Ballast Water Collaborative
IMO Latest Updates

Silver Springs

March 3 2014

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Chair IMO Ballast Water Groups

International Maritime Organization

- The common sense and experience of seafarers coupled with technological knowledge, scientific research and political agendas of member states and observers

IMO Process for Ballast Water Reorganization

- Marine Environmental Protection Committee (MEPC)
  - Ballast Review Group
- Bulk, Liquid Gas Subcommittee (now Pollution Prevention and Response - PPR)
  - Ballast Water Working / Drafting Group
- Flag State Implementation Sub Committee (now Implementation of IMO Instruments - III
  - Correspondence Group to provide input into Port State Control Working Group
- Input from other Committees as appropriate
  - Marine Safety Committee, Legal etc.

BW Convention

- 38 Countries / 30.32% of global tonnage
- Requirement 30 Counties / 35% Tonnage
- Convention comes into force one year after conditions met.
- No ratifications since Switzerland
- Rumours for 2014

Resolution of uncertainty for Administrations / Ship Owners

- Sufficient Type Approved BWMS available to the market
- Confidence that type approved BWMS will meet the D-2 standards in conditions that ships operate in
- Clear Guidance in place as get experience with fitting / operating BW management systems
- Resolution of implementation dates, as dates have slipped
- An enforcement regime that is fair and consistent word wide that provides a mechanism for port states to protect their environment

Are there sufficient BW Type Approved BWMS available?

- Lloyds, ABS, others
- 38 plus systems currently Type Approved to G8
- GESAMP approvals MEPC
- Basic / Final if active substance
- 60 + systems in the market at various stages of approval
- Experience in real world being reported

Guidance from IMO

- High Level
- To assist in providing uniform application
- No other Convention has such a large suite of Guidance put in place in such a short time frame
- Is not intended to provide prescriptive and specific detailed requirements – though in some cases it does
- In some case Guidance was in place prior to the actual BW Technology being invented
- Need to update now that experience in place.

Guidance for Uniform Implementation

- Guidelines for sediments reception facilities (G1)
- Guidelines for Ballast Water Sampling (G2)
  Sampling & Analysis protocol
- Guidelines for ballast water management equivalent compliance(G3)
- Guidelines for BW Management and Development of BW Management Plans (G4)
- Guidelines for ballast water reception facilities (G5)
- Guidelines for Ballast Water Exchange (G6)
- Guidelines for Risk Assessment under Regulation A-4 (G 7)
- Guidelines for approval of Ballast Water Management Systems (G8)
- Procedure for Approval of BWM systems that make use of Active Substances (G9)
- Guidelines for approval and oversight of prototype BWM technology programs (G10)
- Guidelines for Ballast Water Exchange Design and Construction Standards (G11)
- Guidelines for sediment control on ships (G12)
- Guidelines for additional measures including emergency situations (G13)
- Guidelines on designation of areas for ballast water exchange (G14)
- Guidelines for Ballast Water Exchange in the Antarctic Treaty area
- Guidelines for Scaling
- Guidelines for Type testing
- Guidelines for Use of Basic Approval
- Guidelines for Other Methods

Need for continual update of Guidance as gain experience in “real world” with BWMS

- Recent examples
- Guidance on use of BWMS on offshore supply vessels
- Use of Drinking water for ballast
- Use of Eductors for BWMS that use treatment on Discharge

Type Approval

- Traditional way for shipboard machinery to be tested and certified in order to be safely used aboard vessels.
- Shake, rattle and roll
- In case of BWMS, not typical of traditional type testing carried out by class – biology
- Type testing undertaken by 16 facilities around the world
- GloBal TestNet MOU
- Strive for comparable and accurate results
- Approvals given by Flag State

Type Approval Certificate

MEPC 64/INF.12
Annex 1, page 1

ANNEX 1

TYPE APPROVAL CERTIFICATE OF CYECO™ BALLAST WATER MANAGEMENT SYSTEM

格式 Form CF181

中国船级社
CHINA CLASSIFICATION SOCIETY

编号 No. SH11709121_02

压载水管理系统型式认可证书

TYPE APPROVAL CERTIFICATE OF BALLAST WATER MANAGEMENT SYSTEM

兹证明，下述压载水管理系统已经根据IMO的MEPC.174(58)决议中导则的相关规范要求通过了检验和测试。本证书仅对下述载及的压载水管理系统有效。

This is to certify that the ballast water management system listed below has been examined and tested in accordance with the requirements of the specifications contained in the Guidelines contained in IMO resolution MEPC.174(58). This certificate is valid only for the ballast water management system referred to below.

压载水管理系统供应方
Ballast water management system supplied by 上海船研环保技术有限公司 Shanghai Cyeco Environmental Technology Co., Ltd

指定类型和型号
under type and model designation Cyeco-B250

并包括：
and incorporating:

压载水管理系统制造商
Ballast water management system manufactured by 上海船研环保技术有限公司 Shanghai Cyeco Environmental Technology Co., Ltd

设备/组件图号 Cyeco/TD04-40, Cyeco/TD04-41, Cyeco/TD04-01
to equipment/assembly drawing No.
日期 date 2012-06-12

其它设备制造商
Other equipment manufactured by

设备/组件图号
to equipment/assembly drawing No.
日期 date

CCS

№ 12078891

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MEPC 64/INF.12
Annex 1, page 2

额定处理能力
Treatment rated capacity 250 m³/h

本型式认可证书的副本应始终保留在安装该压载水管理系统的船舶上。船上检查时，应提供测试方案的参考文件和测试结果的复印件。如果型式认可证书是基于另一主管机关已经授予的认可签发，则应注明所依据的型式认可证书。

A copy of this Type Approval Certificate, should be carried on board a vessel fitted with this ballast water management system at all times. A reference to the test protocol and a copy of the test results should be available for inspection on board the vessel.If the Type Approval Certificate is issued based on approval by another Administration,reference to that Type Approval Certificate shall be made.

限制条件的说明见本文件的附件。
Limiting Conditions imposed are described in the appendix to this document.

公章 Official stamp

签字 Signed (Liu Ming)

中国船级社
China Classification Society

日期 Dated 2012-06-12

附件：原始测试结果的副本
Enc. Copy of the original test results.

CCS

№ 13429118

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Issues found on reporting on Type Approval Certificates

- Many TA Certificates being found to be lacking information
- Description of Test protocol
- Test results for each land and ship test runs in Annex

  Limiting conditions

  – e.g. salinity, UV transmittance, temperature

  – Operating parameters max/min pressure, pressure differentials, TRO etc

Amendment to Guidance for Administrations on Type Approval Process

- More / sufficient information required to verify operation in different salinity, temperature, sediment loads, treatment rated capacity, safety
- Include unsuccessful tests in documentation
- Proposal to implement self monitoring system to ensure correct operation of system
- Safety and hazard assessment on ships crew
- Show all limitations, test results

Industry concerns re Type Approval Process

- Expectation of “black box” that would work anywhere in worldwide trading
- Reality somewhat different
- Concerns over different interpretations of requirements of G8 depending on test facility
- US has not “accepted” IMO G8 approvals
- ETV process in US
- Submission to reopen G8 at next MEPC

Industry Recommendations to Address Problems with G8

- Testing should:
- Not allow test runs that do not meet D-2 Standard to be counted
- Be undertaken across a wide range of salinities
- Consider the effect of water temperature
- Use organisms that challenge the treatment process and should be standardized across BWMS test facilities
- Increase the levels of suspended solids in the challenge water to meet real world conditions
- Should represent actual flow rates for which a BWMS is approved

IMO Politics over G8

- Media release by ICS
- No Administration attached to MEPC 66/2/11
- Comparison between G8 / ETV
- Lack of data from industry to IMO supporting statements suggesting current BWMS having problems meeting standards
- G8 and ETV not mutually exclusive
- New MEPC chair – focus from Assembly on Outputs specific to Port State Control

Resolution of Implementation Dates

- Dates have slipped since 2004
- Cannot change dates as cannot amend a Convention that is not in force
- Agreement among Parties to implement enforcement schedule for Reg B-3
- Inherent problem – new enforcement schedule refers to renewal survey not harmonized to other statutory instruments
- Demand would peak 5 years after entry
- Distributes dates of compliance evenly

Assembly Resolution 1088 (28)

- December 2013
- Comes into effect on entry into force
- Recommends ships constructed before entry into force of BW Convention, not be required to comply with Reg D-2 until first “renewal survey” following date of entry into force
- Use of IOPP under MARPOL as survey date
- Attempt to provide realistic timeframe for enforcement
- Unintended consequence - negative impact on BWMS Vendors, early implementers

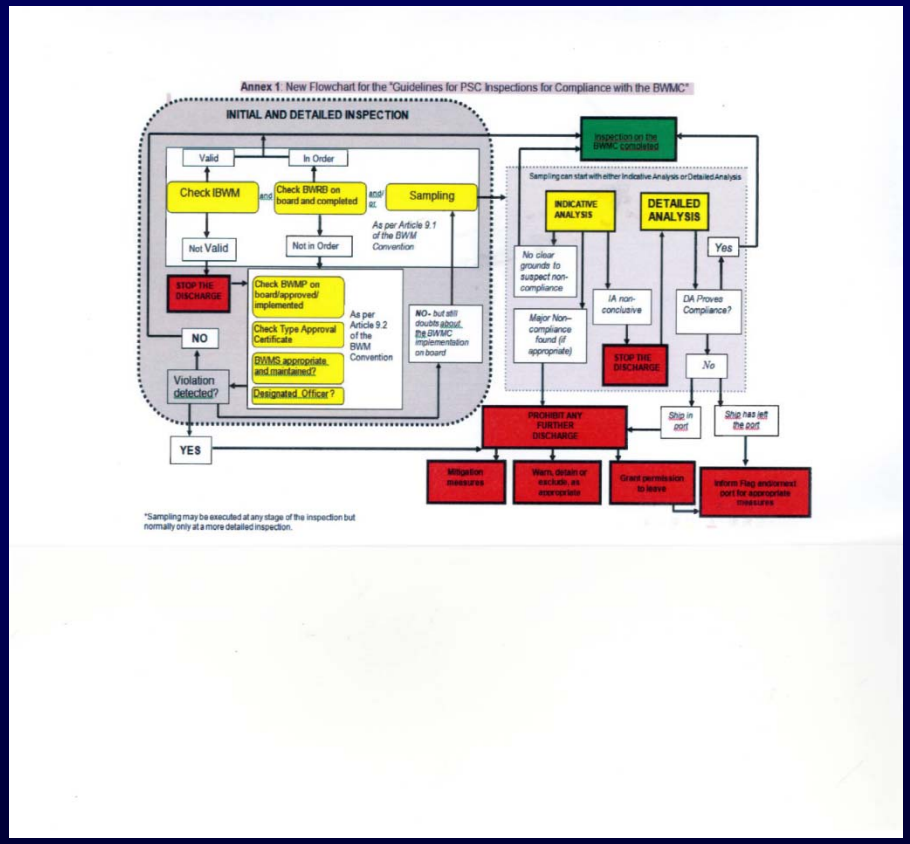
An enforcement regime that is fair and consistent word wide that provides a mechanism for port states to protect their environment

Port State Control

Port State Control Issues

- BW Convention allows sampling before clear grounds established (Article 9)
- Not the same order as typical PSC – before clear grounds
- Survey Requirements – Regulation E
- What is required of PSC Officer with respect to sampling / indicative analysis
- Opportunities for abuse?
- Why cannot simply accept type approval?
- More stringent requirements regionally

Enforcement Regime
Port State Control



- Initial inspection
- Documentation
- IBWM Certificate
- BWMP / Approved by Administration
- Type test certificate / appropriate environment
- Ballast Water Record Book – Electronic records from BWMS
- D-1 Sampling / Salinity
- D-2 Monitoring / Indicative
- D-2 Detailed

Correspondence Group on Port State Control

- Terms of Reference at last FSI
- Based on Paris MOU work to date
- To report to IMO July 2014
- Paris MOU. Japan, Canada primary drivers
- Include results of Assembly Resolution
- Include decision to implement with trial period on sampling for enforcement

  (2-3 years)

Guidance on BW Sampling and Analysis for Enforcement

- Sampling and analysis procedures are to be no more stringent that what is required for Type Approval (none provide greater resolution than current certification testing)
- Applies once BWM Convention in force
- Refrain from applying criminal sanctions or detaining ship based on sampling alone
- Length of trial period 2-3 years
- Encouraged Member States to begin using sampling and analysis procedures
- All other PSC in force
- Reflects current state of technology

Input of technological advances in both Sampling and Analysis into Guidance

- Protocols is currently available to provide a representative sample of the whole discharge
- Sampling technology is available to obtain a replicable and representative sample
- Technology is available to quickly and accurately analyze samples
- Statistic certainty can be provided for indicative samples