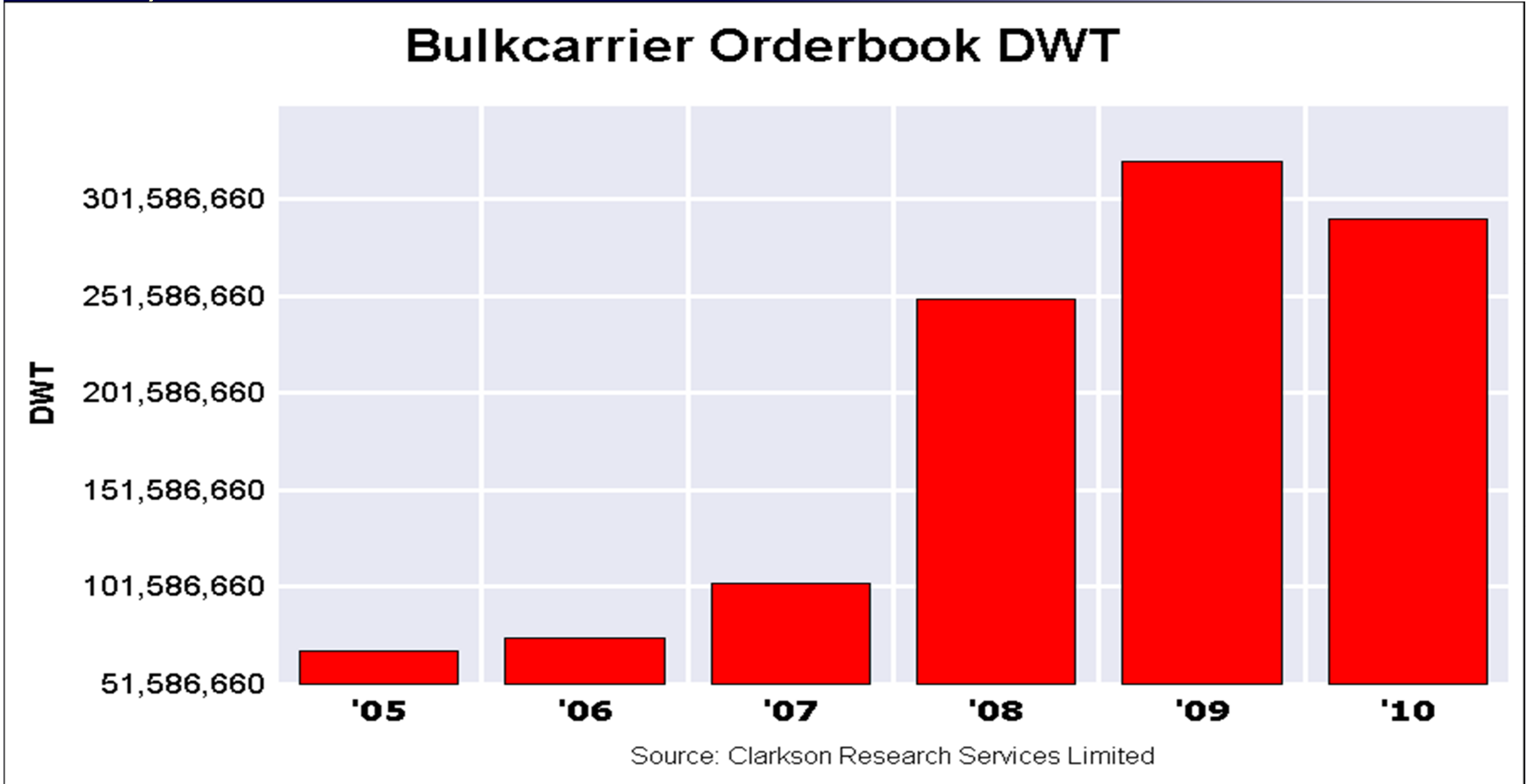
How is it done

- Shipowners
- Shipbrokers
- Cash Buyers
- Recyclers

SHIP RECYCLING:
Market concerns

- Will enough ships be scrapped to offset the new building deliveries? Is there enough capacity to absorb the supply of tonnage?
- What is forcing ships out of the market (i.e. regulations, age, rates, etc.)?
- How can residual value of a ship be determined?
- Are “green” recycling requirements influencing the market and what impact will this have in the future?

SHIP RECYCLING: Order books



Ship Recycling: Capacity
Historic Peaks and Trends

- **2010:** 26.6/6.88 mill DWT/LDT
- **2009:** 28.2/8.1 mill DWT/LDT
- **1983:** 33.3/7.1 mill DWT/LDT
- **1985: 42.6/9.0 mill DWT/LDT (HISTORICAL HIGH)**
  - **About 14.4/1 mill LDT > 2009)**
- **1986:** Rapid decline in DWT/LDT
- **1987:** 17.6/4.8 mill DWT/LDT
- **1988-1990:** About 1.0 mill LDT p/year

SHIP RECYCLING: Capacity

Today’s Market - Absorbing the Tonnage: Conclusion

- **Given past and current trends, it seems clear that the scrap market has the ability to absorb the tonnage needed to help re-balance the greater shipping markets.**

What is being recycled: 2008-2010 change

Vessel Types	2008	2009	Change (%)	2010	Change (%)
MPP/GC	29	176	507%	128	-27%
Asp+Bitu	3			2	
Bulkers	103	262	154%	123	-53%
Chem&Oil	41	71	73%	117	65%
Containers	60	198	230%	82	-59%
Cruise	5	6	20%	3	-50%
FSO/FPSO	5	6	20%	11	83%
LNG	4			2	
LPG	20	28	40%	24	-14%
OBO	3	10	233%	0	-100%
Other	23	22	-4%	53	141%
Pax (Ferries)		2		24	1100%
PCC	24	112	367%	32	-71%
Products	21	34	62%	62	82%
Reefers	31	33	6%	35	6%
RORO	9	52	478%	66	27%
Tankers	35	59	69%	75	27%
Total	416	1071	157%	839	

Dry (Bulk + GC)	64	235	267%	546	132%
Wet (Chem+Product+Dirty)	130	384	195%	293	-24%

What is being recycled:
UL-VLCC Profile

Fleet Profile of World UL/VLCC Fleet

No.Vessels (end)	2008	2009	2010	Jan-11	Orderbook Delivery Schedule			Expected Scrapping (20 yrs or >20)	Net Addition/Deletion to fleet
Fleet Totals	461	506	548	557	2011	78	43%	22	56
Deliveries	39	54	55	9	2012	61	34%	7	54
Scrappings	8	9	13	0	2013+	42	23%	19	23
Contractings	76	19	50	0	Total	181	100%	48	133
Orderbook	230	195	190	181	% Fleet	32.50%			

DWT (M) Tons (end)	2008	2009	2010	Jan-11	Orderbook Delivery Schedule			Expected Scrapping (20 yrs or >20)	Net Addition/Deletion to fleet
Fleet Totals	137,995,414	152,351,683	165,792,743	168,553,752	2011	24,215,647.00	43%	5,905,428.00	18,310,219
Deliveries	12154148	16,709,840	16,894,317	2,761,009.00	2012	19,364,342.00	34%	1,995,071.00	17,369,271
Scrappings	774,724	2,353,571	3,453,257	-	2013+	13,293,156.00	23%	5,619,573.00	7,673,583
Contractings	23,816,446	6,077,052	15,921,000	-	Total	56,873,145.00	100%	13,520,072.00	43,353,073.00
Orderbook	71,240,259	60,607,471	59,634,154	56,873,145	% Fleet	33.74%			

	Avg.YoB	Avg.Age	Ships
Average age of demolition in 2008	1985	23	3
Average age of demolition in 2009	1989	20	9
Average age of demolition in 2010	1990	20	13
Weighted Average		**20**	25

What is being recycled:

Capesize Profile

Profile of World Capesize Fleet

No.Vessels (end)	2008	2009	2010	Jan-11	Orderbook Delivery Schedule			Expected Scrapping (23 yrs or >23)	Net Addition/Deletion to fleet
Fleet Totals	862	965	1158	1189	**2011**	298	47%	111	187
Deliveries	44	111	211	36	**2012**	231	37%	19	212
Scrappings	14	8	18	5	**2013+**	103	16%	46	57
Contractings	212	77	123	9	**Total**	**632**	**100%**	**176**	**456**
Orderbook	781	747	659	632	**% Fleet**	53.15%			

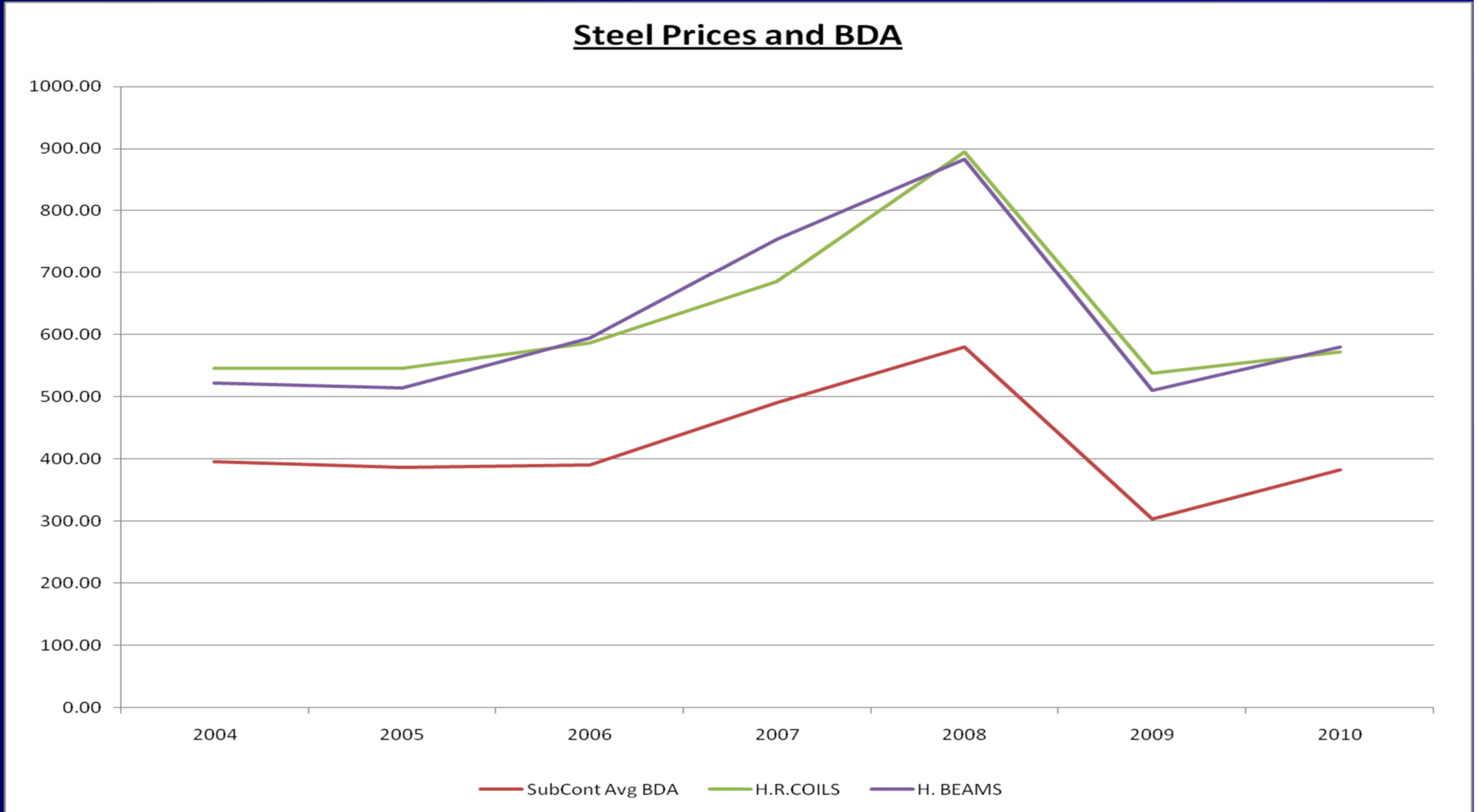
DWT (M) Tons (end)	2008	2009	2010	Jan-11	Orderbook Delivery Schedule			Expected Scrapping (23 yrs or >23)	Net Addition/Deletion to fleet
Fleet Totals	153,322,646	172,866,381	208,366,186	213,903,085	**2011**	56,835,224.00	46%	19,222,786.00	37,612,438
Deliveries	8,624,578.00	20,987,005	38,082,105	6,348,561.00	**2012**	46,073,810.00	37%	3,695,668.00	42,378,142
Scrappings	2,157,823	1,443,270	2,582,300	811,662	**2013+**	20,264,600.00	16%	8,053,272.00	12,211,328
Contractings	41,348,696	17,294,407	23,003,958	1,687,000	**Total**	**123,173,634.00**	**100%**	**30,971,726.00**	**92,201,908.00**
Orderbook	146,811,940	143,119,342	128,041,195	123,379,634	**% Fleet**	57.68%			

	Avg.YoB	Avg.Age	Ships
Average age of demolition in 2008	1981	27	14
Average age of demolition in 2009	1983	26	8
Average age of demolition in 2010	1982	28	18
Average age of demolition in 2011	1982	28	8
Weighted Average		**23**	**48**

What affects residual values?

- Supply of Tonnage
- Demand (Open Yards)
- Regulations
  - Affecting Supply
  - Ship recycling
- Steel prices

BDA & Steel Prices: Comparison



Residual values:
Measurement Tools

- No "off the rack" tools exist to determine FORWARD RVs
- Tools to determine CURRENT RVs:
  - BDA
  - GMS
  - Broker reports

Residual values – Tool(s)
BDA

GMS Leadership

Baltic Exchange Demolition Assessments

Date: 8 December 2008

Vessel Type	Description	Size mt	Unit	Average in $ / LTLD	Movement
D/TKR_CHINA	Del China (15/30 days)	15000-25000	$/ltd	228.333	15.000
D/TKR_SUBCON	Del Subcontinent (15/30 days)	15000-25000	$/ltd	303.333	5.833
C/TKR_CHINA	Del China (15/30 days)	6000-10000	$/ltd	224.167	16.667
C/TKR_SUBCON	Del Subcontinent (15/30 days)	6000-10000	$/ltd	296.667	10.000
B/C_CHINA	Del China (15/30 days)	7000-12000	$/ltd	210.000	13.333
B/C_SUBCON	Del Subcontinent (15/30 days)	7000-12000	$/ltd	265.000	2.500

The Baltic Exchange would like to thank its panellists for their contributions. Names of the panellists are available from the Baltic Exchange website (www.balticexchange.com) and in the manual for the panellists.

Residual values – Tool(s)
GMS

GMS Leadership

For week eleven of 2010, GMS demo rankings are highlighted below:

Demo Ranking	Country	Market Sentiment	GEN CARGO Prices	TANKER Prices
1	Bangladesh	Bullish	USD 400/lt ldt	USD 435/lt ldt
2	Pakistan	Stable	USD 395/lt ldt	USD 430/lt ldt
3	India	Stable	USD 385/lt ldt	USD 420/lt ldt
4	China	Bullish	USD 350/lt ldt	USD 360/lt ldt

Innovative & practical ways for ship owners to implement green ship recycling

- **Introducing the GMS - GL Green Ship Recycling Program.**
  - Perhaps the world's most pioneering and sensible green recycling initiative by ;
    - **Global Marketing Systems (GMS)**
      World's Largest Cash Buyer
    - **Germanischer Lloyd (GL)**
      World's leading IACS classification society.

Innovative and practical ways for ship owners to implement green ship recycling

The GMS - GL Green Ship Recycling Program.

- Seamless implementation of Safe and Environmentally Sound ship recycling guidelines developed by the IMO's Hong Kong Convention.

- Designed to address the needs of the most demanding Corporate Social Responsibility (CSR) programs of the leading ship owners of the world

- Mitigate risk of potential legal action against owners.

- Offers the BEST combination of cost effective practical solutions without sacrificing superior quality.

- In compliance with the guidelines established not only by the IMO's Hong Kong Convention, but also by other leading shipping organizations (Intertanko, ICS, Intercargo, BIMCO, OCIMF, IACS etc):

GL OPERATING 24/7

Innovative and practical ways for ship owners to implement green ship recycling

The GMS - GL Green Ship Recycling Program

Typically stages once a vessel is bought for Green recycling on an ''as is where is'' basis or "delivered" basis:

1. **GL will supervise the preparation of the Inventory of Hazardous Materials (IHM) and certify it.**
2. **GL will vet the ship recycling yard to ensure compliance with international quality standards and issue conclusive report.**
3. **GL will approve the Green Ship Recycling Plan for the vessel.**
4. **GL will supervise and audit the ship recycling process.**
5. **GL will review and approve the final report on the ship recycling process.**
6. **GMS will manage the complete project and do all of the reporting under the auspices of GL.**

Innovative and practical ways for ship owners to implement green ship recycling

The GMS - GL Green Ship Recycling Program.

In summary owners will get:

A Ship Recycling Certificate stamped and endorsed by GL ;

'STATEMENT ' to owners certifying that

the vessel xxxxxxx

was recycled on xxxxxx

at xxxxxxx

in accordance with IMO (Hong Kong Convention) guidelines for Safe and Environmentally Sound Recycling of Ships .

Road Ahead

- **Supply**
  - 2011 promising to be VERY active with capes leading the market (8 mill DWT?)
- **Demand (Capacity)**
  - Stable to decline
- **Prices**
  - Volatile: 5% weekly change not uncommon
- **ESRSR**
  - Worker Safety + Green Ship Recycling
  - Adoption of IMO's Hong Kong Convention
- **Increased role of Cash Buyers**

Thank you!