

5th ASEF (Busan)



ISO/TC8 (Ships & Marine Tech.)- Management & New Projects

1 December 2011

Sei-chang Lee

ISO/TC8/SC8 Chairman

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1. Introduction
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- Consensus for Development of Standards, Rules & Regulations on **Ships & Marine Technology** for “**Safer Ships & Cleaner Oceans**”
 - ISO/TC8 Standards
 - IMO (SOLAS, MARPOL, GBS, etc.)
 - IACS Rules



IMO

ISO

MARITIME
INDUSTRY,
IACS, ...

ISO/TC8 Standards

To Facilitate IMO, IACS & other international maritime body including industry and other ISO/IEC liaisons in establishing Rules & Standards which are specified by ISO(TC8) standards !

- Development of “*niche market*” standards for linkage between IMO and maritime industry
- TC8/SC Chairs’ contribution to IMO
- Collaboration with IACS

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- **ISO Way Forward to be:**
- **“Simpler, Faster & Better”**
(Not complicated, Timing & timely, Consensus with New tech.)
- For **Safer, more Efficient & Cleaner ships** - design, construction and maintenance
- **Proactive development** - Focused on market, interchangeability & performance including economic benefits
- (**Reference** : “ISO strategic plan 2011-2015” and “TC8 Chairman’s case study-TC8 Mission 2011”)



ISO Standards Trend

1947-1994 -----Equipment Standards

1994-2001 -----Systems' Standards

2002-Present ----- Safety, Security,
Environment protection, Information,
Intermodal, Energy management, ...

- *ISO - One Mission*
*“Facilitate Industry Compliance with
Government Rule Making”*

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International Standards – Creating confidence globally

- **“World Standard Day” :**
14 October 2005 - ISO/IEC/ITU



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ISO/TC8 Management

30th ISO/TC8 Plenary,
Helsinki 2011-10-24/28



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ISO TC8 Structure

SC1 – Lifesaving & Fire Protection

SC2 – Marine Environment Protection (Japan)

SC3 – Piping & Machinery

SC4 – Outfitting & Deck Machinery (China)

SC6 – Navigation & Ship Operations (Japan)

SC7 – Inland Navigation Vessels (Reinstated from SC11)

SC8 – Ship Design (Korea)

SC11 – Intermodal and Short-Sea Shipping (Korea)

SC12 – Large Yachts

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TC8 Meetings

- 52 participants from 13 P members and ISO/CS, CEN/TC15, IACS/BIMCO/ITU liaisons in Helsinki on 24-28 October 2011.
- International Seminar on **“Security in International Supply Chain”**
- Coffee-break presentation
- **Mr. Kent Jorgensen – “Special offshore structures”**
- **Dr. Jong-kap Lee – “RBD for ship safety”**

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New Projects

- **TC 8 WGs** (under parent committee)
- **WG on ISO 28000 Supply Chain Security Management Series**
- **Smaller/medium port facilities security – Assist/guidance for implementing & certifying ISO 28000**

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TC8/WG on ISO 30000 Series (Ship Recycling Management Systems)

- ISO 30000: Specifications for management - **Published**
- ISO 30001: Best practice for ship recycling facilities – **Assessment and plan- Under development**
- ISO 30002: Guidelines for selection of ship recyclers (and pro forma contract) – **Published**
- ISO 30003: Requirements for bodies providing audit and certification of ship recycling management systems – **Published**
- ISO 30004: Guidelines for implementing ISO 30000 – **Under development**

ISO 30000 Series (Continued)

- **ISO 30005: Information control for hazardous materials in the manufacturing chain of shipbuilding and ship operations** – PAS Published, DIS voting
- **ISO 30006: Guidelines on surveying of ships for hazardous materials and minimum amount or content of hazardous materials to be reported** –Published
- **ISO 30007: Methods to remove asbestos in ships** - Published
- **ISO 30008: Large Yachts recycling** - Under development

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TC8/WG 3 : Special offshore structures & support vessels (Newly Approved Work Items)

- Service Vessels
- Installation Vessels
- Decommissioning Vessels
- Accommodation Vessels
- Cable-laying Vessels
- Special Moored Vessels
- **Wind Energy Farms**
- **Wave Energy Farms**
- Aquaculture Farms
- Buoys



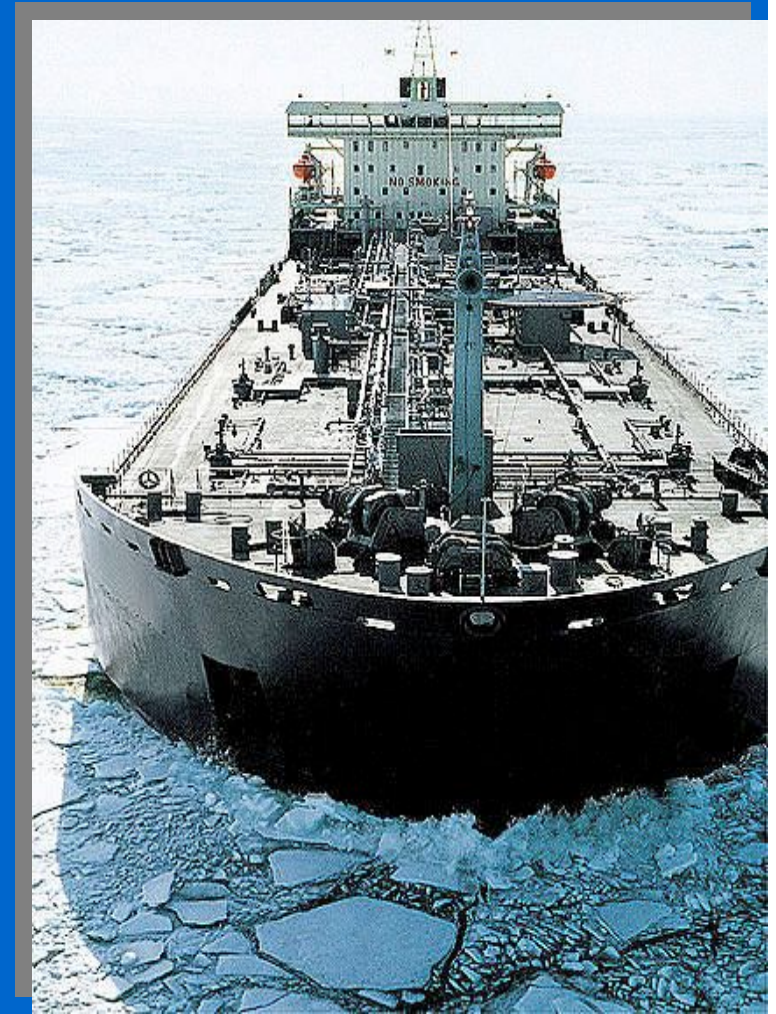
Offshore wind energy



- Communication
(Project leader: V. Köhler)
- Entry-level qualification
(Project leader: C. Wibel)
- Emergency management
(Project leader: T. Peters)
- Technical equipment
(Project leader: E. Runge)
- Logistics
(Project leader: W. Lampe)

Other item : Polar Code

- The TC8 SC Chairmen are invited to review the **IMO draft mandatory Polar code**.
- “Mandatory Requirements Regarding the Provisions of Ships Operating in Polar Waters”
- Comments could be prepared and coordinated through the TC8 Chair & Secretary in advance of the **Feb. 2012 IMO/DE** meeting.
(TC8/SC3 Chair)



“Piracy : Orchestrating the response” – IMO theme of this year



Guidelines: BMP3. NATO open to public use
Pirate attack to a Korean shipping company
in 2010 : 15 times

Samsung shipyard – Anti-Piracy Ship Design

(2011. 01. 24)

- Integrated control at steering room (CCTV)
- Voyage data analysis from 10km away : Pirate ship detect
- Route track monitoring by Radar :
 - High-definition “Night vision” infrared rays
- Water gun of pressure 10 bar (kgf/cm²) : 70m effective distance

Other Resolution: ISO/TC 188

- Noting the confusion regarding the applicability of ISO/TC188 standards,
- ISO/TC8 strongly urges that all ISO/TC188 standards comply with ISO Directives regarding their approved scope by including the following statement in all ISO/TC188 published standards.
- *“The standard is applicable only to small pleasure craft less than 24 meters.”*

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SC1 (Life-Saving & Fire Protection)

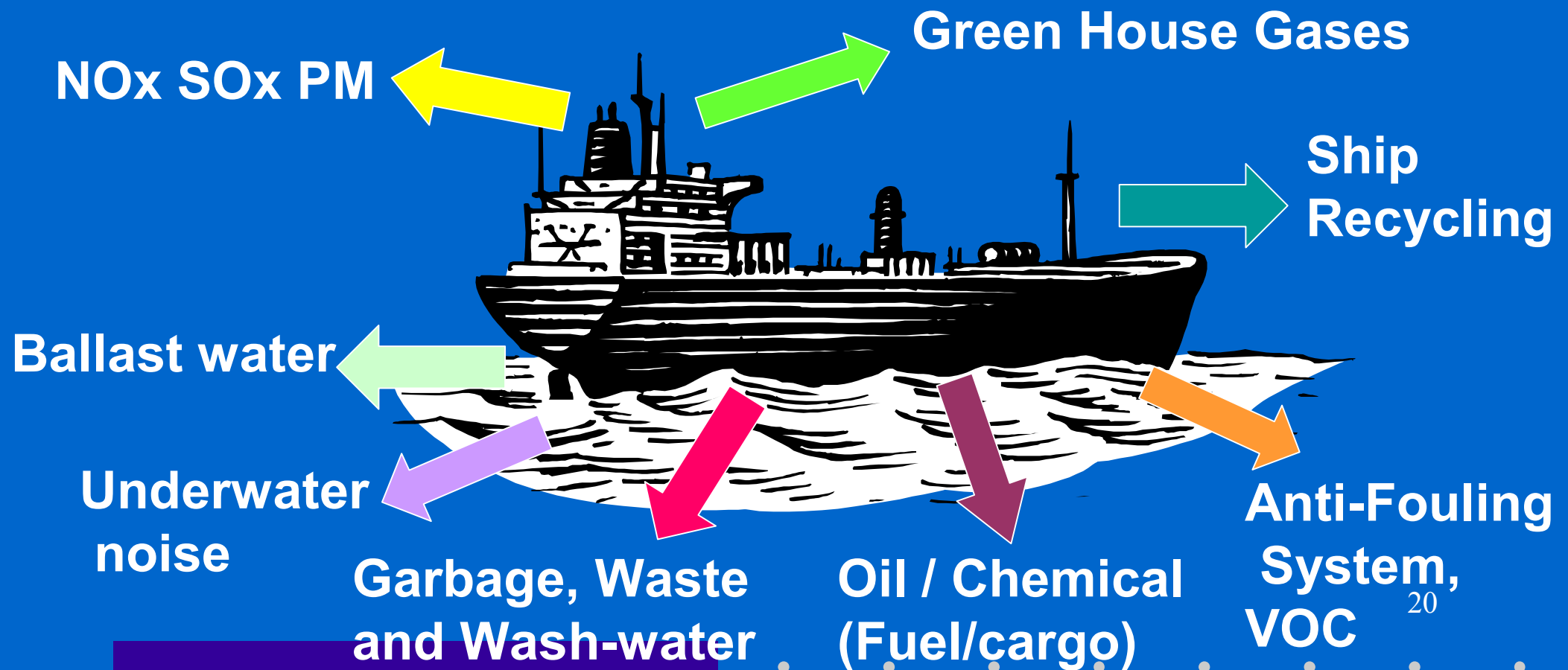
Chair/Robin Townsend (LR/UK), Sec./George Grills (USA)

- *“A proud Past, an exciting future”*
- (Claudio Abbate, previous chairman until 2010)
- *The Two Most Important Elements on a Ship :*
- **Life-saving :**
 - Large Embarkation Ladders
 - Lifting Appliances
 - Life Jackets
- **Fire Protection :**

SC2 (Marine Environment Protection)

Chairman/Koichi Yoshida (Japan), Sec./Carolyn Junemann (USA)

Ship and environment



- **WG3: Environmental response:**
Convenor; Sei-Chang Lee (Korea)
- **WG4: Ship generated garbage (David Condino /USA)**
- **WG5: Antifouling system on ships (AFS Convention)**
Convenor; Tetsuya Senda (Japan)
- **WG6: Protecting marine ecosystem from underwater irradiated noise (Koichi Yoshida /Japan)**
- **Other possible new work item : United Nation's Convention on Biological Diversity; CBD**



SC3 (Piping & machinery)

Chair/Joe Byrne (USA), Sec./Thane Gilman (USA)

- ISO/DIS 11711- **Ballast water sampling** apparatus design
- ISO/FDIS 13613- **Maintenance and testing for critical ship engineering systems** (Also HFO-distillate fuel switching guidelines)
- ISO/IEC/IEEE JWG 28, Cold ironing, High voltage shore connection (Shore power). ISO/IEC 80005-1 DIS
- **Potential New Items :**
 - - Alternative fuels, including natural gas (LNG/CNG), hybrid (large battery installations) and hydrogen fuel cells
 - - Reduction of ship engineering machinery noise
 - - To reduce and measure NO_x, SO_x and CO₂ emissions

SC4 (Outfitting & Deck machinery)

Chair/Xiaochuan Tong (China), Sec./Zhen Liu (China)

- **The future development goal of TC8/SC4 :**
 - To establish a system of outfitting and deck machinery with rational structure.
 - To improve the technical changes and development of international maritime technical policy as well as marine industry needs.
- **The recent revision proposals:**
 - ISO 3078:1987 Cargo winches
 - ISO 6115:1988 Trawl winches
 - ISO 9089:1989 Mobile offshore units - Anchor winch

SC6 (Navigation & ship operations)

Chair/Hayama Imazu (Japan), Sec./Kosei Hasegawa (Japan)

Active Working Groups under TC8/SC6 :

- WG 14: Sound reception systems

Convener: Mr. John Thompson, ANSI/USA

- WG 15: Manoeuvring of ships

Convener: Dr. Kay Meyerhoff, DIN/Germany

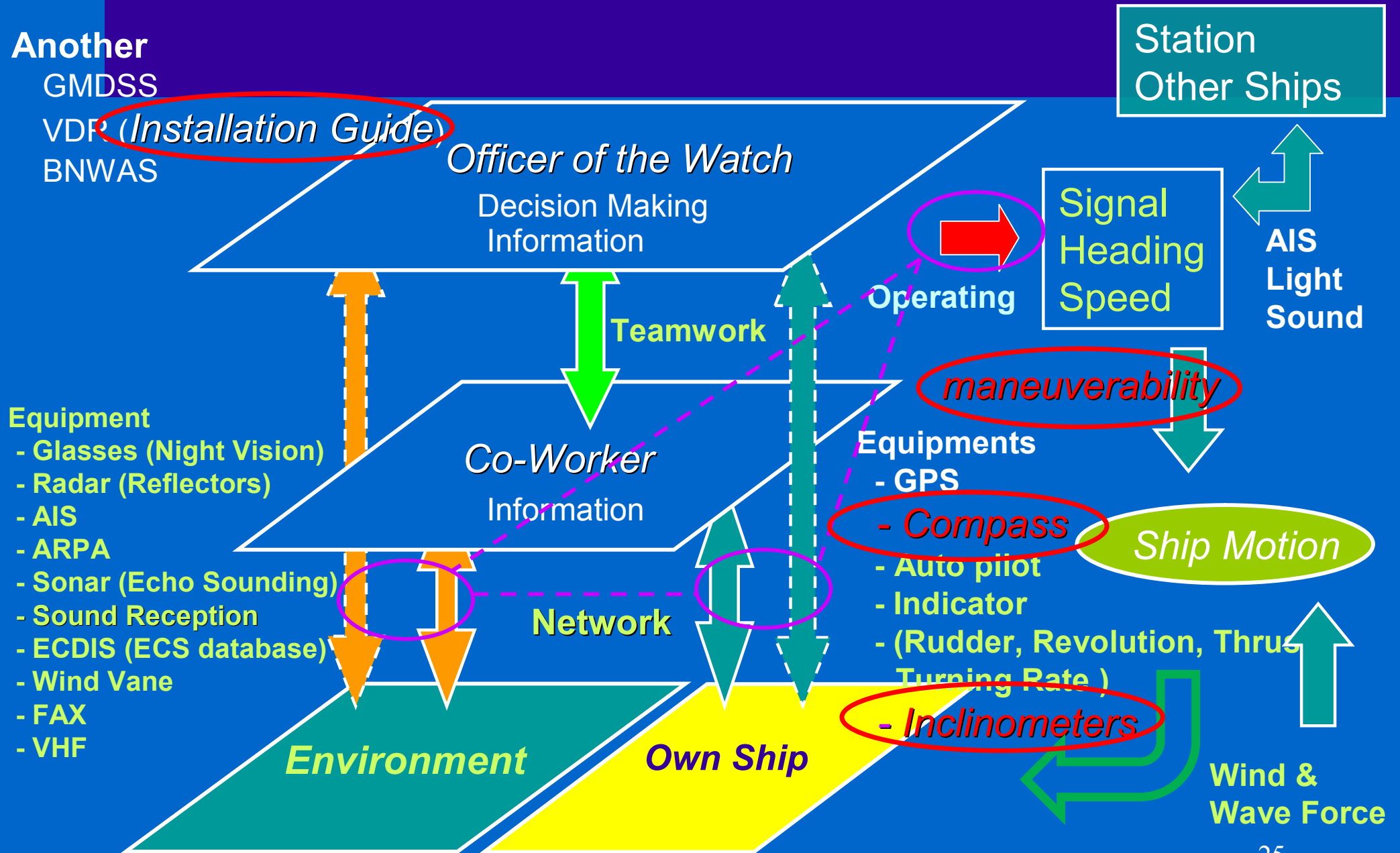
- WG 16: Ship communication network systems

Convener: Mr. Hiroshi Morono, JISC/JSTRA, Japan

Possible New work item:

- New performance standards for "INCLINOMETERS"

Works on Board -- TC8/SC6 Future Plans --



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SC7 (Inland navigation vessels)

**Chair/F. Fuengerlings (Germany), Vice-chair/Y. Rumiantsev (Russia),
Sec./Maja Buntrock (DIN/Germany)**

- **WG 1 Inland navigation**
- **Start since 2012 ????**

SC8 (Ship design)

**Chair/Sei-chang Lee (KR/Korea), Vice-chair/E. Bruenner
(GL/Germany), Sec./Byeong-cheol Choi (KOSHIPA)**

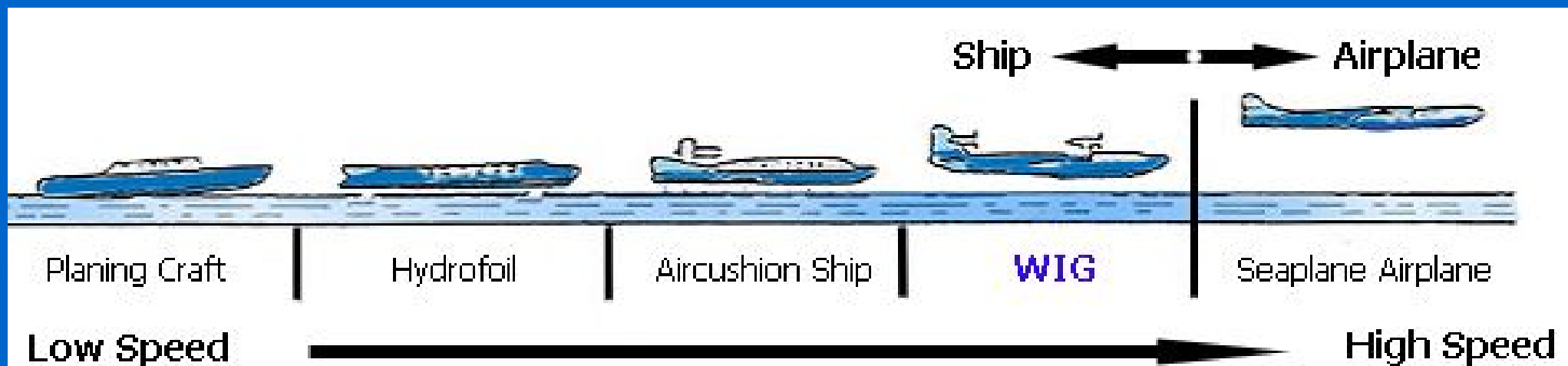
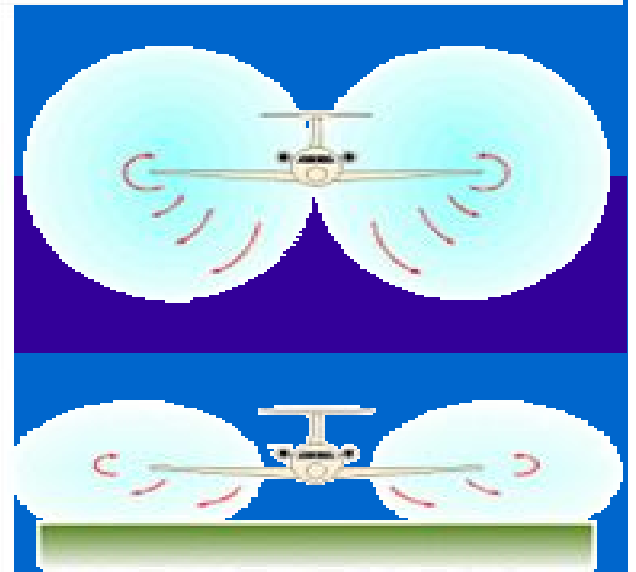


SC8 WGs

- **(Disbanded) WG 1: Bulk carriers**
15041/15042: Construction/repair quality of hull structures
- **(Disbanded) WG 3 : Strength assessment**
- **WG4 : Air Bag** (for Ship's Launching way)
NP 14409-2 Methodology for launching ships utilizing air bags
- **WG5 Protective coatings & inspection method (PSPC)**
 - NP 16145-4 Automated measuring method for water soluble salts
 - NP 16145-5 Assessment & calculating method for damaged coating area of ballast tanks
- **WG6 : Tightness**
- **WG7 : Emergency Towing**

Preliminary Stage

- PWI Guidelines on **Wing In Ground (WIG) Craft** (*IMO-Link-NR31*)
- WIG craft has **characteristics between marine crafts and aircrafts.**



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* What other standards for ship design ?

- Green ship design
- LNG Carriers/Terminal
(Cargo handling system)



Risk-Based Ship Design

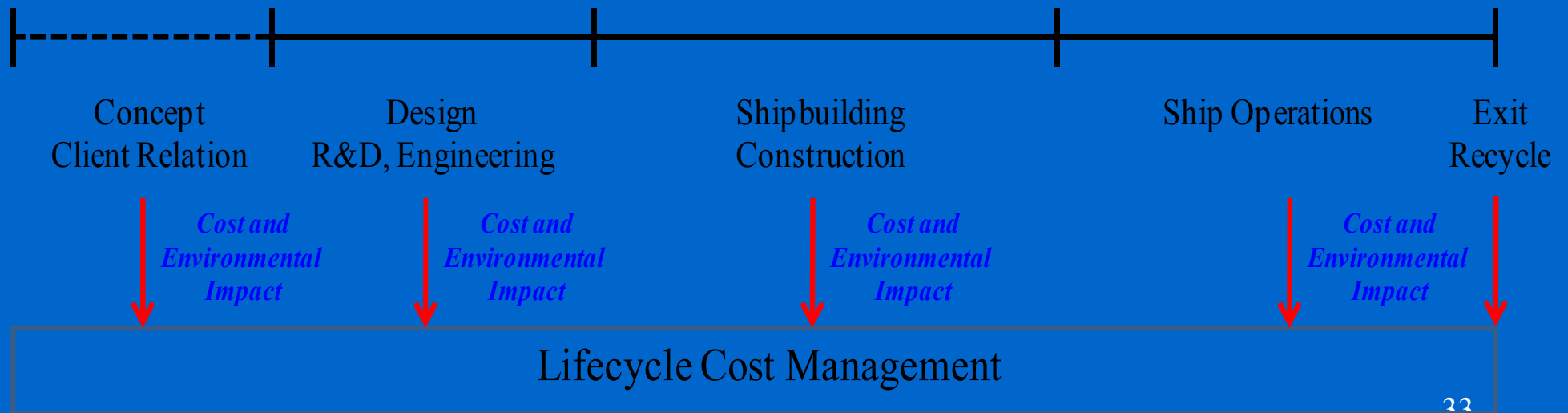
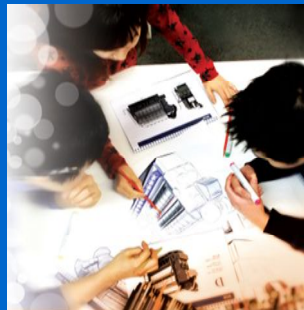
- **Safety Cases** (*UK Health and Safety Executive, 1992*)
- Risk-Based Decision-Making System (*USCG, 2000*)
- **Interim Guidelines for WIG craft** (*MSC/Circ.1054*)
- Alternative Design and Arrangements
(*IMO MSC/Circ.1002, MSC.1/Circ.1212*)
- **IMO FSA** (*IMO MSC/Circ.1023–MEPC/Circ.392*)
- Risk-based regulations (being developed)
- Technologies and s/w tools for **verification/validation** of safety requirements
- Development of “standards and practices”
(**ISO/TC8**)

Cost Management in Ship Design

- The **cost management system** will identify and guide to measure the cost and environmental impacts of shipbuilding at each stage in the shipbuilding lifecycle.
- It will **maximize value creation** throughout the shipbuilding industry, while **sensitive to each shipyard**.
- We shall **NOT disclose individual enterprise's secret and NOR suppress its competition!**
- *Figure - Cost Management in shipbuilding lifecycle*

Cost Management of Shipbuilding Lifecycle

Shipbuilding Lifecycle



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TC 8/SC 11 (Intermodal & short sea shipping)

Chair/Jae-Wook Lee (Korea), Sec./Ms. Luz Smith (Spain)

- **WG 2 Best practices for supply chain security**
(Mr. O'Malley)
- ISO/AWI 28005-1 Security management systems for the supply chain.
Electronic port clearance (EPC). - Part 1: Message structures (Single Window Implementation) : Dr. Ahn (Korea)
- **WG 3 Ships for short sea shipping**
(Prof. Grigoropoulos)
ISO/NP 16296 Shipping. Guidelines for the design, construction, outfitting and Intermodal operation of short sea ships
- **WG 4 RoRo passenger ferries** (Vacant)
 - PWI Security management of RORO passenger ferries
 - Best practices for the application of security measures

SC12 (Large yachts)

Chair/Luigi Scarpati(Italy), Sec./ Roberto Ravaglia

- **WG 2: Hull integrity and fire protection**
 - **FDIS 11336-1, -2, -3 Glazed openings** - Strength, weather-tightness and water-tightness of glazed openings -- Part 1, 2, 3
 - **NP 14484** Weather-tight Doors - Strength and weather-tightness requirements
 - **NP 14486** Structural fire protection for FRP yachts
- **WG 3: Deck equipment**
 - **DIS 11209** Large yachts -- Deck crane and access gangways strength requirements
 - **NP 16556** Large Yachts – **Deck equipment** – Anchoring equipment
- **WG 4: Mechanical system**
 - **NP 14485** Large Yachts – Auxiliary diesel engines – Safety requirements
- **WG 5: Finishing acceptance criteria and components to be installed on board**
 - **FDIS 11347** Large yachts -- Measurement and assessment of the visual appearance of coatings

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4. Remarks

- **Asian shipbuilding experts** should stand on water front and lead the international standardization activities for safer ships and cleaner oceans!
- **“We have to get the ISO ball rolling.”**
- ***For Design/Construction/Operation of Environmental-Friendly/Echo Ships.***

“The (Good) Old Days”

“Supply Chain Resilience, Natural Catastrophes, Crime Terrorism Prevention” by Ken Wheatley, Int’l Security Management Ass.



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ISO/TC8 (Ships & Marine Tech.)

**MUCH HAS BEEN ACCOMPLISHED,
BUT MUCH MORE REMAINS**

(From Capt. Charles Piersall, TC8 Chairman/2011.10)



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“ISO/TC8 Standards

for Ship's Safety & Echo Net”

*Thank you
for your attention !*

