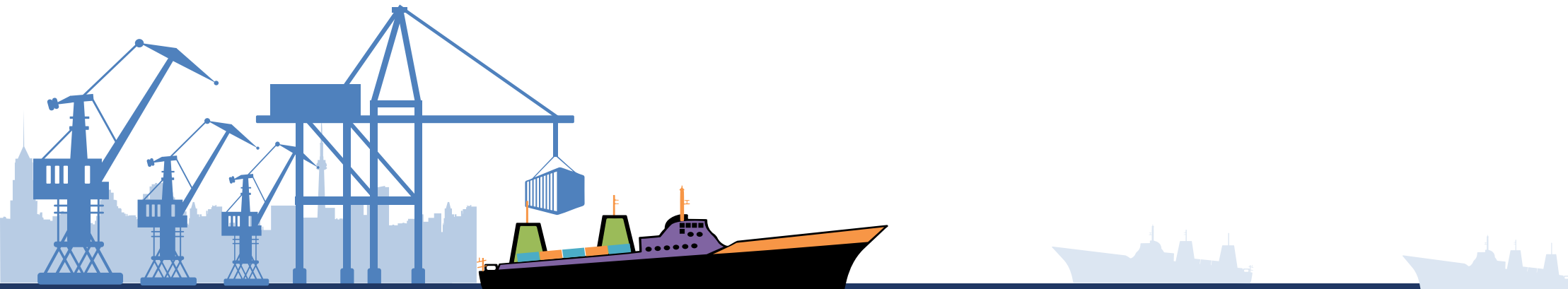


Building up a reliable, efficient, attractive service network for ship effluents: ballast water, oily and toxic waste water





PRF – Scrubber Waste & Ballast Water



Seas, Rivers, Islands
Coastal Areas



Scrubbers – Waste - (Challenges for Shipping and PRF.)

- The International Maritime Organization (IMO) is the global regulator of shipping. However, the implementation of many IMO regulations have their **regional specifications**-States and Ports- Unilateral Imposed Restrictions.
- The meeting of the IMO Marine Environment Protection Committee (MEPC 75) was held remotely 16-20 November 2020- one of the main topics for discussion was the reduction of GHG emissions from shipping,
- IMO – Ship Emission regulations now in force-Sulphur Cap on fuel (SOx) limit of 0.10% applies in all EU Ports.
- From Jan. 2020 World Wide limit of Sox reduced to 0.5% from previous 3.5% (by mass Sox).
- The IMO considers exhaust gas scrubbers to be an acceptable means of reducing vessels’ sulphur emissions and ensuring compliance with MARPOL Annex VI. An accepted abatement technology to meet IMO’s SOx emission
- Despite IMO 2020 rule, differing viewpoints still exist in Countries, Regions and Ports about the viability of scrubbers as a compliance option due to environmental concerns over the discharge of washwater into the sea... “Dilution is not a Solution”.
- Although IMO’s EGCS Guidelines have established washwater discharge and monitoring criteria to safeguard against environmental damage, Coastal states and ports have implemented local regulations with more stringent requirements that restrict or completely prohibit the discharge of washwater from open loop scrubbers or prohibit the use of scrubbers....use the Water Framework Directive.... **This is damaging the IMO’s Reputation. Ship owners have already made significant financial investments** in these systems, rightly expecting easy compliance....No.
- Ports Dilemma on PRF (Port Reception Facilities).... **Who Pays.....Monitoring... Polluter Pays Principal...!!!**



The BWM Convention- General rights and obligations set out in the articles

- Currently it is reported that the treaty has been ratified by > 75 countries, representing more than 75% of world merchant shipping tonnage.
- Parties will undertake comprehensive **actions to prevent transfer of harmful aquatic organisms and pathogens** through the control and management of ballast water and sediments. **Articles 2 & 4.**
- Parties undertake to ensure that **ports and terminals provide infrastructures to retain and dispose of sediments removed from ballast tanks.** **Article 5.**
- Parties should **facilitate scientific and technical research on BWM and monitor the effects of BWM in waters** under their jurisdiction. **Article 6.**
- In addition to Flag survey and Certification, **ships may be inspected by Port State Control Officers (PSCOs).** They may check for a valid certificate and an approved Ballast Water Management Plan (BWMP) as well as **carry out inspections and take samples.**
- Inspections and administrative responsibilities shall be structured in order to **avoid undue delays to ships.**



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The BWM Convention- General rights and obligations set out in the articles- cont..

- On 13th April 2018, the BWMS Code (MEPC. 300 (72)) was adopted, turning the guidelines into mandatory code with type approval required for Ballast Water Treatment Systems installed on new-buildings on or after 28th October 2020.
- There has been a race to certify Ballast Water Treatment Systems in time for the Revised G8 Criteria deadline on the 28th October 2020 which stems from the original guidelines adopted on 10th October 2008. (MEPC.174), which were revealed to be “not robust enough”.
- Research in May 2020 from one of the world’s leading inspection, verification, testing and certification companies, suggests that **21% of systems installed** would not treat water to a compliant standard upon commissioning.
- **Ship owners rightly expect that any IMO or USCG** certified Ballast Water Management System (BWMS) will make legal compliance straightforward, but that is currently not the case.
- Under current regulations, these systems could be malfunctioning upon delivery, or could later develop an undetected fault.
- A BWMS does not currently need to be tested upon installation, **one in five** BWMS installed on commercial vessels might not be treating water to a compliant standard when they are delivered.
- In its study, **21% of systems failed** their commissioning testing.





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- Ship owners have already made **significant financial investments** in these systems, rightly expecting easy compliance. Yet, too often this is not the case.
- The Coast Guard Marine Safety Center has recently issued the 38th U.S. Coast Guard Ballast Water Management System Type Approval Certificate.
- Concerns about operational compliance will persist until shipowners have a reliable, accurate way to collect and measure data on an ongoing basis.
- Regular, ongoing indicative testing is the key to de-risking ballast water management.
- The scale of these operational challenges was recently outlined by one company that stated that **every one of the approximately 210 BWMS, from nineteen different models, fitted to ships managed by them exhibited some issues during the first year of use.**
- Damaged sensitive equipment in harsh environment- moving –banging-vibrating ships.
- Shipowners and regulators cannot expect crew to be microbiologists- **human error** represents a similar threat.
- Should a crew genuinely believe that it is following the correct operational processes, the data produced by a BWMS is not likely to alert it to failures.



Key Challenges for all Ports- (Sustainability for Cruise Sector)

- Cruise Europe Ports are carrying out assessments to accurately monitor sustainability.
- Reviewing all segments of shipping and in particular the cruise visit cycle.
- Large Ports reviewing the maximum number of cruise vessels/passengers per day.
- Most ports actively engaged with **PERS Certification**. (Port Environmental Review System)
- Monitoring **Air Quality** adjacent to activities.
- Installing **Noise Sensors** in port areas at the Port-Population Interface.
- Enforcement of **Ballast Water Management** and Compliance
- **Water Quality** to assess MARPOL and Water Framework Directive.
- **Waste** (liquid & solid) PRF- collection services.
- Management of **Risks and Incidents**.