

OECD WP6

WORKSHOP ON GREEN GROWTH IN SHIPBUILDING

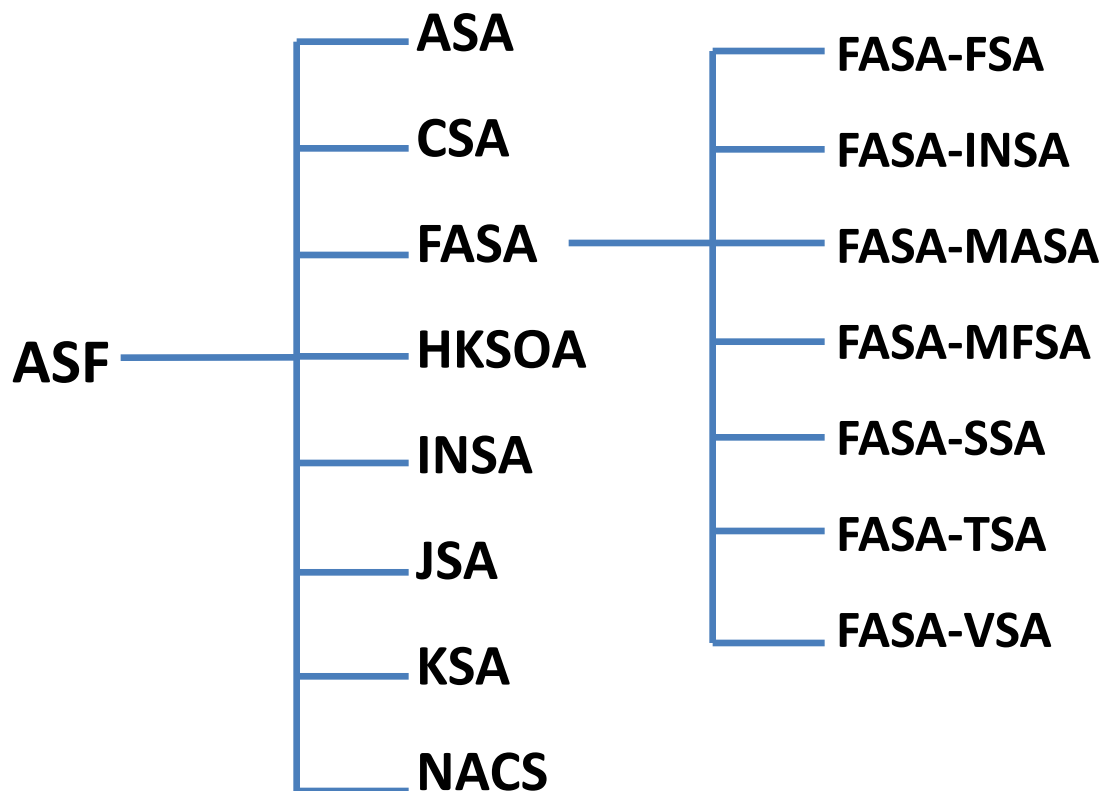
PARIS, 7-8 JULY 2011



Yuichi Sonoda
Secretary General
ASF
(Asian Shipowners' Forum)



ABOUT ASF



> ASF members are estimated to control about 50% of the world's merchant fleet



ASF OBJECTIVES

- > Promote interests of Asian shipping industry
- > Project an unified voice of Asian Shipowners to International Community



ASF

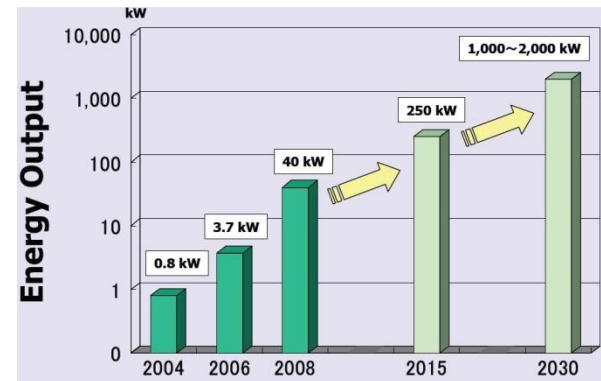
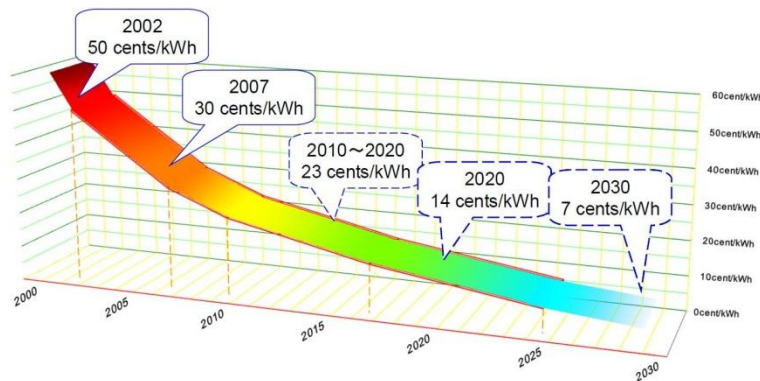
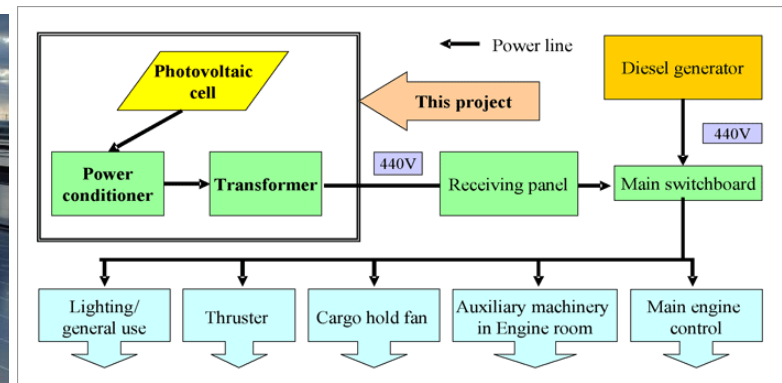
STANDING COMMITTEES

- > Seafarers Committee (SC)
- > Ship Economics Review Committee (SERC)
- > Ship Insurance and Liability Committee (SILC)
- > Safe Navigation and Environment Committee (SNEC)
- > Ship Recycling Committee (SRC)

Innovations for ships

Solar power

- The 6,200-unit PCTC MV Auriga Leader, delivered in December 2008, is equipped with 328 solar panels (250 m²) that generate 40 kW. The solar power system is connected to the ship's propulsion system.
- The system supplies up to 6.5% of the electricity used on board, and CO₂ emissions are expected to be reduced by 40 tons per year.



“Yamatai”

MHI Nagasaki Shipyard
March, 2010

- Air Lubrication System installed.
- expected to result in 10% less CO2 emissions from the vessel.



NYK ⁶ **LINE**
NIPPON YUSEN KAISHA

Innovations for ships

NYK SUPER ECO SHIP 2030

- A New Concept Ship for the Future
8,000 TEU Container Ship (LOA: 353 meters, Speed: 25 knots)
- **CO₂ emission cuts of 69%**

<http://www.nyk.com/english/csr/envi/ecoship.htm>

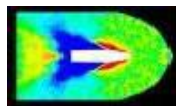
Reduction of Energy for Propulsion



Weight savings
9%



Hull friction
10%



Hull form
optimization 2%



Wind resistance
1%



Propulsion
efficiency 5%



Superconductivity
2%



Reduced power
for ship use 2%

Switch of Energy sources



Fuel cells
32%

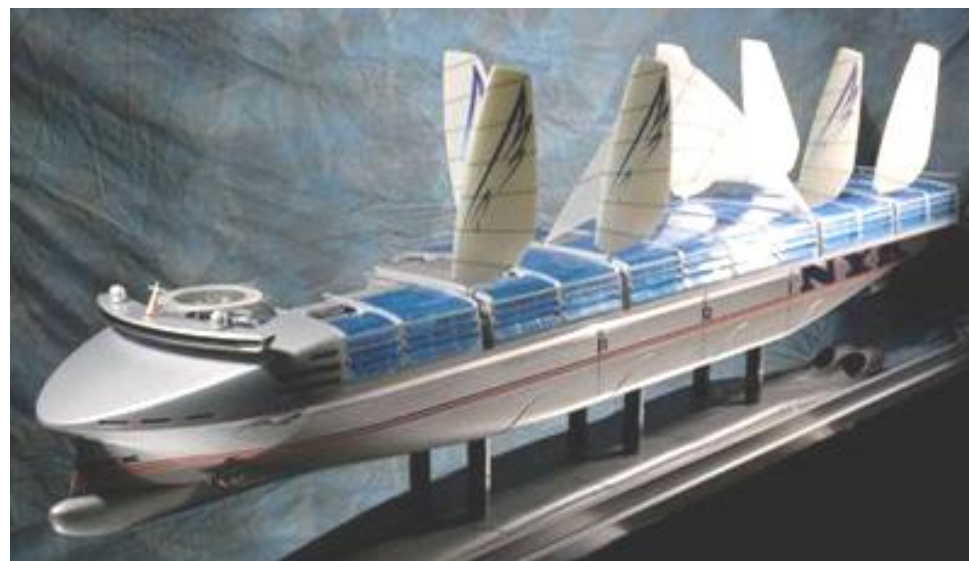
Use of Natural Energy



Solar power
2%



Wind power
4%

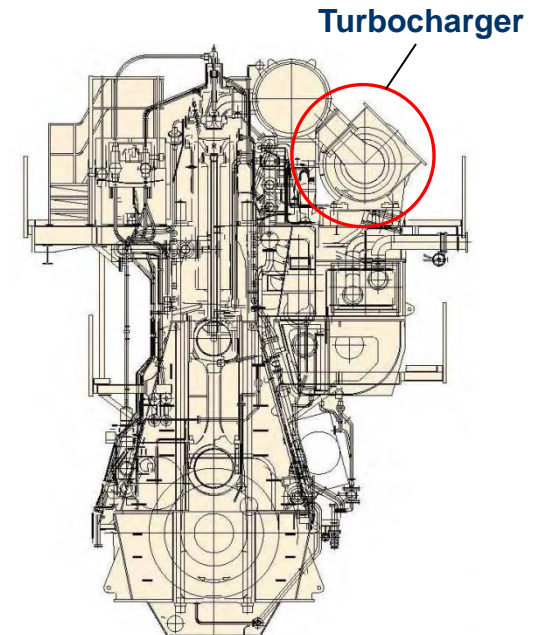


Slow Steaming

- A 10% speed reduction cuts 20% in fuel consumption and CO₂ emissions.
- Engines can be operated continuously at low loads when cutting out one turbocharger, which provides significant fuel-consumption benefits.

e.g. 8UEC60LS II : MCR15,540KW

Loads	25%Load (Min)	50%Load	85%Load (Max)
Speed	13.5 knots	15.8 knots	20.0 knots
Fuel consumption per day	17 tons	34 tons	57 tons
Normal			
T/C cut			





Optimum Operation of Ships

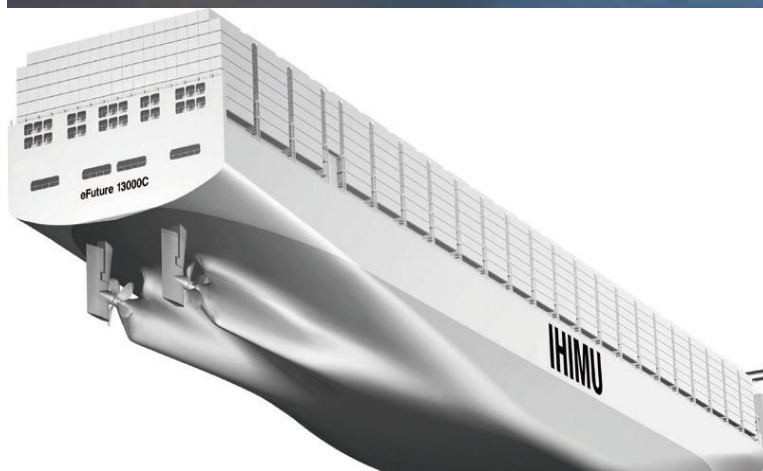
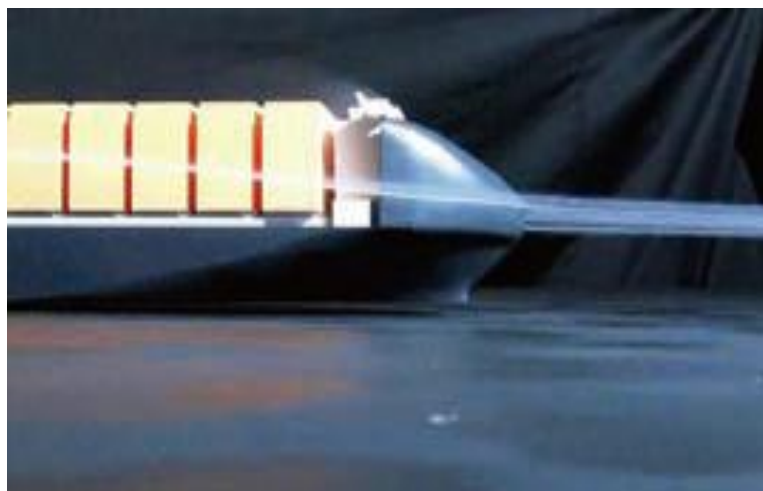
- > Slow Steaming

- > Derating Engines
- > Selecting Appropriate Turbo Chargers
- > Selecting Environmentally Safer and Energy Efficient Hull Paints.....

- > Optimising Operation
SEEMP (Ship Energy Efficiency Management Plan) to be adopted at MEPC62?



“eFuture 13000C” developed by IHIMU





Why Green Ships?

> World Seaborne Trade will grow led by Emerging Economies

+3%/y from 2010 → x3.3 in 2050

> Ever-Increasing Bunker Fuel Prices

Jan 2011		Apr 2011
USD541/t	→	USD678/t



Owners and Operators

Green Ships

> Costs : Ship Owners

> Benefits : Ship Operators



SaveOurSeafarers (SOS) CAMPAIGN



<http://www.saveourseafarers.com>



THANK YOU !

Yuichi Sonoda

ASF