SHIP SAFETY BULLETIN

Bulletin No.: 01/2016
RDIMS No.: 11363543
Date: 2016-01-20
Y - M - D

We issue Ship Safety Bulletins for the marine community. Visit our Website at www.tc.gc.ca/ssb-bsn to view existing bulletins and to sign up to receive e-mail notices of new ones.

Subject: **LARGE FISHING VESSELS - EFFICIENT BILGE DRAINAGE SYSTEMS IN ALL WATERTIGHT AND REFRIGERATED SPACES**

Scope:

This Ship Safety Bulletin applies to all Large Fishing Vessels (longer than 24.4m or greater than 150 gross tonnage) which are inspected under the *Large Fishing Vessel Inspection Regulations*.

Purpose:

This Ship Safety Bulletin aims to remind all Large Fishing Vessel owners and operators that they must ensure that all bilge drainage systems fitted in watertight compartments, **including refrigerated watertight compartments**, are functional and maintained on a regular basis.

Reason:

This Ship Safety Bulletin is issued in response to Transportation Safety Board (TSB) recommendation #M-92-05 regarding the sinking of the fishing vessel "NORTHERN OSPREY" on June 27, 1990, off Northern Labrador.

Although the incident occurred in 1990 and the report was released in 1992, the TSB recently reactivated' its recommendation to Unsatisfactory – Active.

This fishing vessel sank after being damaged by ice and subsequently flooded. The TSB determined the lack of effective pumping ability in the affected space to be a factor.

Details:

The following text is taken from the TSB report # M90M4020, regarding the events and factors that led to the sinking of this vessel:

> "While manoeuvring in ice-infested waters, on 27 June 1990, the vessel sustained damage to her shell plating on the starboard bow in the vicinity of a common bulkhead between a fuel oil tank and the fish hold. As a result of this, fuel oil gained entry to the fish hold, followed some hours later by sea water.
>
> The Transportation Safety Board of Canada determined that, while operating in ice conditions, it is most probable the vessel was holed, due to contact with ice. The holing was not detected and, in an effort to remove oil from the fish hold because it could not be effectively pumped, the watertight subdivision was lost when a manhole cover to the pipe tunnel and an access door from the pipe tunnel to the engine-room were removed / opened to drain the oil, and not replaced /closed. Sea water then flooded the hold and engine-room, and the vessel was lost."

Keywords:

1. Bilge Pumping System
2. Effective
3. Maintained

Questions concerning this Bulletin should be addressed to:

AMSDS
Small and Fishing Vessels, Design and Equipment
Standards and Boating Safety
613-998-0652

Transport Canada
Marine Safety and Security
Tower C, Place de Ville
330 Sparks Street, 11th Floor
Ottawa, Ontario K1A 0N8

Contact us at: marinesafety-securitemaritime@tc.gc.ca or 1-855-859-3123 (Toll Free).

Canada

"Attempts were made, unsuccessfully, to pump the oil out of the fish hold with that compartment's bilge suction system. The only reason for the failure of the bilge suction system to work is the likelihood the suction end of the bilge lines were frozen."

Important Reminders:

In light of the events that led to the loss of the "Northern Osprey" owners and operators of all large fishing vessels are reminded of the following safety related requirements and general principles of prudent seamanship:

- All large fishing vessels must satisfy the requirements of the *Large Fishing Vessel Inspection Regulations*, sections 14(4), ... *piping and means for drainage shall be so arranged that any water that may enter a watertight compartment can be pumped out...*
- The current *Large Fishing Vessel Inspection Regulations*, section 14 applies **to all watertight compartments** – whether they are refrigerated or not.
- Since the current regulations include no provisions that exclude refrigerated compartments, section 14 does not exclude refrigerated spaces.
- To ensure efficient bilge drainage in refrigerated compartments, vessel owners and operators should monitor accumulated liquid condensate from refrigeration equipment for proper drainage, to make sure it does not accumulate and freeze, which could prevent the crew's ability to pump the bilge compartment that contains refrigeration equipment.
- Refrigerated Machinery Certificate (RMC) class notation is an option for providing continuous drainage of condensate from the inside of refrigerated spaces, insulated chambers and cooler trays. However, this option **does not** supersede nor replace the regulatory requirements of section 14 of the *Large Fishing Vessel Inspection Regulations*.
- Fishing vessel owners and operators should ensure that all aspects of the main bilge pumping system onboard the vessel are maintained on a regular basis. Procedures for regular maintenance should include, but not be limited to ensuring that:
  - bilge pumps are working in satisfactory condition;
  - piping is in satisfactory condition;
  - strainers are clean;
  - valves are free and accessible;
  - bilge wells and suction points are free from water and debris; and
  - the system is functional under the full range of anticipated temperatures.

Important Notes:

- Fishing vessel owners and operators should develop, practice and follow proper bilge pumping and emergency procedures.
- TCMSS inspectors and Recognized Organization surveyors have been instructed to verify that efficient bilge drainage systems are provided in all watertight compartments; including refrigerated compartments and that these systems are functional under the full range of anticipated temperatures.
- Bilge pumping systems are not designed to save a vessel from the entry of extreme amounts of seawater.

References:

- *Canada Shipping Act 2001* - Large Fishing Vessel Inspection Regulations
- SSB 06 / 1998 – Responsibility of Ship owners and Masters Respecting Maintenance of Watertight Integrity of their Vessels
- SSB 09 / 2002 – Bilge Pumping Systems: Early Detection Saves Lives
- TSB Incident Report M90M4020 – Northern Osprey
- Marine classification society requirements for refrigerated cargo installations and piping design systems.
- Transportation Safety Board Definition. Unsatisfactory. Active. Refer to web link; http://www.tsb.gc.ca/eng/recommandations-recommendations/rg.asp