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# MARI-TECH 2019

## In-Service Support Challenges: an LR perspective

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## A Lloyd's Register perspective

- Some background on Class, Flag and the IMO
- Some challenges commercial operators face
- Some challenges for naval ships



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## Some background on Class and Flag:

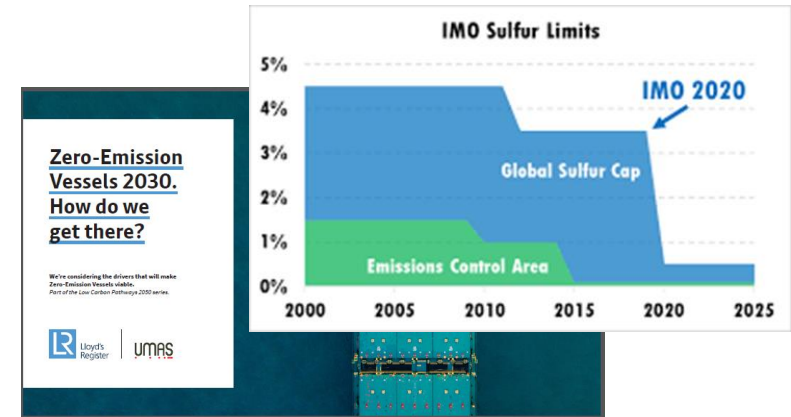
- Class: a system or process for controlling or regulating the materiel state of the ship, component or feature to which it is applied
- Class Rules and IMO Conventions: support assurance that the ship, component or feature will function as intended and function safely



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Some challenges commercial operators face:

- Increasingly stringent environmental requirements
- Complex, continuously changing Regulatory environment
- Aging fleets
- Market volatility and the need to repurpose / convert vessels



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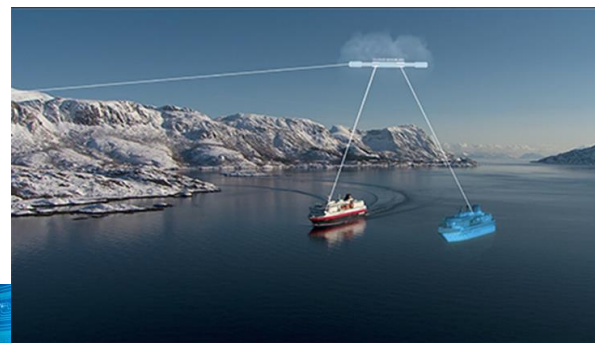
Some challenges commercial operators face:

- Global Supply Chain



- Fourth industrial revolution

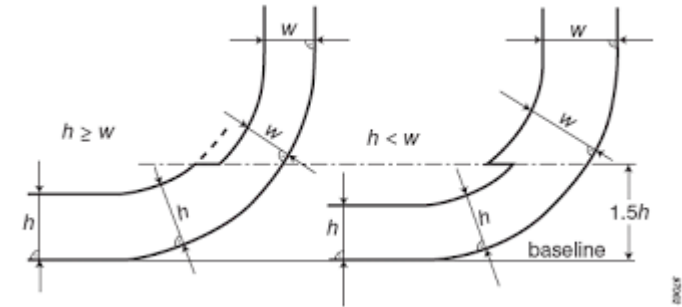
- Successful incorporation of innovation into existing fleets
- **Appropriate incorporation of innovation into Rules and Regulation**



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## Some challenges for navies and naval ships:

- Warships are exempt from much of what commercial ships are required to comply with – but how does this work in practice?
- Flexible approach relying on “demonstration of equivalence”
- Understanding that Class cannot prevent a warship from going to sea (the Operational Imperative is paramount)
- Understanding and applying the pedigree required by Class in the Supply Chain
- Integration of Class processes with the waterfront organisations and operational readiness states of warships



# Thank you

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