Bulletin

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Australian Ship Safety Information

--- Ballast Water Management System

As indicated in IMO Circular No. BWM.2/Circ.59 as in attachment No.1, from June 16, 2016, Australian had accepted the use of Ballast Water Management Systems (Abbr. BWMS) subject to following restricted condition:

1. BNWS holding IMO Type Approval Certificate
2. Vessel was provide with a valid Ballast Water Management Certificate, or Certificate of Compliance, that is approved by a port state administration, or a recognised survey authority
3. Vessel was provide with a valid Ballast Water Management Plan specific to the vessel
4. Vessel was provide with Ballast Water Management Records that clearly demonstrate the BWMS has been operated consistent with the Ballast Water Management Plan.
5. Crew were proficient in the operation and maintenance of the BWMS.

Currently, Australia still accept traditional ballast water management methods such as Sequential exchange (empty/refill) and Flow-through exchange as used on board the vessel before.

Meanwhile, Australian Government, Department of Agriculture and Water Resources released its updated < Australian Ballast Water Management Requirements (Ver.6)>, as in attachment No.2.

【NOTE 1】Traditional ballast water exchange methods:

1. Sequential exchange (empty/refill)

Sequential exchange is the emptying of a ballast tank of high-risk ballast water prior to refilling it with water sourced from the deep ocean. In addition to the requirements

above on exchange location, vessels conducting an empty/refill operation must ensure that the residual volume is less than 5% of the total tank volume.

When verifying an empty/refill operation, a **biosecurity officer** (Quarantine Officer same as below) will compare the residual volume of the tank to the final volume on arrival to ensure that at least 95% of high-risk water was exchanged.

2. **Flow-through**

A total of three times the total ballast capacity of the tank (300%) must be pumped through when conducting exchange using the flow-through method.

The 300% capacity is measured from when water begins to overflow from the tank, not from when the pumps start. This is the case regardless of whether the tank was partially or completely full at the beginning of the flow-through process.

Tanks must be flushed one at a time or in similar port and starboard pairs. If co-joined ballast tanks are flushed, a biosecurity officer may request documentary evidence of the ballast tank layouts to ensure compliance with these requirements. Flushing dissimilar tanks together does not meet Australian requirements and may result in the ballast water not being managed for discharge in accordance with the **Biosecurity Act** (ACT related to ballast water exchange) .

A biosecurity officer can verify if a sufficient volume of water has been exchanged by using the pump time and capacity (pump rate) to calculate if at least 300% of the total tank capacity has passed through the tank.

Whatever methods for ballast water exchange to be used, Ballast water exchanges must be conducted as far from the nearest land as possible, but not within 12 nautical miles from the nearest landmass and, where possible, in water at least 50 metres deep.

Under the BWM Convention, the outer edge of the Great Barrier Reef and part of the Torres Strait region are considered land as indicated from below points:

From the nearest land off the north-eastern coast of Australian means from a line drawn from a point on the coast of Australia in

latitude 11°00´ S, longitude 142°08´ E

to a point in latitude 10°35´ S, longitude 141°55´ E

thence to a point latitude 10°00´ S, longitude 142°00´ E

thence to a point latitude 9°10´ S, longitude 143°52´ E

thence to a point latitude 9°00´ S, longitude 144°30´ E

thence to a point latitude 10°41´ S, longitude 145°00´ E

thence to a point latitude 13°00´ S, longitude 145°00´ E

thence to a point latitude 15°00´ S, longitude 146°00´ E

thence to a point latitude 17°30´ S, longitude 147°00´ E

thence to a point latitude 21°00´ S, longitude 152°55´ E

thence to a point latitude 24°30´ S, longitude 154°00´ E

thence to a point on the coast of Australia in latitude 24°42´ S, longitude 153°15´ E

Therefore, ballast water must be exchanged at least 12 nautical miles from this area to meet Australian requirements. Regulation A-1.6 of the Annex to the BWM Convention defined the relevant area of the Great Barrier Reef and Torres Strait, corresponding Map was indicated in attachment No.3.

REMINDER, Vessels are required to maintain a Ballast Water Record system to record the management of all ballast water taken up and discharged within Australian seas. This system should be separate to the deck log and be available for inspection by a biosecurity officer during an on-board inspection. The details that need to be recorded depended on the type of ballast water management used. Before calling Australian Port, crew ALSO MUST

complete the Australia required Ballast Water Report using special Form as indicated in attachment 4, in which all the contents must be consistent with above Ballast Water Record system.

【NOTE 2】Australia required Ballast Water Report Form:

Two different Ballast Water Report Form will apply to situations depending whether BWMS had been used on board or not.

Additionally, it was noted actual pump rate was a critical factor to the effect of flow-through exchange. The actual pump rates will differ from their rated capacity due to:

1. Wear on pumps, pipes etc.
2. Depth underwater of sea inlet (vessel's draught)
3. Horizontal and vertical distance of each tank from the pump (friction/gravity)
4. Vessel trim (trim by the stern will pump the water uphill and force the pump to overcome gravity)
5. Variations in ballast main diameter

To ensure that sufficient water has been flushed through a tank to satisfy Australian requirements, Australian Government, Department of Agriculture and Water Resources **strongly recommends** that ballast water management equipment such as pumps be regularly surveyed and tested to verify actual delivery rates using template in Attachment No.5 Ideally, the pumping rates should be recorded in the ballast water management plan and verified through annual surveys.

【NOTE 3】Australia required ballast pump routine test methods:

Pump tests should be conducted against the fore peak tank as it is generally the most distant tank from the ballast pumps, most have a portion above the waterline and most ballast mains (pipes) will incorporate a series of reductions in diameter and changes in direction between the pump and the tank. The combination of all of these

factors leads to the fore peak tank receiving less water per hour than any other on the vessel.

The pump test should therefore comprise filling the forepeak from empty or waterline (as proven by a manual sounding) until it overflows, and timing the operation.

If more than one ballast pump is fitted, each pump should be tested separately. If two pumps are intended to be used together in flow-through operations, a separate test using both pumps together should be conducted. The quantity being delivered by two pumps operating together into a common line would usually be less than the sum of each pump's individual delivery rate.

Since it would be unusual to use two pumps to fill the fore peak tank, a test of the combined delivery rate of two pumps should be conducted against forward upper wing tanks, ideally above the waterline (for example, Top Side Tanks 1 Port and Starboard).

The department recommends a pump test only be conducted when it is safe to do so.

As included in NOTE 1 of context, when using flow-through exchange, The 300% capacity is measured from when water begins to overflow from the tank, not from when the pumps start. This is the case regardless of whether the tank was partially or completely full at the beginning of the flow-through process.

Special Reminder, Severe penalties may apply if a ballast water discharge does not meet the requirements prescribed by the Biosecurity Act.

Attachment 1: IMO Circular BWM.2/Circ.59

Attachment 2: Australian Ballast Water Management Requirements (Ver.6)

Attachment 3: Great Barrier Reef and Torres Strait acceptable for ballast water exchange

Attachment 4: Australia required Ballast Water Report Form

Attachment 5: Ballast water pump test Form

CCS Australia Office

August 5, 2016

Announcement:

1. Intention is to assist and ensure owners to understand and well prepared, ensuring all updated requirements from AMSA can be met
2. For more information, please visit AMSA website at www.amsa.gov.au and CCS website at www.ccs.org.cn
3. The information contained does not and cannot supersede any AMSA or related governing parties requirements as well as CCS class rules and regulations.