Movement of establishing a GUIDELINE for Risk assessment

of

Active substances in BWTS on the PSPC Coating system (Updated information)

November 2012



Today's Topic

- Concern raised among the industries
- Latest movement
- SAJ's view





Active substances of BWTS



- OZONE (O₃)
- -HCIO
- Other chemicals



BWTS



In December 2010, London:

"Assessing the Risks of Ballast Water
Treatment Systems on Ballast Tank Coatings"
chaired by Safinah.

Recognized & Shared this potential issue



- Active substances may cause adverse effect to coating system?
- Target useful coating life is 15 years?



If Target useful coating life is NOT 15 years?



Wasteful works?



- GESAMP-BWWG's
 corrosion test report:
 Confidential . . .
- Corrosion test:Non-mandatory

GESAMP-BWWG 10/6

ANNEX 7

REVIEW OF PROPOSALS FOR APPROVAL OF BALLAST WATER MANAGEMENT SYSTEMS THAT MAKE USE OF ACTIVE SUBSTANCES

Resource Ballast Technologies System

Submitted by South Africa for Final Approval

0 SUMMARY

- 0.1 Having reviewed all the data and information submitted by South Africa with the application for Final Approval and the information received from the Applicant during the GESAMP-BWWG meeting, the Group recommended to MEPC that Final Approval be granted to the Resource Ballast Technologies System, provided that recommendations given below are taken into account.
- 0.2 The Group recalled that Basic Approval of this ballast water management system (BWMS) was granted by MEPC 57 to Resource Ballast Technologies (Pty.) Ltd. of South Africa and the report is available at document MEPC 57/2/10 (BWWG 5/9, annex 5, Review of Proposal for Basic Approval of Active Substance).
- 0.3 Following the Group's review of the responses from the Applicant to questions posed by the Group and listed in the Basic Approval report, together with both the additional and further information provided by the Applicant in response to questions posed during the GESAMP-BWWG meeting, the Group was satisfied with the completeness of the dossier received from the Applicant.
- 0.4 The Group noted that the Resource Ballast Technologies System uses a combination of cavitation as a primary treatment of the ballast water with small amounts of Active Substances (come and sodium hypochlorie) to assist the cavitation process, together with ballast water filtration. The Group also noted that the BWMS generates the two Active Substances on board ship, employing ambient air to form ozone in a generator unit and electrolysis of seawater in an electrochemical unit to produce hypochlorite. Hypochlorite is added to the ballast water up to a maximum allowable dose of I mgL (TRO as Cl₂), while the ozone is injected into the ballast water, also up to a maximum allowable dose of I mgL (TRO as Cl₂). The Group noted that ballast water is treated on uptake only.
- 0.5 As the BWMS does not require the storage of chemicals on board ship, the Group recognized that there will be no associated storage safety problems.
- 0.6 The Group recognized that the system utilizes Active Substances and produces Relevant Chemicals and Other Chemicals with potential safety and environmental concerns and the Group has reviewed the hazards and risks associated with all these chemicals.
- 0.7 The Group recognized that the Applicant has provided detailed information on system controls and safety considerations for installation of the BWMS on board ship, together with provisions for maintenance and emergency operations of the system and acceptable results of corrosion testing. As such, the Group considered that the BWMS should present no unacceptable risks to the safety of the ship. Additional corrosion tests are in progress as part of the land-based and Type Approval tests.

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*GESAMP-BWWG: Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection of IMO - Ballast Water Working Group



BWTS vs. PSPC

- BWTS:
 approved by MEPC GESAMP.
- PSPC coating system: approved in compliance with MSC.215(82).

BWTS vs.PSPC

- PSPC is NOT used in treated ballast water environment.
- No unified rules for BWTS and PSPC.
- Considerable time need for revising or unifying both IMO Rules.

Potential issues and concerns

- What kind of effect to coating?
- How much impact ?
- Who takes responsibility for coating failure?

(BWTS manufacturer, Coating manufacturer, Shipyard or Ship-owner?)

NO rules, NO criteria



What we NEED

GUIDELINE

- Information about impact of risks for combination of BWTS and PSPC coating.
- Support Ship-owner & Shipyard to select a suitable combination.

Image of the GUIDELINE

	Coat-1	Coat-2	Coat-3
BWTS-A	Discolored	Discolored	Discolored
BWTS-B	NON	Blister	NON
BWTS-C	NON	NON	NON

NO PASS-FAIL Criteria





Development of test method

 TG-452: "Testing of Coating Suitability, Anode Consumption, and Corrosion Evaluation with Use of BWT Systems"

- In March 2011, established at NACE Corrosion 2011 in Houston.
- In September 2011, 2nd TG-452 at NACE Coating Technical Week in Las Vegas.
- Approved on June 23rd, 2012



IMO MEPC 64



Joint submission to BLG 17 in February 2013

Revision of GESAMP methodology

 by IPPIC & NACE under the coordination of GESAMP-BWWG chairman

Discussion on the stage of IMO



SAJ's View

Revised GESAMP Guideline should be:

Disclosed a process of approval and test result

Including information

Ship-owner & Shipyard CAN select a suitable combination of BWTS and coating system.





Assumption for establishing a GUIDELINE

- Target scope:
 - BWTS approved by GESAMP
 - PSPC coating system

- Non-coating materials:
 - Separate from this GUIDELINE



SAJ's Proposal

Re-recognize below:

• GOAL of TG452:

Establishing a GUIDELINE

that supports Ship-owner and Shipbuilder to select a suitable BWTS & PSPC.

NOT PASS or FAIL criteria



JOIN the NACE's TG 452

- ONLY appropriate platform to reach solution.
- Gather and share All information among all involved parties.
- All involved parties should JOIN in TG-452.
- Develop a useful GUIDELINE.

