

Implementation of MARPOL Annex VI

Views and Actions on Air Pollution Prevention

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***LEADING THE WAY,
MAKING A DIFFERENCE***



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1. INTERTANKO

Perspectives on Air Pollution and MARPOL Annex VI:

- 2. Fuel oil availability**
- 3. Fuel oil quality**
- 4. Final remarks**



1. INTERTANKO

INTERTANKO



International Association of Independent Tanker Owners

Non-governmental organization
Established 1970

Strict membership criteria

205 Members/260 Associate
Members in 42 countries

Observer Status at IMO, IOPC,
UNFCCC, OECD, UNCTAD

Offices in
Oslo - London – Washington
Singapore - Brussels



1. INTERTANKO

INTERTANKO

INTERTANKO MISSION

Provide Leadership to the Tanker Industry
in serving the World with the
**SAFE, ENVIRONMENTALLY
SOUND AND EFFICIENT**
seaborne transportation of
oil, gas and chemical products



2. Fuel oil availability

INTERTANKO

Background perspective

- October 1997 **MARPOL Annex VI** is adopted requiring sulphur content of fuel oil used on board ships to not exceed **4.50%**
- Regulations also include:
 1. Requirements for SO_x Emission Control Area (ECA) for Baltic Sea (not to exceed **1.50%**); and
 2. Use of an exhaust gas cleaning system as an alternative
- Entered into force in May 2005
- July 2005 IMO agrees to revise Annex VI to “**significantly strengthening the emission limits**”



2. Fuel oil availability

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Background perspective

- November 2006 **INTERTANKO proposes** to IMO that ships use **distillate fuels**, with a global sulphur content cap introduced using a two-tiered program:
 1. from [2010] a maximum of **1.00%** sulphur content; and
 2. for ships' engines installed on and after [2015], a maximum **[0.50]%** sulphur content

Why?

1. Solve the problem ashore, not on the ship
2. No need for ECAs which would require multi-fuel operations
3. Cleaner fuel improves both environmental performance (reduces waste and emissions) and increases engine performance



2. Fuel oil availability

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Background perspective

October 2008 revised MARPOL Annex VI is adopted (entered into force in July 2010); sulphur content of fuel oil used on board ships shall not exceed:

- a) **4.50%** prior to 1 January 2012;
- b) **3.50%** on and after 1 January 2012; and
- c) **0.50%** on and after 1 January 2020 (**with review**)

Regulations also include:

1. SO_x Emission Control Area (ECA) for Baltic Sea (North Sea and North America later added)
 - a) **1.50%** prior to 1 July 2010;
 - b) **1.00%** on and after 1 July 2010; and
 - c) **0.10%** on and after 1 January 2015
2. Exhaust gas cleaning systems **cease to be alternative** (effectiveness must be demonstrated to be equivalent)



2. Fuel oil availability

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2020 decision and transition

- MARPOL Annex VI requires a review **to be completed by 2018** to determine the availability of fuels with a sulphur content of 0.50% or less (2020/2025)
- Review concluded that the refinery sector **can produce sufficient amounts** of maritime fuels with a sulphur content of 0.50% or less **to meet demand by 2020**
- MEPC 70 agreed to the date of 1 January 2020 as the effective date of implementation for ships to comply with the 0.50% sulphur content
- Majority of other shipping associations **did not express a preference** on the date – but did want a decision at MEPC 70 (October 2016) so industry had certainty



2. Fuel oil availability

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2020 decision and transition

- During the debate a **considerable number of concerns and potential problems were identified** with respect to implementation of this decision
- MEPC recognized these concerns and requested the Pollution, Prevention and Response Subcommittee (PPR) to develop new work program item on what additional **measures may be developed to promote consistent implementation of the 0.50% sulphur limit**
- Shipping industry submits joint proposal to PPR 4 to identify **four areas that are critical to effective implementation** of the 0.50% global sulphur limit
- **Member States add an additional three points...**



2. Fuel oil availability

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2020 decision and transition

1. preparatory and transitional issues (31 Dec 2019 to 1 Jan 2020);
2. impact on fuel and machinery systems (safety concerns);
3. verification issues and control mechanisms and actions (level commercial landscape, ensure compliant fuel is delivered to ships);
4. develop a draft standard format (a standardized system) for reporting fuel oil non-availability;
5. develop guidance, as appropriate, that may assist Member States and stakeholders (assess sulphur content of fuel delivered to ships);
6. request ISO to consider the framework of ISO 8217 (consistency); and
7. any consequential regulatory amendments and/or guidelines (promote consistent implementation).



2. Fuel oil availability

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Other Potential Influencing Factors

- Abatement technology (scrubbers, etc.)
- Alternative fuels (LNG, methanol, biofuels, etc.)
- Reduction of GHG emissions from ships



2. Fuel oil availability

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INTERTANKO position

- Strategic Workplan

“Promote the global use of clean fuels to reduce air emissions from ships and assist Members in making the right choices for their ships to comply with air emission requirements”

- Level playing field
- Pragmatic port state control action



3. Fuel oil quality

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- INTERTANKO's quest for fuel quality started in 1981!

More recently however,

Regulation 18, MARPOL Annex VI: Fuel Oil Availability and Quality

Fuel oil . . . shall meet the following requirements:

- shall be blends of hydrocarbons derived from petroleum refining
- shall be free from inorganic acid
- shall not include any added substance or chemical waste which:
 - jeopardizes the safety of ships or adversely affects the performance of the machinery, or
 - is harmful to personnel, or
 - contributes overall to additional air pollution



3. Fuel oil quality

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- In practice, there is no quality control of bunkers delivered to ships except for the testing arranged by ship operators
- The requirements are placed upon the ship
- There are no requirements on the fuel supplier



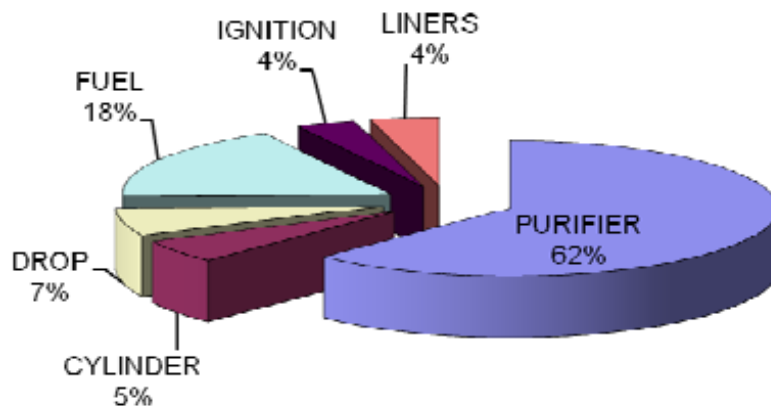
3. Fuel oil quality

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INTERTANKO has been raising this concern at IMO since 2009

Norway and INTERTANKO collected data from two fuel testing laboratories which together represented more than 50% of all bunker deliveries worldwide

- Out of over 100,000 bunker samples, the receiving vessels have reported that on **1,468** occasions they have had machinery problems as a result of using the fuels as supplied.
- These were events resulting in machinery damage and black outs





3. Fuel oil quality

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Finally, MEPC 67 (October 2014) agreed to:

- develop guidelines for member states to use to ensure fuel quality compliance with MARPOL Annex VI; and
- consider the adequacy of the current legal framework for assuring fuel quality

Correspondence Group to MEPC 68 proposes “guidance” that could consist of a range or menu of options, from policies and quality control measures for fuel providers

INTERTANKO leads in **expressing “disappointment”** with progress of CG and **recommends** development of “best practice” guidance



3. Fuel oil quality

INTERTANKO

MEPC 68 concurs with INTERTANKO recommendation

CG initiates “Best Practice” guide for

- Fuel oil providers (to be developed by fuel suppliers (??))
- Fuel oil purchasers/users
- Member states/coastal states

MEPC 69 (April 2016)

- agrees with development of “Best Practice” guides
- majority of delegations were of the view that the contract of the supply and delivery of fuel oil to a ship was a **commercial matter**, and the existing requirements in MARPOL Annex VI were adequate

CG to submit draft “Best Practice” guides to MEPC 71 (July 2017)



4. Final remarks

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INTERTANKO commissioned Fuel Quality Study 2016 – MEPC 70

1. Quality problems with fuel oil blends when SECAs of 1.00% were introduced, these problems may occur again when 0.50% sulphur limit is introduced;

- The risk of off-spec fuel is in the order of 4-5 bunkering out of every 100
- Residual: asphaltene stability and abrasive contents leading to implications of fuel usability for ships

2. Industry successfully complied with the 0.10% sulphur limit when introduced in SECAs in 2015;

- With the ECA SO_x limit shifting from 1.00% to 0.10% from 1 Jan 2015, the low sulphur compliance is reported to be above 95%.
- Distillate fuels: risk is that the sulphur content will not meet statutory requirements



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Thank you