

# THE **SMARTEST** MOBILE BWMS ON THE MARKET

#### **INNOVATIVE APPROACH**

Ship's ballast tank

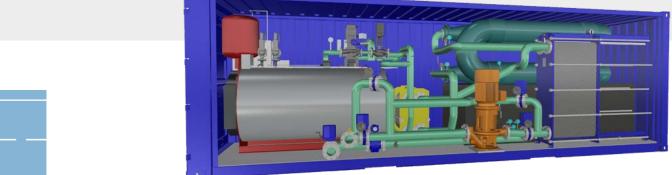
Bawat's Mobile BWMS allows ballast water treatment on land or barge in ports, terminals and shipyards, if an on-board system is not installed or malfunctions.

#### **HOW IT WORKS**

Bawat's Mobile BWMS is easily connected to the ship's ballast water piping. The ballast water is pumped through the system by use of the ship's ballast pump. When the ballast water has passed the Bawat system, the ballast water is in full compliance with the IMO criteria for ballast water discharge.

#### **STANDARD MARINE COMPONENTS**

Bawat's Mobile BWMS is composed of well-known, standard marine components, making the system easy to operate and simple to maintain.



Example of a 200 m<sup>3</sup>/h system in a 30-foot container.



### Ballast Water Management

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#### **ABOUT BAWAT**

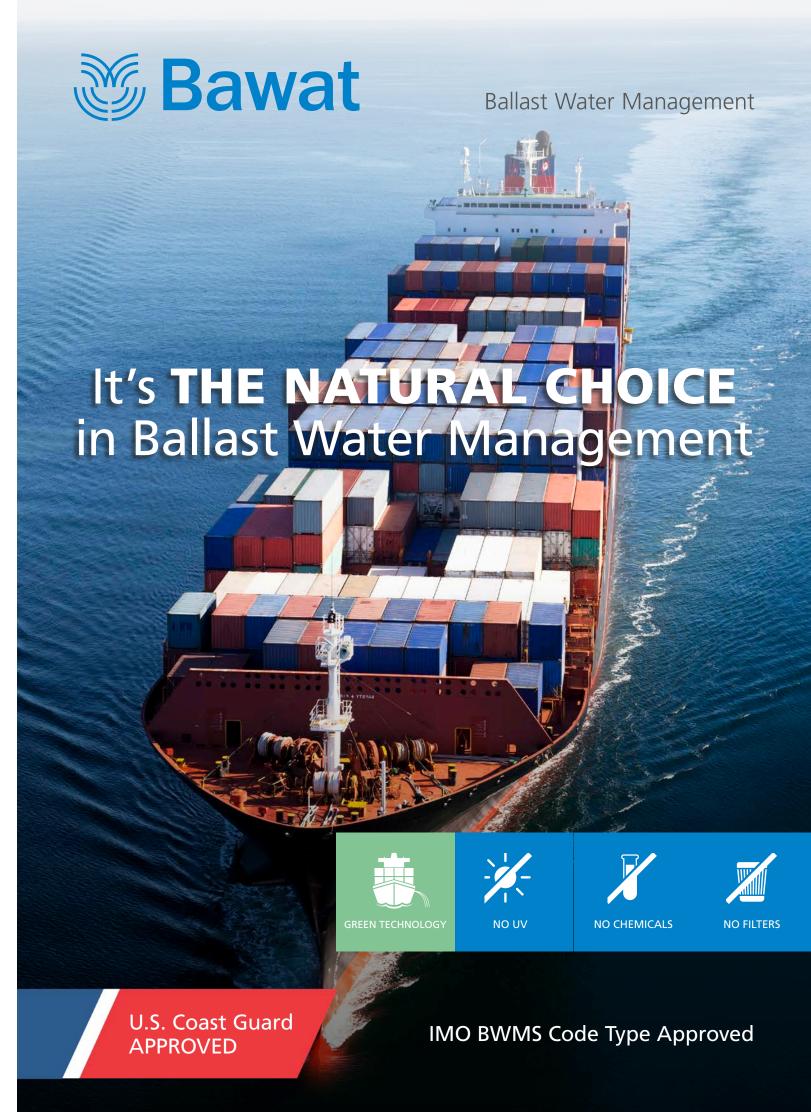
Bawat was established in 2011 with the aim of developing and bringing to market technologies for treating ballast water in the maritime sector. Possessing in-depth knowledge and an extensive network, Bawat is a trusted and professional partner to an industry undergoing rapid growth today and into the future.

#### **OUR COMMITMENT**

The spread of invasive species, carried in ships' ballast water, from one ocean to the next is wreaking havoc on the ecological balance at sea and it has been recognised as a grave environmental threat. Bawat is committed to making a difference concerning the ecological well-being of the world's oceans by introducing innovative sustainable technology for the maritime industry and related sectors.

#### **REGULATORY COMPLIANCE AND CERTIFICATIONS**

The Bawat BWMS is U.S. Coast Guard and IMO BWMS Code Type approved.



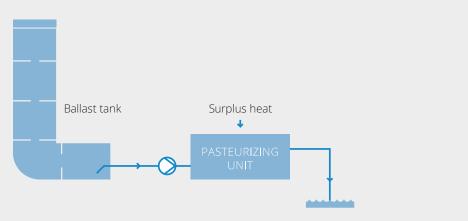
# **IN-VOYAGE** TREATMENTS

# **1) BALLASTING IN-LINE TREATMENT** ONE-PASS Ballast water is pumped from the sea through the pasteurizing unit and into into a clean ballast tank. Ballast tank Surplus heat

# **② DE-BALLASTING IN-LINE TREATMENT**

#### ONE-PASS

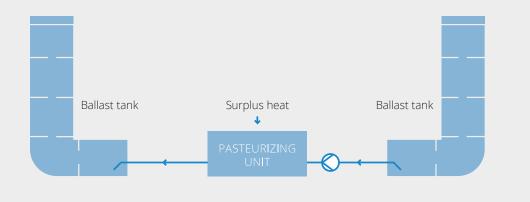
Ballast water is pumped from the ballast tank through the pasteurizing unit and into the sea.



### **3 TANK-TO-TANK TREATMENT**

#### ONE-PASS

Ballast water is shifted from one tank to a clean tank through the pasteurization unit.



# **BAWAT BWMS** THE OVERVIEW

#### PERFECT PASTEURIZATION

BAWAT's unique patented ballast water management system uses pasteurization as the treatment process. Pasteurization has for more than 150 years a track record of being effective.

BAWAT exploits the onboard waste heat energy to eliminate the unwanted organisms. Thus, the Bawat BWMS is the most sustainable BWMS in the market.

#### TREATMENT PROCESS

Ballast water treatment is initiated when the vessel has left port

Ballast water is pumped through the Pasteurizing Unit. Within the Pasteurizing Unit, the ballast water is heated to the pasteurization temperature and kept at this temperature for the required time.

The regeneration section of the unit enables the treated ballast water to preheat the in-coming water, resulting in low power requirements and optimal energy efficiency.

One pass through the system and the water is treated. No further treatment is necessary before deballasting.

#### COMPONENTS

The Bawat BWMS is simple and composed of standard well proven marine components.

#### THE BENEFITS

- No filters
- Independent of water quality and temperature
- Very low OPEX Exploits onboard waste energy
- In voyage BWMS No holding time
- No disruption to cargo operations
- Composed of proven standard marine components only









