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CIRCULAR

To : All Offices
From : General Manager
ISClass
Date : 29th August 2005
Ref : CIR05/0004

RE: MARPOL ANNEX VI

This is a follow up to CIRCULAR 05/0003. In a recent detention of one of our vessels, the Japanese Port Authority has issued a reply to us based on the above issue. The excerpts of the letter are as follows:

“In this issue, you are kindly informed that the vessel was detained by the following due reasons;

- a) The Government of Japan accepted the 1997 Protocol to MARPOL 73/78 and has enforced the national legislation in order to implement the requirements of the ANNEX IV of MARPOL 73/78 , and ships in all ports of Japan are required to comply with the requirements of the ANNEX VI from 19th May 2005 even though the vessel's flag is not member states.
- b) 71c article 5(4) of MARPOL Convention' provides that with respect to the vessels of non-party to the convention, parties shall apply the requirements of the present convention as may be necessary to ensure that no more favorable treatment is given to such vessels. And this treatment is followed by the provisions of the "PSC Guideline (A.787(19) as amended)". Thus, the Government of Japan applies the requirements of ANNEX VI (except certification) to the vessels of non-party.
- c) The requirements of the "Technical File" the "Record Book of Engine Parameter and the "Bunker Delivery Note" have applied since 19th May 2005 in accordance with the regulations of MARPOL VI. The regulation 6(2) of ANNEX VI applies only to certification of the 1APP certificate, and it doesn't apply to all the requirements of the ANNEX V1.”

To handle the above issue, we have attached the following documents for you to read and to advise the owners accordingly.

1. Summary – table to assist in studying the implication of the Annex VI
2. APPENDICES
 - A. Frequently Asked Questions
 - B. Checklist
 - C. Shipboard Incinerator
 - D. Bunker Delivery Note
 - E. Survey Requirement Map

SUMMARY - MARPOL ANNEX VI - APPLICATION TO EXISTING SHIPS (KEELS OF WHICH LAID BEFORE 19 MAY 2005)

	Surveys	Certification	Ozone Depleting Substances	Nitrogen Oxides (NOx)	Sulphur Oxides (SOX)	Volatile Organic Compounds	Shipboard Incineration	Fuel Oil Quality
Application	Ships > 400 grt and every fixed and floating drilling rig and other platform	Ships > 400 grt on international voyages, and platforms and drilling rigs on international voyages	All ships and fixed and floating drilling rigs regardless of size	Each diesel engine of > 130 kW installed on a ship whose keel laid on/after 1 Jan 2000. Any diesel engine of > 130 kW which undergoes major conversion, on/after 1 Jan 2000	All ships regardless of size	All tankers regardless of size, when trading to a port or terminal which regulates VOC emissions	All ships regardless of size	All ships regardless of size
Application Date		First scheduled drydocking after 19 May 2005, but no later than 19 May 2008	19 May 2005	19 May 2005	19 May 2005	19 May 2005	19 May 2005	19 May 2005
General Requirements	Initial, annual, intermediate and periodical surveys, Survey of engines conducted in accordance with NOx Technical Code.	International Air Pollution Prevention (IAPP) Certificate. 5 year period of validity, but subject to HSSC where applicable	Deliberate emissions of ODS (including whilst maintaining, servicing, repairing or disposing) prohibited. New installations prohibited, except those containing HCFC's permitted until 1 Jan 2020. New installations includes new portable fire extinguishing units and insulation, but excludes repair or recharge of previously installed units	NOx emissions to be within limits, and engine to comply with NOx Technical Code. Does not apply to emergency diesel engines, lifeboat engines or any device solely for emergency use. This regulation only applies to diesel engines at present, and not steam turbine or gas turbine systems	Sulphur content of any fuel used onboard not to exceed 4.5% m/m. In SOx Emission Control Areas sulphur content of fuel used onboard not to exceed 1.5% m/m unless exhaust gas cleaning system or equivalent used. If operating on both high and low sulphur fuel, the practical arrangements of fuel storage and transfer need to be considered.	Vapour collection system to be provided, complying with MSC/Circ.585. Tankers with a VECS System. Only applies to gas carriers when loading and containment system allows safe retention of non-methane VOCs on board, or their safe return ashore.	Shipboard incineration only allowed in a shipboard incinerator. Shipboard incinerator installed on/after 1 Jan 2000 to be approved in accordance with MEPC.76(40). Oil and sewage sludge incineration may take place in main or auxiliary power plant or boilers. Prohibited incineration of certain materials	Fuel oil for combustion delivered to and used onboard to comply with this regulation. Bunker delivery note to be kept onboard for 3 years, and fuel oil sample for 1 year, after fuel delivered



APPENDIX A

Frequently Asked Questions

MARPOL Annex VI and the NO_x Technical Code.

Q Which regulations are required to be complied with?

A If a statement of fact is requested then it is the Owners option which regulations are complied with.

If an IAPP certificate or certificate of compliance is requested then all the regulations as applicable for the ship type and equipment fitted are required to be complied with: -

- Regulation 12
- Regulation 13 (if diesel engine > 130kW are fitted)
- Regulation 14
- Regulation 15 (tankers only and if VEC system fitted)
- Regulation 16 (if incinerator fitted)
- Regulation 18

Q How will Air Pollution from ships be controlled?

A Annex VI controls six areas of air pollution from ships: -

- A prohibition on the discharge of ozone depleting substances
- Emissions of nitrogen oxides -NO_x
- Emissions of sulphur oxides - SO_x.
- Volatile organic compound emissions from tankers
- Incinerators emission controls
- Fuel oil quality

Q What certification can ISClass offer?

A If requested by a shipbuilder or an Owner, ISClass can offer the following certification and surveys.

- A statement indicating the degree to which a ship complies with the MARPOL Annex VI Regulations which were verified at the Owners' request.

This would be a statement of fact stating the ship had been surveyed, with details of the regulations it complies with at the time of survey. The statement would have no period of validity and no further surveys would be required. Acceptance of such statements rest with the Port Authorities that the ships are trading.

- A certificate of compliance with MARPOL Annex VI.

This will be a certificate issued in the same format as an IAPP certificate and valid for five years. To maintain its validity annual and intermediate surveys will be required. At the end of the five-year period of validity a renewal survey will be required in order for a new certificate to be issued.

- An International Air Pollution Prevention (IAPP) Certificate

This is a certificate indicating the ships compliance with the applicable requirements of MARPOL Annex VI and is valid for 5 years. To maintain its validity annual and intermediate surveys will be required. At the end of the five-year period of validity a renewal survey will be required in order for a new certificate or statement to be issued.

Q Can ISClass issue certification on behalf of national administrations?

A Tuvalu and Mongolia Registries have authorized ISClass to issue Certificate of Compliance pertaining to Annex VI on their behalf.

Q Can an IAPP certificate be issued?

A IAPP certificates can be issued for MARPOL Annex VI once the Flag States have ratified the Convention..



- Q** Can ISClass certify diesel engines for compliance with the NOx Technical Code?
- A** Yes. If a request is received for NOx Code certification, contact ISClass Head Office for instructions. In principle, ISClass accepts the certification issued by all IACS members.

APPENDIX B



**MARPOL 73/78 ANNEX VI
CHECK LIST**

This survey checklist and any certificates or statements issued are the information to indicate compliance with the provisions of MARPOL Annex VI.

Mark Yes', 'No' Or NA' as applicable. The right hand column indicates the survey type for which item to be completed.			
General		YES	NO
1	Have any changes been made or any new equipment installed which would affect the validity of the Certificate? (If Yes, include details in the narrative of the report).		
2	Were all other Statutory Certificates and Classification Certificates valid at the time of survey?		
3	Was the structure, equipment, systems, fittings arrangements and materials examined for compliance with the relevant requirements of MARPOL 73/ 78 Annex VI?		

Documentation			
1	Are there certificates for compliance with the NOx Technical Code onboard for each engine required to be certified (refer to section 2.2.1 of the Record of Construction and Equipment)		
2	Is there an approved Technical file for each Certified engine on board?		
3	Is there a type approval certificate on board for each incinerator onboard?		
4	Are there bunker delivery notes on board as required by regulation 18?		
5	Is there an approval certificate for the exhaust gas cleaning system?		

Ozone Depleting Substances (Regulation 42)			
1	Does any system or equipment onboard contain ozone depleting substances?		
2	If Yes, Check Dates Such Equipment Are Permitted To Remain Onboard.		
3	Is Any System Or Equipment Still In Use Or Approaching Its Allowable Date To Remain Onboard? If Yes, Advise Owners It Must Be Removed And Disposed Of To Appropriate Reception Facilities.		

Nitrogen Oxide Emissions From Diesel Engines (Regulation 13) Technical File			
1	Verification Of The Engine Parameter Check Method :		
2	Review Engine Documentation And The Record Book Of Engine Parameters		
3	Has The Engine Undergone Any Modifications Or Adjustments Since Last Surveyed?		
4	Conduct survey as detailed in the on-board system in the Technical File.		
5	If An Electronic Engine Management System Is Used Check Against The Original Settings.		
6	Verification Of The Simplified Measurement Method:		
7	Review Engine Documentation.		
8	Confirm Test Procedure Approved		
9	Confirm Test Equipment correct type And Calibrated In Accordance With The NOx Technical Code.		
10	Confirm Correct Test Cycle Used For The On-Board Confirmation Test Measurements.		
11	Was a Fuel Sample Taken During The Test And Submitted For Analysis?		
12	Submit A Copy Of The Test Report For Approval On Completion.		

Direct Measurement And Monitoring Method			
1	Review Engine Documentation		
2	Confirm Test Procedure Approved		
3	Confirm Test Equipment Calibrated In Accordance With The NOx Technical Code And Operational.		
4	Current Data Available Reviewed On Board And Confirmed That Weighted Average NOx Emissions In Accordance With The NOx Technical Code.		

5	Review and confirm the past three month's engine operating data. In accordance with the Technical File.		
6	After-treatment device is installed.		
7	From an external examination verify the after-treatment device is in a generally satisfactory condition.		
8	Verify it's operation and NOx compliance		
9	If additional substances are introduced (e.g. steam, water, urea, etc) verify consumption meter operation.		
10	Confirm any adjustments or modifications are recorded in the Engine's Record Book of engine parameters.		
11	Where adjustments or modifications are outside the Technical file limits, confirm they have been verified as not exceeding the NOx limits.		

Sulphur Oxides (Regulation 14)

1	From an external examination verify the exhaust cleaning system is generally in a satisfactory condition..		
2	Is the exhaust cleaning system is operating correctly with manufacturer's instructions?		
3	Are there records of the changeover to and from low sulphur fuel during transit through SOx Emission Control Areas?		
4	Where equipped with tanks for low and normal sulphur content fuel are switching arrangements provided and operational?		
5	Review bunker notes for carriage of correct quality fuel(s)		

Volatile Organic Compounds (Regulation 15)

(Tankers)

1	From a general examination, was the vapour collection piping in a satisfactory condition?		
2	Is a means provided to eliminate the collection of condensate in the system, such as drains in low points of the line end, and are the drains operable?		
3	Is the piping electrically continuous and electrically bonded to the hull, and the means of bonding intact?		
4	Are the isolation valves at the vapour manifolds operational and do the valve position indicators operate correctly?		
5	Are the ends of each line properly identified as vapour lines?		
6	Are the vapour connections flanges in accordance with industry standards?		
7	Where portable vapour hoses are provided are they in good condition, and electrically continuous?		
8	Are the hose ends properly marked as vapour hoses?		
9	Is the closed gauging system operational and the readouts in the cargo control area functional?		
10	Is an overflow control system provided? (level alarms)		
11	Are the alarms operational?		
12	Do the audible and visual alarms operate?		
13	Are the alarms properly labeled?		
14	Does the power failure alarm operate?		
15	Is there a means to check the operation of the alarms and is this means operational?		
16	Are high and low pressure alarms provided in each main vapour line?		
17	Do these alarms operate at the correct set points?		
18	Are the high level and high high level (overflow) alarms independent of each other?		

INCINERATORS (Regulation 16)

1	From an external examination, was each incinerator in a generally satisfactory condition and free from leaks of gases or smoke?		
2	Are the warning and instruction plates legible and secured in a prominent location?		
3	Is the manufacturers name, incinerator model number/type and capacity in heat units per hour permanently marked on the incinerator?		
4	Are the incinerator casing insulation arrangements in good condition?		
5	Are the following alarms and safety devices operational?		
6	Flue gas high temperature alarms and shutdown.		

7	Combustion temperature control and shutdown		
8	Combustion chamber negative pressure		
9	Flame safeguard control, alarms and shutdowns.		
10	All alarms both visual, audible and functioning and do they indicate the cause of the failure		
11	Power loss alarm and auto shut down arrangements		
12	Charging arrangement		
13	Low fuel oil pressure alarm/shut down		
14	Emergency stop switch and electrical isolating arrangements		
15	Interlocks		
16	Was it verified that the O ₂ content in the combustion chamber is between 6-12%		
17	Are complete instruction and maintenance manuals available on board?		
18	Are Staff suitably trained?		
19	Are drip trays fitted under each burner, pump, strainer and are they in good condition?		
20	Was the combustion chamber flue gas outlet temperature verified as between 850 -1200 °C?		



APPENDIX C

(Extract of Appendix IV from Annex VI of MARPOL 73/78)

TYPE APPROVAL AND OPERATING LIMITS
FOR SHIPBOARD INCINERATORS

(Regulation 16)

- (1) Ships incinerators described in regulation 16(2) shall possess an IMO type approval certificate for each incinerator. In order to obtain such certificate, the incinerator shall be designed and built to an approved standard as described in regulation 16(2). Each model shall be subjected to a specified type approval test operation at the factory or an approved test facility, and under the responsibility of the Administration, using the following standard fuel/waste specification for the type approval test for determining whether the incinerator operates within the limits specified in paragraph (2) of this appendix:

Sludge Oil Consisting of-	75% Sludge Oil from HFO;
	5% Waste Lubricating Oil; and
	20% Emulsified Water
Solid Waste consisting of.	50% Food Waste
	50% Rubbish Containing
	Approx. 30% Paper,
	" " 40% Cardboard,
	" " 10% Rags,
	" " 20% Plastic
	The mixture will have up to 50% moisture and 7% incombustible solids

- (2) Incinerators described in regulation 16(2) shall operate within the following limits:

Oz in combustion chamber:	6- 12 %
CO in flue gas maximum average:	200 mg/MJ
Soot number maximum average:	Bacharach 3 or Ringleman 1 (20% opacity) (A higher soot number is acceptable only during very short periods such as starting up)
Unburned components in ash residues:	Maximum 10% by weight
Combustion chamber flue gas outlet temperature range:	850 - 1200 degrees Celsius



APPENDIX D

(Extract of Appendix V from Annex VI of MARPOL 73/78)

Information to be included in the bunker delivery note Regulation 18(3)

Name and IMO number of receiving ship Port

Date of commencement of delivery

Name, address, and telephone number of marine fuel oil supplier Product name(s)

Quantity (metric tons)

Density at ¹⁵⁰ C (kg/m³)³⁹

Sulphur content (% m/m)⁴⁰

A declaration signed and certified by the fuel oil supplier's representative that the fuel oil supplied is in conformity with regulation 14(1) or (4)(a) and regulation 18(1) of this Annex.

APPENDIX E

Survey Requirement Map

