

Global service  
built around you

**North**

# Talkback: Issue 4

## February 2015



A BULLETIN FOR  
SURVEYORS, CONSULTANTS  
AND CORRESPONDENTS



# Talkback: Issue 4

## CONTENTS

Introduction.....	01
Assessing Living Conditions.....	01
Checking MARPOL Annex I Compliance .....	03
Condition Survey News.....	06



Is the housekeeping up to standard?

### Introduction

Welcome once again to Talkback, a periodical bulletin for marine surveyors, consultants and correspondents.

In this issue we will look at living standards on board ships and how to assess these standards when carrying out surveys. This is particularly important when carrying out P&I condition surveys - such conditions, including hygiene and cold store performance, are within the scope of the inspection.

It is vital that vessels' bilge water treatment equipment, such as the oil water separator and oil content monitor, are in full compliance with statutory regulations such as MARPOL Annex I. Surveyors must be confident in testing these items of equipment and are able to spot the tell-tale signs if there is anything untoward.

We have an update on the latest developments and news on condition surveys. To help us plan for the future, we would like to know your thoughts and experiences on using electronic survey forms that could be filled in during the survey such as on a tablet device or smartphone. We will also be focusing on the prioritising and selecting of representative samples for inspection and testing as well as clarifying the scope of a follow-up survey.

North's new website went live in January 2015 and now includes a fantastic new feature that will aid our Members. In collaboration with Gray Page, we have provided an interactive map that shows Maritime Threats and Incidents (MTI), identifying current incidents, enduring risks and danger areas. It is important that this map is kept up to date with reliable information and as such we request your local expertise.

Remember, back issues of Talkback are available for download from our website at [www.nepia.com](http://www.nepia.com)

### Assessing Living Conditions

There may be occasions when a surveyor is called upon to assess the living conditions on board a vessel, most commonly when instructed to carry out a P&I Condition Survey.

The International Group P&I Condition Survey includes the following in its scope:

#### 4.5 Hygienic Standard and House Keeping

4.5.1 Are crew galley and pantries clean and tidy? Is fitted equipment in apparent satisfactory condition? Are suitable food handling procedures in place?

4.5.2 Are provision and cold stores clean, tidy and maintained to correct temperature?

4.5.3 Is the general house-keeping standard, including sanitation, satisfactory?

There may also be instances when a surveyor during the course of an unrelated attendance raises concerns on the apparent living conditions on board.

Assessing habitable on board conditions is of course subjective and there are varying perceptions on what are acceptable standards of hygiene and cleanliness. So the question is to what criteria should it be assessed?

The primary legislation covering conditions on board a vessel is the ILO Maritime Labour Convention (MLC) 2006 which was introduced to protect the rights and welfare of seafarers. Title 3 of MLC, "Accommodation, Recreational Facilities, Food and Catering" is particularly pertinent.

Additionally, the World Health Organization (WHO) International Health Regulations of 2005 require that a Ship Sanitation Certificate be maintained (replacing the old deratting certificate). Details on the scope of inspection required for issue of the appropriate certification is in their publicly available handbook (see further reading later in this article).

### Food Safety & Hygiene

Fundamentally, a vessel must have:

- Adequate supplies on board for the planned voyage length and taking into consideration the trading area.
- Suitable food safety or food handling policies and procedures.
- Food that is safe to eat.

It is also important that the crew are provided with food that is both nutritious and varied.

The United Kingdom MCA in their guidance notice MGN 397 stated that the ten main reasons for food poisoning are:

1. Preparation of food too far in advance and stored at room temperature.
2. Cooling food too slowly prior to refrigeration.

# Talkback: Issue 4 (cont.)

3. Not reheating food to high enough temperatures to destroy harmful bacteria.
4. Using contaminated cooked food.
5. Undercooking.
6. Not thawing frozen meat for sufficient time.
7. Cross contamination from raw food to cooked food.
8. Storing hot food below 63°C.
9. Infected food handlers.
10. Improper use of leftovers.

The "danger zone" for food is between 5°C and 63°C. It therefore stands to reason that hot food is kept >63°C and cold food is maintained <5°C.

The following includes some of the areas that have an effect on the levels of food safety and hygiene with typical indicators to allow an assessment.

## Galleys and Mess Rooms

The general cleanliness of the galley, food preparation areas and food serving areas will often be the biggest indicator of hygiene standards.



Ship's Galley

However, specific items that can be checked are:

- Are galley hoods/extractors clean and free from build-up of grease?
- Is there sufficient hand washing facilities with hot water, soap and hygienic drying facilities?
- Is food being left at the danger zone temperature and/or uncovered for excessive periods?
- Are tongs being used and are measures in place to prevent cross contamination?
- Are there suitable garbage arrangements that allow segregation and hygienic collection?
- Are work surfaces intact and easily cleanable?
- What are the observed standards of personal hygiene in these areas?
- Are scuppers and drains clean and covers in good condition?

## Scullery or Dishwashing Area

It is important that cleaned pots, crockery and utensils are kept separate from dirty to prevent contamination. Dishwashing

and pot-washing equipment should be operational with a wash cycle that uses detergent and rinse cycle that achieves sanitisation by reaching minimum temperatures (180°F or 82°C) or through chemical means.

In the absence of an operational dishwasher which necessitates manual washing, a three stage process of wash, rinse and sanitise can be practiced.

## Cold Storage

The correct storage temperatures for cold rooms on board a vessel are as follows:

- Freezing at or below -18°C
- Storage at or below +4°C

These are the safe temperatures for frozen and chilled storage respectively but it is thought that a slight deviation is unlikely to create any significant risk to food safety.



Freezer store temperature check

The manner of stowage in freezers and cold rooms is important. Although crew may have challenges with capacity regarding the storage of provisions when embarking on a long voyage or if anticipating future procurement problems, they should avoid storing foodstuffs directly on the deck of the rooms as it may become damaged by any standing water.

Raw and cooked foods must remain segregated and avoid storing meat above other foods.

General cleanliness should be noted and particular attention should be given to door seals, ensuring they are clean and not torn as they can harbour debris.

Important safety features fitted to walk-in cold rooms are the 'locked-in' or 'man-trapped' alarm and the internal door release; these should be tested during routine condition surveys.

## Potable Water

A ship must have sufficient amounts of clean drinking water that is fit for human consumption; the amount held on board is determined by the trading pattern of the vessel, the length of voyages and the ability to make fresh water using flash evaporators or reverse osmosis plants.

However, a general rule of thumb regarding reserves is that there should be a minimum two day supply held in dedicated potable water storage tanks.

When bunkering potable water, the ship should use designated hoses that are not used for any other purposes. They must be capped at both ends when not in use.

Desalination equipment such as fresh water generators (flash evaporators) and reverse osmosis plants should be in good order and properly maintained. Potable water lines should not

# Talkback: Issue 4 (cont.)

be cross connected to any other non-potable systems (unless suitable air breaks or vacuum breakers are fitted).

Potable water that is generated on board or bunkered from shore should undergo an appropriate disinfection process. This is particularly important when water is produced from a flash evaporator under vacuum because the water is not subject to temperatures high enough to kill bacteria. Typical disinfection systems are chlorination, silver and ultraviolet treatments. They should be in working order and checked to ensure there are no means to bypass or override the treatment unit.



Potable water treatment

As well as water for drinking, the crew must have a supply of hot water for washing purposes and for the galley. Calorifiers should be operational and able to meet demand.

The potable water system should be included in the ship's planned maintenance system and include schedules for flushing and super-chlorinating equipment, lines and shower heads.

## Pest Management

Often referred to as 'vectors', pests can include many types of insect as well as mice and rats. Probably the most common insects to affect living areas are cockroaches, flies and to a lesser extent bed bugs and fleas.

Pests are attracted by food wastes and the best prevention is cleanliness and good garbage management.

The ship should maintain a pest control book detailing the number and type of pest(s) found and their location as well as any treatment applied.

## Toilets & Sanitary

There must be an adequate number of flushing toilets and washing facilities for the crew. The toilets must include hand washing facilities with hot water, soap and hygienic drying facilities, preferably paper towels or a powered hand dryer.

Toilets and washrooms should be kept clean and although we all have different interpretations of what constitutes a 'clean'

toilet; common sense should apply when making an assessment.

## Laundry Facilities

Laundry facilities are vital and a lack of working machines is a common grievance from crew. The re-wearing of soiled clothes not only leads to an unpleasant environment but can cause skin complaints.

A vessel must have an adequate number of washing machines, dryers and pressing equipment, as well as detergents.



Laundry Facilities

## Further Reading

World Health Organisation:

[www.who.int/ihr/publications/handbook\\_ships\\_inspection/en/](http://www.who.int/ihr/publications/handbook_ships_inspection/en/)

United Kingdom MCA guidance:

[www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/282167/mgn397.pdf](http://www.gov.uk/government/uploads/system/uploads/attachment_data/file/282167/mgn397.pdf)

MLC 2006:

[www.ilo.org/wcmsp5/groups/public/@ed\\_norm/@normes/documents/normativeinstrument/wcms\\_090250.pdf](http://www.ilo.org/wcmsp5/groups/public/@ed_norm/@normes/documents/normativeinstrument/wcms_090250.pdf)

## Checking MARPOL Annex I Compliance

If a vessel is found to be in violation of legislation such as MARPOL Annex I or the US Act to Prevent Pollution from Ships, then fines can total several million US dollars and crew members can find themselves in prison.

Common factors in high profile prosecutions are the use of temporary transfer lines, known as 'magic pipes' which effectively by-pass the oil water separator, the manipulation of the oil content monitor and the falsification of the ship's Oil Record Book.

It is important that the on board equipment and systems are operated as designed and approved. It is also important that an attending surveyor knows how to properly test and inspect these aspects of the bilge water management system as early identification of an irregularity may prevent a serious incident.

Although time is often very limited during a P&I condition survey, there may be a need to scrutinise the vessel's Oil



# Talkback: Issue 4 (cont.)

Record Book, and as such surveyors should be familiar in its use and the correct methods in filling it in.

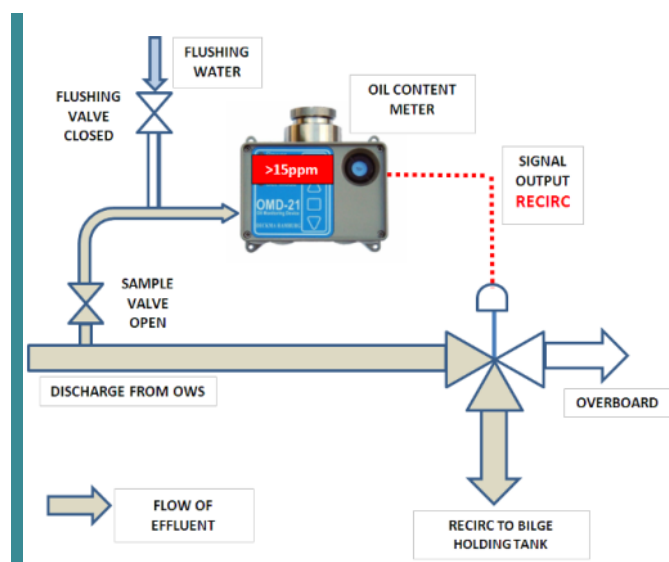
## Testing the 15ppm OWS

There are number of different types of oil water separator (OWS) but regardless of the processing method (gravity separation, coalescing, filtration or centrifuge) a common feature that is important to focus on is the three way valve which is controlled by the oil content monitor (OCM).



Oil Content Monitor on centrifugal type OWS

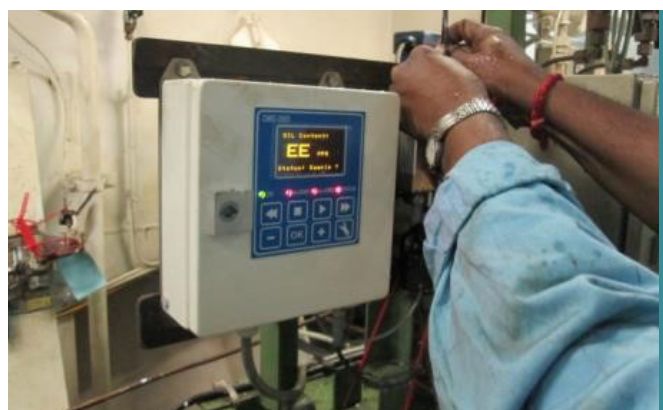
In very basic terms, when the sample passing through the OCM is measured it will give a signal to the three way valve on the OWS discharge line which will direct the effluent to either the overboard line or to the recirculation line.



Recirculation when at oil content greater than 15ppm

It can be difficult to test the function of the OWS when in port as there will be reluctance by crew to operate the unit if there is a risk of pollution.

However a simple test is to first ensure the systems manual overboard valves are fully closed, and then pass flushing water through the OCM until it reads 15ppm or less. Then by using an object to obscure the sensor, the reading should increase to over 15ppm and activate an alarm. As well as activating the alarm, the three way valve should be heard to operate as it changes position from allowing overboard discharge to recirculation.



Testing the Oil Content Monitor

This is a very rudimentary test and does not verify the accuracy or calibration of the OCM; however, calibration certificates issued by shore based specialists can be requested for review. Nor does this test positively confirm the actual operation of the three way valve but only the operation of the valve actuator.

It is increasingly common to fit open ended drain lines on the overboard line and recirculation line either side of the three way valve and a means to isolate the overboard line. This allows for a more thorough testing of the OWS when in port and helps prove positive flow through the recirculation line and more importantly prove no flow through the overboard line.

However, any such modification made to the system must have been made with the approval of Flag State or Class as appropriate.

An important observation a surveyor can make is that of crew familiarity when testing the equipment. The vessel should have a testing procedure and the ship's engineers should be confident in this action.

For vessels equipped with an OWS complying with IMO Resolution MEPC 107(49), the crew must not only be thoroughly familiar with the operation and maintenance of the equipment, but also know how to retrieve historical data from the OCM in accordance with manufacturer's instructions and as indicated in MEPC 107(49).

# Talkback: Issue 4 (cont.)

When Port State Control (PSC) carry out their inspections and they suspect the crew are unfamiliar or lacking confidence in its testing, this often leads them to investigate further and raises their suspicions on how the equipment is operated and maintained. In such an event, the PSC inspector may go on to request the removal of the pipe between 3-way valve and the overboard valve to allow an internal inspection. If there is presence of oil residue this will lead them to conclude that oil has passed illegally through the pipe.

## Magic Pipes

There have been a number of instances where bilge water has been discharged illegally by directly pumping overboard. A common method in executing this illegal practice is the use of temporary transfer lines known as 'magic pipes' which bypass the processing equipment.

Magic pipes are often temporary, sometimes flexible and usually easily removed. If the magic pipe has been removed before an inspection, then an inspector or surveyor may be alerted by disturbed paint coatings on flanges. Or conversely, if a fresh coat of paint is noticed on a flange this may be seen as an attempt to hide the evidence. Blanked flanges and T-pieces on the discharge pipes may also give rise for a need to investigate deeper.



A magic pipe – in this case a temporary plastic pipe

Magic pipes can be very difficult to identify as they may be positioned well away from the OWS and out of sight under the engine room floor-plates.

The magic pipe may be a direct means of discharging overboard the bilge holding tank (or even sludge tank) or from the bilge wells. The more creative offenders may tap into other discharge systems such as the ballast pumps or sewage/ greywater lines.

There are a number of preventative measures based on industry best practice that can be considered to stop the illegal

use of magic pipes, including welded beads on the pipe flanges or the flanges drilled and security seals fitted through them accordingly.

## Oil Record Book

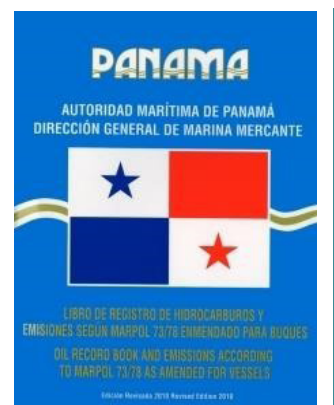
If a vessel is suspected of an illegal discharge or improper use of the bilge processing equipment, the relevant port authorities will scrutinise the vessel's Oil Record Book. If there are irregularities in the Oil Record Book this can lead to a charge of falsifying records, which in the United States is a serious federal offence, regardless of where in the world the alleged violation took place.

It should also be noted that it is easy for a ship's crew to fall foul when it comes to the Oil Record Book, and port State authorities may interpret genuine mistakes as something more sinister.

Entries in the Oil Record Book should be made with good adherence to IMO Guidelines MEPC.1/Circ.736/Rev.2. However, problems may arise when each watch-keeping engineer has a slightly different way of making entries – the codes may very well be correct but the style and layout of entered data may differ. This in principle is acceptable, but it makes following the entries when checking and auditing difficult. Although not considered a 'defect' as such, a helpful suggestion to the crew would be to implement a uniform and consistent method of making entries by all persons.



Oil Record Book Part 1



All changes in tank quantities should be accounted for in the book. Be aware that there may be less traditional processes practiced on board such as the boiling / steaming of sludge tanks and the resulting changes in levels must be accounted for.

Engine room alarm records may also be checked for bilge high level alarms and the Oil Record Book then reviewed for a correlating entry related to the pumping operation.

Another check that can be made by a reviewing party is to cross reference the most recent recorded tank levels with the actual levels at the time of inspection.

For more information, please visit [www.nepia.com](http://www.nepia.com)    

Copyright © 2020 The North of England P&I Association Limited

MEMBER OF  
**IGP&I**

# Talkback: Issue 4 (cont.)

Further information on bilge water management can be found in our loss prevention briefing at: [www.nepia.com/latest/all-publications/](http://www.nepia.com/latest/all-publications/)

## Condition Survey News

As you may already know, the present condition survey report format used by North and many other International Group Clubs utilises interactive pdf documents. It has been assumed that an attending surveyor will print these documents (Parts A through to D) and generate a rough handwritten draft during the actual survey and later complete these electronically before submitting to the Club. As the surveyor is required to leave a copy of Part D (List of Defects) with the ship's master before leaving the vessel, then a handwritten version is often the only option at that time.

But as technology advances and smartphones and tablets are increasingly common, we would be interested to know your thoughts and experiences on using these devices for survey reporting through a specially designed app or program.

Apart from the obvious restrictions on the use of electrical and electronic equipment on tankers and in some terminals, would it be feasible to complete the survey report electronically during the actual attendance by using a mobile device or tablet and negate the need for printing?

If you have any constructive comments on this, positive or negative, please contact us at [survey@nepia.com](mailto:survey@nepia.com)

## Prioritising the Scope

We rely heavily on the skill and judgement of an attending surveyor to decide on which areas of a survey require more attention and time than others. Surveys are carried out under a limited timescale and the attending surveyor is also at the mercy of the availability of the ship's crew in accompanying him or her as well as making items available for inspection or testing.

Within the survey report format, there are a number of questions and items whose scope depend on the judgement of the surveyor and the time and assistance available. Such items include:

- Internal inspections of ballast tanks and cargo tanks.
- Testing of fire detectors.
- Inspection and testing of remote shutdowns and ventilation flaps.

In the majority of instances it is unreasonable to expect all tanks and voids to be inspected and it would be more appropriate to look at a representative sample. Taking the example of ballast tanks, perhaps a peak tank, a double bottom and a wing tank would be suitable and if all is in order then class records or on board tank inspection reports can be checked in lieu of further tank inspections.

There is no hard and fast rule in selecting a representative sample for inspection and we leave it to your good judgement, but if you require any specific guidance please do not hesitate to ask your instructing principle.

## Follow-Up Surveys

There is sometimes a little confusion when a request is made to carry out a follow-up survey on a vessel, particularly when the instructed surveyor was not the person who carried out the initial full condition survey.

If instructed to carry out a follow-up survey, you should request clarification from your instructing principle on the scope of the survey and the reporting requirements.

Upon instruction you should receive a copy of the previous condition survey report. The rule of thumb is that the scope of a follow-up survey is limited to checking the rectification of the defects raised, such as the items listed in Part D of the International Group report format, and any concerns raised by the previous surveyor in the 'Surveyor's Summary' in Part A.

Upon completion of the follow-up survey a revised Part D (list of defects) should be issued with comments against the previous defects stating 'completed', 'in progress' or 'outstanding'. However, during the course of the follow-up survey should you notice any further defects then these can be added to your new list.

Reporting requirements for a follow-up survey are limited to Part A and Part D. There is no requirement to submit Parts B and C.

As always, ensure you are using the most up to date format and avoid keeping templates on your computer as these may become out of date. Survey packages are downloaded from our website, which can be accessed at:

[www.nepia.com/about-us/what-we-do/loss-prevention/survey/](http://www.nepia.com/about-us/what-we-do/loss-prevention/survey/)

## Disclaimer

The purpose of this publication is to provide a source of information which is additional to that available to the maritime industry from regulatory, advisory, and consultative organisations. Whilst care is taken to ensure the accuracy of any information made available no warranty of accuracy is given and users of that information are to be responsible for satisfying themselves that the information is relevant and suitable for the purposes to which it is applied. In no circumstances whatsoever shall the Association be liable to any person whatsoever for any loss or damage whensoever or howsoever arising out of or in connection with the supply (including negligent supply) or use of information.

Unless the contrary is indicated, all articles are written with reference to English Law. However it should be noted that the content of this publication does not constitute legal advice and should not be construed as such. Members should contact the Association for specific advice on particular matters.

Published February 2015.