Considerations on Exhaust Gas Cleaning Systems Retrofit
Greener Shipping Summit 2018

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Global Sulphur Cap

• The Global Sulphur Cap deadline is approaching
• Is there still time to be an early adopter?
• When is late too late?
• What are the most important considerations when retrofitting an EGCS?
Ecospray Facts & Figures (updated 31.08.2018)

- **Certified and Operating Ships**: 81
- **Certified EGC Systems**: 223
- **Refit**: 80%
- **New Build**: 20%

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cruise</td>
<td>70%</td>
</tr>
<tr>
<td>Ferries</td>
<td>10%</td>
</tr>
<tr>
<td>Cargo Vessels</td>
<td>20%</td>
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Retrofit Focus

• What are the important considerations for a successful retrofit?
• What are the main factors that can make/break a retrofit project?
• What are the considerations for EGCS maker selection for retrofit beyond price?
Actors Involved in a EGCS retrofit project

EGCS Maker
Installation Engineering Firm
Installer
Shipyard
Class / Flag
Installation Engineering: Attention Points

- 3D-scan of vessel
- Ship survey & feasibility study
- Detailed engineering
- (installation supervision?)
Installation: Attention Points

- Close relationship with installation engineering firm
- Supply of components not provided by Maker or Yard
- Preparation work onboard and prefabrication ashore
- Installer and shipyard relationship
- Travelling teams for both pre- and post-Yard work
- Drydock versus wetdock
- In-service installation option
Where is the money?
Considerations for successful retrofit

- Close gaps among Maker, Engineering Firm and Installer
- Early decisions reap long-term benefits
- Owner-supply choices are not pure procurement exercises
- Maker decision likely predates installation location, therefore logistics is key
- Time out of service might be less than some think
Maker Selection Considerations

• Depth. How many systems has a maker delivered?
• Breadth. In how many different configurations / profiles?
• Proven reliability. What are the availability and usage rates?
• Beyond the tangibles. What about the soft part of EGCS?
• Will somebody answer the phone beyond 2020?
Some final thoughts

• Some makers still have availability in 2019-2020
• When possible, make deals at least one year in advance
• Consider export credit-backed financing
• Reduce the number of players to maker, installer, yard.
• ‘Turn-key’ deals are now available: in Europe, Asia, Caribbean
• Cost and installation time may be less than you think
Thank you

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