

# TECHNICAL CIRCULAR No. 020 of 27 August 2011

To:	All Surveyors
Applicable to flag:	All Flags
Subject:	Ballast Water Treatment System – Surveyor's Guidelines
Reference:	Ballast Water Management Convention

The Ballast Water Management Convention could be in force as early as 2012. If you have to inspect the existing ships, you should be aware about the inspection of the ballast water treatment system (BWTS) now.

Here are top ten things to consider when inspecting a BWTS.

## Step 1: Is it approved?

To install a BWTS on board the ship, it must be 'type approved' by the flag administration or a Recognized Organization in accordance with the relevant IMO Guidelines\*. If the system uses an active substance, this will need to have received final approval from the IMO before type approval can be granted.

#### Step 2: Does it have enough capacity?

All BWTS have a 'total capacity rate' (TCR). This indicates how many cubic meters of ballast water the system can process each hour. The system should have a TCR high enough to handle ship's ballast capacity and operational pumping rate.

#### Step 3: Is it gas safe?

If the ship is a tanker, and the system is going to be installed in a 'gas dangerous area' (i.e., in the cargo area), your system must be certified 'gas safe'.

## Step 4: How much space does it need?

System footprints range from approximately 0.25 m2 to 145 m2, depending on their TCR. Some are single units while others can be installed as separate components.

#### Step 5: What are the capital and operating costs (for surveyor's info only)?

A BWTS is a big investment and could cost as much as \$2,000,000 depending on the manufacturer. As for operating cost, it depends on the type of system and starts from as little as a few dollars per 1,000 m3 of treated water. Many system suppliers quote operating costs below \$20 per 1,000 m3.

### Step 6: Is there enough power available to run the system?

Some systems have very high power requirements - as much as 220kW per 1,000 m3 of treated water. You should check whether it is necessary to run another generator when the system is in operation or even is necessary to install an additional generator set. Another consideration is whether it is a spare breaker available in the electrical distribution board to provide power to the BWTS. If not, an alternative solution may be found.

# Step 7: Will it integrate with the existing systems?

It is advantageous to integrate the alarms and controls for the treatment system with those for the ballast pumping system, so that both can be operated from all control panels.

# Step 8: Are consumables, spares and servicing support readily available?

It is important to be able to keep your BWTS operational. If it stops working, it is in contravention of the Convention and could face fines or detention. Check that spares, consumables and servicing are readily available in all the areas where your ship is trading.

## Step 9: What are the implications for crew training?

Whatever BWTS is to be considering, training will be required on operating and maintaining the system, and health and safety aspects such as chemical handling. Training requirements will need to be included in the ballast water management plan required by the Convention.

# Step 10: How might it affect tank structure and coatings?

Corrosion and coating degeneration are two potential effects that system substances and processes may have on tanks. You should get assurance from the system manufacturer that tanks will not be adversely affected.

#### REFERENCES:

Ballast Water Management Convention

#### **ATTACHMENTS:**

No.

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