IMO REGULATORY REQUIREMENTS AFFECTING ASIAN MARITIME INDUSTRY

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INSTALL BALLAST WATER TREATMENT SYSTEM (D2) UNDER BWM 2004

Require:

- **New ship (08/9/2017)**: Install BWM system upon delivery;
- **Existing ship**, Completed IOPP renewal survey between 8th Sept. 2014 and 7th Sept. 2017: Install BWM system at the first IOPP renewal survey on or after **8th Sept. 2017**
- **Other exisiting Ship**: Install BWM system at whichever **occurs first**: First IOPP renewal survey on or after 8th September 2019 or Second IOPP renewal surevy on or after 8th September 2017
- **Existing vessels not required to have an IOPP certificate**: Install BWM system not later than 8th Sept. 2024.

To present, Install BWM system at first IOPP renewal survey on or after **8th Sept. 2019.**

INSTALL BALLAST WATER TREATMENT SYSTEM (D2) UNDER BWM 2004

Date of Enter into force of BWM Convention: 8/9/2017	8/9/2017-7/9/2018	8/9/2018-7/9/2019	8/9/2019-7/9/2020	8/9/2020-7/9/2021	8/9/2021-7/9/2022	8/9/2022-7/9/2023	8/9/2023-7/9/2024	8/9/2024
	First IOPP Renewal survey after EIF					Apply D2 (Second IOPP Renewal survey after EIF)		
		First IOPP Renewal survey after EIF					Apply D2 (Second IOPP Renewal survey after EIF)	
			Apply D2 (First IOPP Renewal survey after EIF)					
				Apply D2 (First IOPP Renewal survey after EIF)				
					Apply D2 (First IOPP Renewal survey after EIF)			
	Ship without IOPP (Oil tanker with GT < 150 or othe ship with GT > 400 Must apply D2 not later than 8/9/2024							Apply D2 D2
	New ship (08/9/2017) – Apply D2 upon delivery							

Apply D2

Apply D2 or D1

EIF	8/9/2017
IOPP	International Oil Pollution Prevention Cert.
D1	Ballast water exchange at open sea.
D2	Ballast water performance standard.

BALLAST WATER MANAGEMENT SYSTEMS UNDER BWM 2004

MEPC.300(72)

Code for approval of Ballast Water Management Systems (BWMS Code),

take effect on 13 October 2019,

BWMS installed on ships on or after **28 October 2020** should be approved in compliance with this Code.

BWM 2004 STATUS

As at 09/07/2019	BALLAST WATER 2004
Bangladesh	x
China	x
Indonesia	x
Japan	x
Malaysia	x
Maldives	x
Philippines	x
Republic of Korea	x
Russian Federation	x
Singapore	x
Thailand	
Timor-Leste	
Viet Nam	

BALLAST WATER MANAGEMENT SYSTEMS UNDER BWM 2004

Effect on Asia Maritime Community:

- **Operational reliability of the systems that could result in a non-compliance leading to financial penalties, port state detentions or commercial losses:** This could be affected by several factors such as the use of unreliable or non-OEM equipment or components (filters, sensors, sampling pumps, valves, actuators, electrolytic cell assemblies, chemical dosing sub-systems, UV reactors, etc.) or improper system installation by the shipyard.

- **No single treatment technology works for all vessels:** Another technical challenge for retrofitting a BWMS is that no single BWM treatment technology meets the demands and operational needs for all types of vessels.

- **Vendor technical support network and after-sales service:** Inconsistent after-sales support between different BWMS vendors. Limited global availability of vendor's technical attendance caused prolonged system outages.

- **Quality of the software and hardware systems.** Control system software faults and hardware failures that caused unexplained alarms interrupting continuous operations of the BWMS affecting cargo operations. Unable to verify the authenticity of the control software or that the software updates and upgrades for the installed BWMS met USCG or IMO approvals.

- **Effective crew training and competency levels.** The transfer of experience with the selected BWM technology from one crew to another is challenging. Experienced crew trained on a specific BWMS may not be able to apply their experience or knowledge effectively when working on another vessel employing a different BWM technology.

Effect on Asia Maritime Community:

- **During port State control inspections, an indicative analysis will be required to determine ships' compliance with the ballast water discharge standard. The reliable standard for the verification of ballast water compliance monitoring systems is needed as soon as possible to avoid unnecessary argument on the result of indicative analysis.**

GLOBAL SULPHUR CAP 2020

MEPC.280(70): Revised Annex VI, Reg. 14.1.3 MARPOL

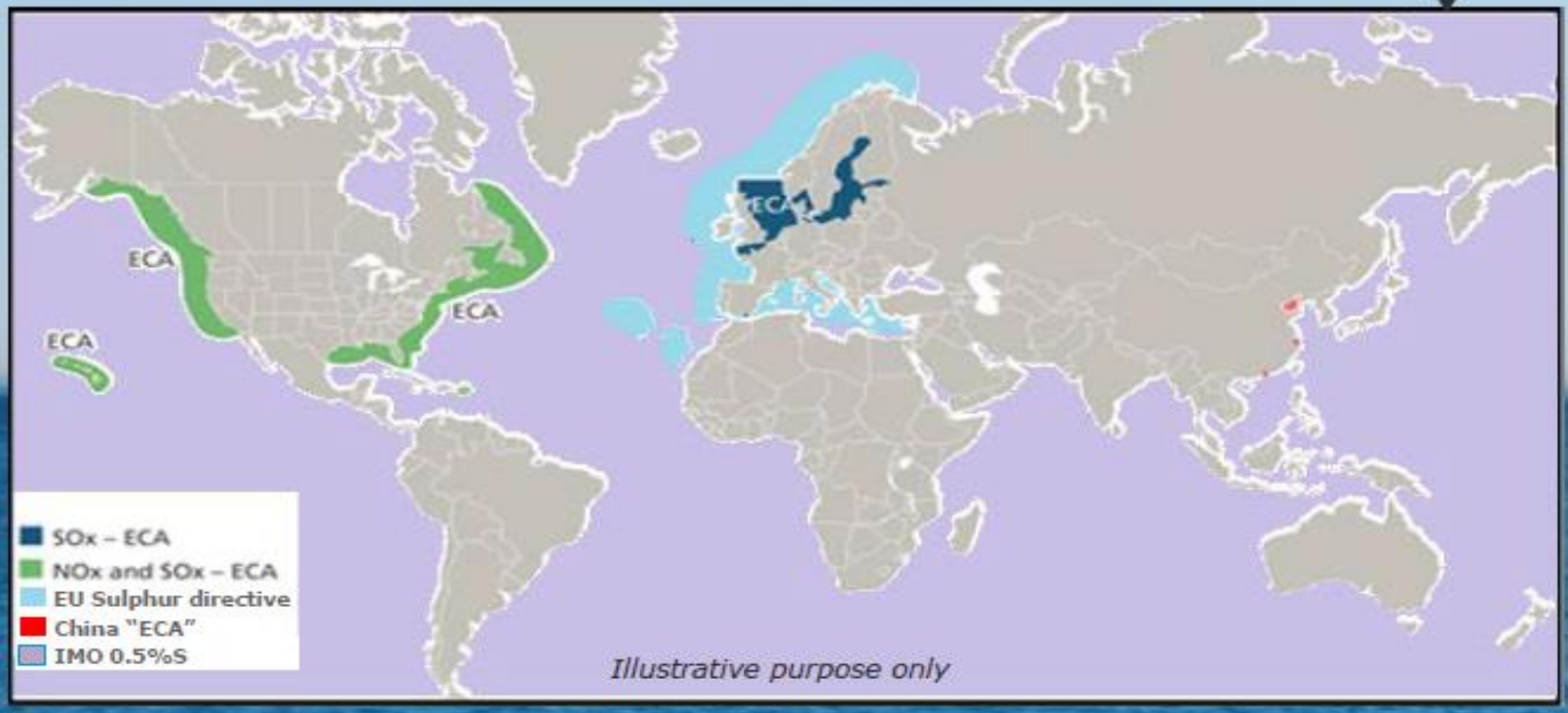
- **Requirement:** Maximum sulphur content of fuel oil changed. Worldwide: 0.50 % m/m.

- **Apply:** All cargo vessels, HSC/ DSC and passenger vessels. Not applicable for ships with scrubbers.

- **Entry into force**: 2020-01-01

GLOBAL SULPHUR CAP 2020

2015	2020	2017/2019	2020
SECA	EU	CHINA	IMO
0.1%S	0.5%S	0.5%S	0.5%S



GLOBAL SULPHUR CAP 2020

Compliance options

What are the options?

2020-01-01

0.5% S

Compliance options:

- HFO +Scrubber
- MGO/MDO
- Alternative Fuels (LNG, Methanol, etc)
- New Compliant Fuels? (0.5%S)

To prepare for 2020, options should be evaluated and strategies put in place to order to have the best competitive edge in the market

Source: DNV-GL

GLOBAL SULPHUR CAP 2020

MEPC.1/Circ.875/Add.1 Guidance on best practice for fuel oil suppliers for assuring the quality of fuel oil delivered to ships.

Guidance to Shipping Companies and Crews on Preparing for Compliance with the 2020 ‘Global Sulphur Cap’ by ICS - July 2019 edition

MEPC.320(74) - “2019 Guidelines for consistent implementation of the 0.50% sulphur limit under MARPOL Annex VI” and MEPC.1/Circ. 875 - “Guidance on best practice for fuel oil purchasers/users for assuring the quality of fuel oil used on board ships”

MEPC.1/Circ.878 “Guidance on the development of a ship implementation plan for the consistent implementation of the 0.50% sulphur limit under MARPOL Annex VI”

GLOBAL SULPHUR CAP 2020

MEPC.305(73): Annex VI, Reg.14 MARPOL

- **Requirements**: Fuel oil used or carried for use on board a ship shall not exceed a sulphur limit of 0,50% m/m. The supplement to the IAPP certificate is updated accordingly

- **Apply to**: All cargo vessels, HSC/ DSC and passenger vessels. Not applicable to ships with scrubbers.

- **Enter into force**: 2020-03-01

GLOBAL SULPHUR CAP 2020

Effect on Asia Maritime Community:

- **Significant increase of fuel expenses in shipping**

  - More interest in efficient ship operation

- **Earlier scrapping of older ships**

  - More scrapping and new building orders

- **Scrubber installation**

  - More business for repair yards and manufacturers

- **Wider distribution route for new fuel**

  - Need for more tankers

GLOBAL SULPHUR CAP 2020

Effect on Asia Maritime Community - Shipowners

- Shipowner's decision are made depending on two key factors: bunker pricing and bunker availability, both of which are expected to exhibit much less market stability in most of 2020.

- In the meantime, many shipowners are expected to adopt a ‘wait and see’ approach; some cases holding out and risking the consequences of non-compliance until the costs associated with the various compliance options come down.

- Each compliance option would have technical considerations for shipowners: the use of blended fuels will lead to higher risks of compatibility issues. Fuel contamination and associated engine problems will continue to pose a risk for vessels.

- The vessels investing in scrubbers pre-2020 may remain exposed to regulatory risks. Future new regulations could render conventional systems obsolete.

GLOBAL SULPHUR CAP 2020

Effect on Asia Maritime Community - Charterers, Insurers

- It is expected that in the short-term charterers buying HFO for use on a vessel with a scrubber will pay less than those purchasing distillates or blended/ hybrid fuels. This means those with time charterers could be looking to move their cargo on vessels equipped with scrubbers

- In addition to the fuel price and technical uncertainties, bunker fuel clauses within charter party agreements currently represent significant risk for both shipowners and charterers.

- From an insurance perspective, insurance costs are likely to rise amid the higher value of bunker fuel stored onboard the vessel, which has seen calls for updates and clarity within charter party agreements. Furthermore, the cost of credit insurance is also set to rise as a result of higher discretionary limits, in keeping with higher bunker fuel costs and higher credit risk.

DATA COLLECTION SYSTEM FOR FUEL OIL CONSUMPTION OF SHIPS

Regulation 22A/ MARPOL Annex VI:

- Date to apply: 01/01/2019
- Ship with GT ≥ 5.000
- Require
  - SEEMP
  - Sumary for each year
  - Report to Administration
  - Statement of Compliance

MEPC.278(70): IMO DCS

- Final date of the first fuel consumption report to be submitted for verification: 2020-03-31.

- Final date of the first issuance of the Statement of Compliance after the annual report is verified and submitted to the Administration: 2020-05-31

- Apply: All cargo vessels, HSC/DSC and passenger vessels, GT >= 5000.

STRENGTHENING EEDI PHASE 3 REQUIREMENTS

MEPC 74 approve Amendments to Regulation 21.6 Annex VI MARPOL

Draft amendments to MARPOL Annex VI were approved based on followings consensus. The draft amendments will be adopted at MEPC 75:

- For general cargo ship, LNG carrier and cruise passenger ship, advance starting year from 2025 to 2022 and retain 30 % reduction rate.
- For gas carrier (LPG carrier) with 15,000DWT and above, advance starting year from 2025 to 2022 and retain 30 % reduction rate. For gas carrier (LPG carrier) below 15,000DWT, retain the current requirements of starting year in 2025 and the reduction rate.

STRENGTHENING EEDI PHASE 3 REQUIREMENTS

MEPC 74 approve Amendments to Regulation 21.6 Annex VI MARPOL

- For container ship, advance starting year from 2025 to 2022, and strengthen the reduction rate based on the ship sizes as follows:

DWT	Reduction rate
10,000 and above but less than 15,000 DWT	15-30%
15,000 and above but less than 40,000 DWT	30%
40,000 and above but less than 80,000 DWT	35%
80,000 and above but less than 120,000 DWT	40%
120,000 and above but less than 200,000 DWT	45%
200,000 DWT and above	50%

- For ship types other than above, retain the current requirements of starting year in 2025 and the reduction rate.

IMO STRATEGY ON REDUCTION OF GHG

MEPC 72 adopted Initial IMO Strategy on reduction of GHG emissions from ships.

The initial Strategy identified three levels of ambition and listed the candidate measures for each level;

i) to reduce the carbon Intensity, as an average across international shipping, by at least 40% by 2030 compared to 2008,

ii) to reduce the total annual GHG emissions by at least 50% by 2050 compared to 2008, and

iii) pursuing efforts towards phasing out GHG emissions in this century.

IMO STRATEGY ON REDUCTION OF GHG

Effect on Asia Maritime Community - Construction, operation of ships

- Construction of a new ship will be guided by international rules and standards applicable to its class, including prospective standards with effectiveness at a later date, as well as market demand and finance.

- The hull will have a hydrodynamic design to maximize the use of its propulsion and energy savings. The propulsion machinery and propeller will vary and will potentially be operable, with modifications, to use different types of fuels.

- The master, officers and crew will be trained and certified in accordance with international standards to navigate the ship in a safe, environmentally responsible and economically efficient manner.

- In case individual states or states at the regional level adopt rules for emissions from international shipping outside of the IMO, there could be adverse consequences for the general expectations of universality and uniformity of international maritime regulation, the protection of international navigation rights, and potentially the availability of shipping to service maritime trade.

IMO STRATEGY ON REDUCTION OF GHG

Effect on Asia Maritime Community - Technical and Operational Measures

- Technical measures relate to the standards of construction and equipping of a ship and usually entail long-term investments in the form of retrofitting and new builds.

- Operational measures concern how a vessel is in fact operated while trading or in port, and can usually be implemented in the short term.

- The key regulations concern the EEDI as a technical measure for new ships and the SEEMP as an operational measure for existing ships. Collectively, these measures seek to increase the operating efficiency of ships on international routes, thereby reducing fuel consumption and overall GHG emissions in the sector.

- To facilitate proper functioning of the EEDI and SEEMP models, MARPOL Annex VI incorporates a mechanism to facilitate the collection and reporting of fuel consumption data. Data is collected yearly by the flag state and transmitted to the IMO, with each ship's performance anonymously catalogued by the IMO and distributed among member states for their consideration and analysis

IMO STRATEGY ON REDUCTION OF GHG

Effect on Asia Maritime Community - Market Based Measures (MBMs)

- MBMs as potential mechanisms for curbing GHG emissions in the international shipping sector, in addition to other measures, was first made in an IMO Assembly resolution in 2003.

- The group of MBMs focused on in-sector emissions reductions will best serve to drive and incentivize technological innovation by shipowners in order to increase efficiency within the shipping sector. Shipowners who fail to reach gradually increasing standards would be liable to pay a penalty of sorts, the proceeds of which would ultimately be used for administrative purposes, R&D, or mitigation of ill-effects on developing countries.

- The group of MBMs focused on offsetting would, to some extent, integrate international shipping into the broader GHG emissions reduction effort. Shipowners would either purchase or be allotted emissions credits, which could be subsequently used, traded or potentially banked for later use.

IMO STRATEGY ON REDUCTION OF GHG

Effect on Asia Maritime Community:

- In order to reach the 2050 target, a shift to low-carbon and zero carbon fuel is inevitable.

- Pressures on such transition to zero-GHG energy sources will increase and it is therefore important that industry understand and respond to the need to address environmental impacts and sustainability.

MARITIME CYBER RISK MANAGEMENT

MSC.428(98)

Application: ISM Code Ship

ENCOURAGES Administrations to ensure that cyber risks are appropriately addressed in safety management systems no later than the first annual verification of the company's Document of Compliance after 1 January 2021

MLC 2006

In accordance with Article XIII of the MLC, 2006, as amended

Text of the amendments adopted on 27 April 2018

Amendments to the Code of the MLC, 2006, Regulation 2.1

Standard A2.1 – Seafarers' employment agreements

Seafarer's employment agreement shall continue to have effect while a seafarer is held captive as a result of acts of piracy or armed robbery against ships, regardless of whether the date fixed for its expiry has passed or either party has given notice to suspend or terminate it.

MLC 2006

Amendments to the Code of the MLC, 2006, relating to Regulation 2.2

Standard A2.2 – Wages

Where a seafarer is held captive as a result of acts of piracy or armed robbery against ships. Wages and other entitlements shall continue to be paid.

Amendments to the Code of the MLC, 2006, relating to Regulation 2.5 – Repatriation

Guideline B2.5.1 – Entitlement

The entitlement to repatriation may lapse if the seafarers concerned do not claim it within a reasonable period of time to be defined by national laws or regulations or collective agreements, except where they are held captive as a result of acts of piracy or armed robbery against ships.


Thank you
for your attention
ACS Website:
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