Future regulations & green ship certification

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Agenda

- Context
- Current regulations
- Developing regulations
- The (A) way ahead
  - Not just about environmental legislation
Context

Port Calls Traffic

Local Air Quality
Highlight containerships

- 32% of today’s fleet is post-panamax
- 52% of today’s order book is post-panamax
- We have reached the *magic* 10,000 TEU
- Is there a limit?

<table>
<thead>
<tr>
<th>Company</th>
<th>TEU</th>
<th>Type</th>
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<tbody>
<tr>
<td>China Shipping Group</td>
<td>8,500</td>
<td>Samsung HI</td>
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<tr>
<td>China Shipping Group</td>
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<tr>
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<tr>
<td>Zim</td>
<td>10,000</td>
<td>Hyundai HI</td>
</tr>
</tbody>
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... Emma Mærsk, 11,000 TEU
How big is Emma Maersk?

1,305 ft
Emma Maersk

1,670 ft
Taipei 101
Taipei

1,483 ft
Petronas Towers 1 & 2
Kuala Lumpur

1,460 ft
Sears Tower
Chicago

1,360 ft
Jin Mao Building
Shanghai

1,260 ft
Empire State Building
New York
The engine...

1998, 12 CYLINDERS, EACH 96CM DIAMETER, APPROACHING 80,000KW
Current status: international regulations


Developing legislation

- Ship Recycling
- Revision MARPOL Annex VI
- Greenhouse gas (GHG) emissions
Ship recycling

- IMO Guidelines on Ship Recycling
  - Adopted December 2003
  - Voluntary guidelines, Applicable to both existing & new ships
  - Implications throughout ship lifecycle

- International Convention for the Safe and Environmentally Sound Recycling of Ships
  - New legally binding IMO Instrument to be adopted 2008-2009
  - To set out mandatory requirements governing:
    - Ship design and construction, operation and maintenance, preparation for recycling
    - Requirements for recycling facilities
    - Enforcement mechanisms
  - Generally consistent with Guidelines
Update MARPOL Annex VI

- SOx emissions- 3 options
  - Do nothing
  - Reduce S cap in SECAs to 1% by 2010 & 0.5% by 2015
  - Switch all ships to distillate fuel with max 1% S by 2010 & limit new engines to 0.5%S in 2015 (INTERTANKO)

- Proposed NOx emissions reductions
  - 1st step - 20% reduction (now-2012)
  - 2nd step - 40-50% reduction (post 2015/17)
  - 3rd step - further reductions!
Update MARPOL Annex VI (2)

- Particulate emissions - no specific restrictions

- VOC - Ship specific operational requirements for limiting VOC production on tankers – but no linked approval

- ODS – Nothing!

- Emissions trading – Annex VI to be amended to accept concept
Greenhouse gas (GHG) emissions

• Interim Guidelines for Voluntary Ship CO$_2$ Indexing – CO$_2$ emissions/ unit cargo carried/unit distance (July 2005)

• Work plan & timetable to identify & develop mechanisms to limit or reduce CO$_2$ emissions from ships agreed October 2006. Target completion date 2008/2009. To include:
  • Further development CO$_2$ Indexing Scheme & more trials in accordance with Guidelines
  • Methodology for establishing CO$_2$ emissions baseline(s)
  • Technical, operational & market-based methods
Legislation vs “Green Ship” incentive schemes

- Classification Society Environmental notations
  - Covers major operational pollutants
  - Recognises performance that is better than legislative minimum
  - Annual survey confirms ongoing compliance
  - Drivers for compliance – financers, supply chain pressure, PR

- Port-based environmental certification eg Green Award
  - Covers major operational pollutants
  - Discounted port dues, pilot fees etc for compliant ships

July 2000
The Way Ahead?

- Industry partnership: port – ship – classification society

- Combine best of elements of incentive schemes and legislation to produce scheme to reward ship owners & operators for improved environmental performance

- Define a baseline of legislative compliance, now and in the future.
Where does the Port fit?

- Ports have the ability to provide incentives for operators to meet environmental targets, either or both of
  - Recognize earlier compliance with legislative standards, or,
  - Recognize achievement of environmental standards over and above requirements.

- This sounds great, but ports do operate in a competitive world so balance is needed to ensure don’t drive business away whilst at same time meeting needs of local port environment.

- The Port Challenge!
The Operator/Ship

- Role here is again obvious, must meet legislative requirements
  - Unlikely that legislation is retrospective, so ongoing improvements
  - Capital costs of retrofitting are not small, nor are the costs of energy recovery etc. even at new building
  - Many operators are already going beyond compliance as part of broader social responsibility.

- Again shipping is competitive so how does an operator get incentivised to exceed current legislative requirements?

- Energy loss or wastage management is key tool here
  - Energy audits/energy management – but how to recognize this?

- The operators challenge!
Where does Lloyd’s Register (Classification) fit?

- This is possibly less obvious!
- Through programs such as regular certification and the enhanced products such as EP Notations provide recognition that a company is meeting, or exceeding environmental standards.
- Provide a mechanism for a port to recognise this compliance.
What about the manufacturer/consumer?

• Must not forget the end user of the delivered goods
• Social pressure is moving towards broader environmental awareness, but in conflict with demand for lower priced/higher value goods.
• At present shipping seems to skim slightly under the radar despite carrying over 80% of world goods.
• Pressure for environmental performance is only going to increase!
• Will environmental performance of the complete supply chain become a competitive piece for manufacturers in the future?
Thank you

For more information please contact

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