Summary

1. IACS
2. Safety
3. Sustainability
4. Emerging vs developed economies
5. Challenges
IACS: Role & Mission

- 13 classification societies
  90% of the world’s fleet tonnage

- Leading role for developing technical requirements
  Class and IMO rules

- Cooperate with Regulatory Bodies & industry on safer and cleaner shipping

IACS: Guiding Principles

- Leadership
- Technical Knowledge
- Quality Performance
- Transparency
**Partner of the Maritime Community**

**Regulatory Bodies**

**IMO**

**ILO**

**PSC**

**Flag**

**Industry**

**International Association of Classification Societies (IACS)**

**Safer and Cleaner Shipping**

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**Rules & technical requirements**

- IMO Codes & Conventions and Class requirements apply uniformly to all ships whatever their building location

- This contributes to maintain a level playing field among shipbuilders

- Classification Societies members of IACS act also as Recognized Organizations for implementation of International and National Regulations

- Examples:
  - Maritime Labour Convention 2006
  - SOLAS & MARPOL Conventions
  - IACS Harmonized Common Structural Rules for oil tankers & bulk carriers

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**Safer and Cleaner Shipping**

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IACS

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Safety remains the key priority

Total Losses 1996-2012 As Percentage of World Fleet

Sources: Fleet numbers = Clarkson Research Services. Losses = Lloyds List Intelligence.
Safety remains the key priority

Number of large spills (> 700 tons) 1970-2012

Harmonization of Rules

- Producing and harmonising Common Structural Rules for bulk carriers and oil tankers
- Bulkers & tankers represent 73% of the world fleet in tonnage
IACS

Rules to enable advanced ship designs

- IACS Internal expert group to investigate the state of the art of post-Panamax container ships
- IACS is participating to the development of the new IMO Polar Code

Safer and Cleaner Shipping

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Safer and Cleaner Shipping
Environmental Regulatory Pressure

- Contribute to uniform and effective implementation
- Targets must take safety into account

EEDI = \frac{\text{Environmental cost}}{\text{Benefit to Society}}

Cost: emission of CO₂
Benefit: cargo capacity & transport work

- ECA NOx Tier III (2016) 75%
- SECA NOx (2015) 0.1%
- Global SOx (2020) 0.5%

Environmental Friendly Technologies

- Participating to the on-going work on the IMO Code of Safety for Gas-Fuelled ships (IGF code)
- Numerous studies by class societies on LNG as a Fuel
- Risk & Safety analysis of new infrastructures (LNG terminals & re-gasification plants)
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Class inspections reflect the GVC distribution

Percentages of Class inspections value per region

% of shipbuilding inspections

% of equipment inspections

Note: equipment inspection encompasses all parts of the ship from hull steel to electronic navigation devices
Class Societies adaptation

1. Survey centers in new shipbuilding locations

2. Design review in offices located in main shipbuilding countries

3. Research & Development centers linked with major Universities in emerging economies

Organization of Work

• The model of independent shipyards designing, building and selling their ships is common

• Other models exist however:
  • Independent designers providing designs to many shipyards
  • Trading houses selling ships to shipowners
IACS

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Increased Complexity

- Safety requirements
- Protection of the environment
  - MARPOL Convention
  - BWM convention
- Increased efficiency
  - EEDI requirements
- Code on Noise levels onboard ships
- Possible future regulations on underwater noise...

EEDI formula
New Technologies

- Some technologies are new onboard ships:
  - Noise & vibration control
  - Water ballast treatment
  - SCR reactors