

**This Compendium contains the following Case Studies issued in year 2012:**

- 1) Case Study 1/ 2012 "Collision/ Contact in restricted visibility between cruise ship and cargo ship"
- 2) Case Study 2/ 2012 "Fire hazard in accommodation"
- 3) Case Study 3/ 2012 "International Marine transportation Limited Safety Alert Bulletin"
- 4) Case Study 4/ 2012 "Damage to side shell door"
- 5) Case Study 5/ 2012 "Grounding in Svalbard Archipelago"
- 6) Case Study 6/ 2012 "Improper mixing of swimming pool water treatment chemicals"
- 7) Case Study 7/ 2012 "Improper recordkeeping/ missing entries in Oil Record Book"



## V. Ships Leisure S.A.M.

### INCIDENT CASE STUDY 1 -2012:

#### COLLISION/CONTACT IN RESTRICTED VISIBILITY BETWEEN CRUISE SHIP AND CARGO SHIP

##### WHAT HAPPENED

Collision/contact in high traffic area between cruise ship and cargo ship while approaching in dense fog the Pilot boarding ground in a bay.

##### Synopsis'

At approx 0800 LT the Officer on Watch informed the Captain of the reduced visibility; with no traffic in the area. Restricted visibility checklist prepared.

Master on the Bridge at 0833 Local approx.

At approx 0940 LT cruise vessel contacted by the Pilot that asked to the ship to anticipate the arrival, due to low visibility at pilot station. Cruise ship speed increased up to 18 kts; Master on the Bridge monitoring traffic of fishing boats in the area.

At 1055 LT Captain conning. Visibility lowered down to 50 mtrs approx due to dense fog. Fog horn as per COLREG.

At 1105 LT vessel in Red condition, changed over from auto to manual steering. Many targets now on the radars. Pilot contacted on VHF confirming ETA. Speed reduced at 14 Kts approx.

At 1121 LT approaching Bay entrance, a group of targets with no AIS acquired on radar spotted with variable vectors in close proximity of the ship and ship's current course, in order to be aligned to enter the Bay.

At 11:22 LT the anchors clear from lashing in view of the arrival.

At 1123 LT a cargo ship was spotted on port bow of the cruise ship with no apparent working radar and no fog signal. Visibility 50 – 60 mtrs approx. Cruise ship course 328 speed 14kts. (Estimated cargo ship speed 4 ktn) . Engines were set on full astern and rudder hard to starboard. The cruise ship collided with the cargo vessel crossing the course by port side.

Master sounded the GES soon after the contact calling Crew and Passengers to Muster Station.

Passengers informed about situation.

Muster stations dismissed after it was clear that no risk for persons and ship occurred. No persons reported injured.

Both vessels were able to resume their voyages upon assessment of damages reported has confirmed not affecting seaworthiness ; no injuries and no pollution reported by both ships.

The following Deck Officers and ratings were present on the Bridge of the cruise ship at the time of the incident:

Master, 2<sup>nd</sup> Officer on Watch, A/B Wheel, A/B Daily (Fire) lookout, Staff Captain and Safety Officer.

*Note: events and chronological order have been compressed and summarized for the incident case study and may not include all known details about sequence of events and related actions.*

##### EXTENT OF DAMAGE

Cruise ship : bulwark upper most parts port side (approx. 7.5 mtrs in length X 1 mtr in high X 14mm thick) including face plates, 7 nos side longitudinal and stiffeners, 2 nos brackets.

Bulwark first strake port side plating including longitudinal (approximately 1.1 meter in length).

Bulwark second strake port side plating (approx. 3.4 meters in length).

Cargo ship: stbd side bridge wing heavily damaged by the contact with the port bow of the cruise vessel.

##### WHY DID THIS HAPPEN?

The cruise ship appears not to have proceeded at a safe speed given the prevailing circumstances, and not to have made proper use of the bridge anti-collision equipment given the conditions of visibility, although the safe speed for navigation in restricted visibility is always debatable,

The presence of the cargo ship was detected by the radar, but the risk of collision was not assessed with sufficient time to allow appropriate actions to avoid collision.

The risk of collision was ascertained only when the visual contact was established with the cargo ship.

The AIS was apparently not in use on the cargo ship as the target was not detected as threat by the bridge equipment of the cruise vessels; it could have helped to avoid the collision.

The risk of collision with the cargo ship was not ascertained by the bridge team monitoring radars until that the vessels were so close that any action taken would not have avoided a contact/collision.

The cargo ship was keeping course E-NE speed 4 kts crossing the course of the cruise ship that was proceeding W-NW, speed 14 kts, on the recommended track approaching the bay and pilot station .

It's reasonable to assume that the cargo ship did not make proper use of the radar given the prevailing circumstances and conditions of



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restricted visibility; the watch arrangement was presumably not in line with the STCW standards regarding watch keeping at sea under different conditions and areas.

The cargo ship was not using any sound signal as required by Colreg, given the prevailing visibility in the area. The cargo could have used signals permitted in the COLREGS. The presence of the cargo vessel may have been brought to the attention of the lookout if the said ship had been making sound signals, which might have attracted the cruise ship's attention in sufficient time to have allowed action to be taken in order to avoid the collision.

The area was not regulated by traffic separation scheme (although subject to dense traffic)

No vessel traffic service in the area (no monitoring of traffic situation; no information about developing of dangerous situation when an unidentified vessel is entering or manoeuvring in the area in restricted visibility .

Pilot boarding area affected by heavy traffic, restricted visibility and in congested waters.

### ROOT CAUSE / CONTRIBUTORY FACTORS

External Conditions Fog : limited visibility

Human Error : Inattention: Loss of attention, not paying attention; the failure to detect, attend to, or be aware of critical or significant information. Situation awareness.

Judgement- Incorrect assessment, estimation, interpretation or opinion.

Risk taking : taking an action when the outcome is uncertain

Situational awareness I: information incomplete / unsafe conditions

### PROPOSED CORRECTIVE / PREVENTIVE ACTIONS

to disseminate the lessons learned from this accident to all managed ships ;

to review the company's bridge management related procedures and training and the master's standing orders to emphasise Rules 19, 8, 11, and 6 of the collision regulations.

to be reminded that it should never be assumed that the other vessel has a radar. Yachts, for instance, may not and will be relying on hearing a fog signal to give warning of an approaching ship.

Review of the relevant risk assessment .

The attached Marine Guidance Note 369 will be circulated on board all managed ships for review of Masters and bridge management teams.

### INTERNATIONAL REQUIREMENTS

Convention on the international regulation for preventing collision at sea 1972: Rule 6 Safe speed; Rule 8 Actions to avoid collision; Rule 19 Conduct of vessel in restricted visibility , Rule 35 Sound Signals in restricted visibility

STCW Code Chapter VIII, Standards regarding watch keeping, Section A-VIII/2 Part 3, watchkeeping at sea.

STCW Code Chapter VIII, Standards regarding watch keeping, para 15



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### INCIDENT / NEAR MISS - CASE STUDY Nr. 2 -2012/ June 2012

#### FIRE HAZARD IN ACCOMMODATION

##### WHAT HAPPENED

At sea. 1212LT. Smoke in the cabin 4144.  
Reception desk reported to the Bridge smoke in the cabin 4140.  
Almost at the same time all ventilation was shut down as manual call point at the cabin was activated by crewmember discovered smoke.  
"Assessment Party" called by Captain via P.A system from the Bridge.  
ECR informed by OOW.  
Assessment Party reported smoke condition in the Pax alleyway on Deck 4 port side forward. Source of smoke in the cabin 4144 (wheelchair pillow). No fire discovered.  
Area was evacuated and isolated by Assessment Party.  
Assessment Party confirmed no fire found and situation is under control.  
Commenced ventilation of the area with permission from the Bridge. Extra blowers were installed in the area.  
Shell door F2 opened with permission from the Bridge. Smoke was blown out from the compartment through shell door F2.  
Area clear from the smoke.  
All FSDs opened.  
Assessment Party stand down.  
Travel iron removed from cabin.

##### EXTENT OF DAMAGE

Smoke in passenger cabin ; Assessment party alerted ; Partial evacuation of the area.

##### WHY DID THIS HAPPEN?

The cause of hazardous occurrence was the hot portable iron left on the pillow after ironing a dress.  
The risk for the similar incident exists if portable heating devices, used by passengers, left without sufficient attention till it's cooled down.

##### ROOT CAUSE / CONTRIBUTORY FACTORS

Organizational management failure : Passenger was not properly informed of potential electrical hazard and fire risk on board .  
Cabin Staff during routine inspection in the cabin, did not realise that the non authorised portable iron carried by the passenger could represent a fire hazard

##### PROPOSED CORRECTIVE / PREVENTIVE ACTIONS

Use of portable heating devices should not be permitted in passenger cabin  
Travel irons and kettles are not permitted in cabins by Company Regulations and passengers are advised of this in the "Essential Cruise Information Booklet" sent to them with their Tickets.  
Ship's first line of defence against infringements of these Rules are our Cabin Staff and the restriction will be reinforced to them by means of a Master's Directive.  
They will be empowered to remove any banned electrical items they come across and report to their Head of Department.  
Passengers should have the message reinforced to them on boarding.  
Shipboard commands required to review internal procedures in place onboard to prevent fire hazards ; housekeeping staff to be reminded of the fire risk assessment when inspecting guests cabins .

##### INTERNATIONAL REQUIREMENTS

SMS Company procedures :  
FOM 326 Personal electrical appliances  
FOM 341 Fire hazards

# **INTERNATIONAL MARINE TRANSPORTATION LIMITED**

## **SAFETY ALERT BULLETIN**

**NUMBER: MS - 03 / 2012**

### **INCIDENTS WHILST VESSEL UNDER PILOTAGE**

**THE INFORMATION BELOW IS PRODUCED BY IMT MARINE SERVICES AND IS BASED ON REVIEWS OF INDUSTRY INCIDENT INVESTIGATION REPORTS.**

The marine industry continues to experience an increasing number of incidents whilst vessels are either berthing, un-berthing or navigating under pilotage. Typically these incidents include collision, contact with fixed objects and grounding. The purpose of this Safety Alert Bulletin is to highlight this disturbing trend to all vessel operators. It is hoped that the bulletin will encourage vessels operators to increase focus on this area of vessel operations in order to prevent occurrence of such incidents.

IMT has noted following failures of communication between the pilot and the bridge team management which have significantly contributed to such incidents:

- Ineffective master-pilot exchange: Though vessel information is provided to the Pilot by means of pilot card, pilotage plans are not fully reviewed and agreed by the master and/or not communicated to or understood by the bridge team.
- Failure to intervene: The bridge team failed to raise concerns or challenge the decision of the pilot.
- Failure of bridge team to anticipate developing dangers to navigation.
- Insufficient manning of the bridge resulting in reduced focus on pilot's activities.
- Failure to discuss and plan the mooring arrangement during the master-pilot exchange.
- Communication Failure:
  - 1) Pilot communicating with tugs and shore mooring teams in a local language not understood by the vessel's bridge team.
  - 2) Communication failure between the pilot and the bridge team caused through premature issuing of instructions by the pilot before the master/pilot exchange has taken place.

#### **KEY MESSAGES & LEARNINGS:**

- A thorough master-pilot exchange should include
  - 1) Providing vessel's information to the pilot as required by the pilot card.
  - 2) Pilot's plan of maneuvering the vessel at different stages communicated to the master.
  - 3) Details of mooring/unmooring plan and tug arrangements.
- The language of internal and external communication should be agreed and documented during the initial master-pilot information exchange. Bridge team should raise pilot's attention if there is a deviation from the above agreement.
- Vessel operators are encouraged to develop a pro forma to assist masters in receiving and documenting the pertinent information and for easy communication with the bridge team.
- Appropriate bridge manning and delegation of duties is key to the success of the bridge team. Pre-arrival and pre-departure bridge team meetings are an essential step to discuss the final plans for vessel's safe navigation.
- Vessel operators may wish to reiterate master's overriding authority and take steps to instill confidence in them to intervene when necessary.
- The bridge team should not hesitate to seek clarification from pilots regarding any aspect of their plans or communication.

Cohesive interaction between the pilot and the bridge team management, supported by clearly understood plans and communication protocol is key to the safe and effective navigation of the vessels. Operators are encouraged to take every possible mitigation step to prevent future incidents and halt the disturbing trend that is developing in the marine industry.

**Disclaimer**

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### INCIDENT / NEAR MISS - CASE STUDY Nr. 4 -2012/ 26 July 2012

#### DAMAGE TO SIDE SHELL DOOR

##### WHAT HAPPENED

Ship in port (Ireland)  
Vessel moored at 9:00 a.m. LT. port-side alongside..  
Water hose connected port side bunker station deck 3;  
Main gangway located on deck 3.  
Personnel in charge of the gangway informed by the Staff Captain to pay attention to the gangway and bunker side shell doors which open outside as tide predictions for the port did show a difference of 4 mt from high and low tide.  
The OOW on the Bridge was informed of the risks associated with the significant tide in the port.  
According to the estimation made by the shipboard command, the initial arrangements could have been safely maintained until 12:30 LT.  
At 11:00 the Staff Captain gave instruction to the Bosun to prepare the gangway on Deck 5.  
At around 12:00 the Staff Captain was visiting the gangway before to go for lunch: the gangway was still on deck 3 and bunker door left open in its initial position. The security guard was then reminded of the planned shifting of the gangway.  
Gangway was still about 0,7 m above pier level and bunker shell door was about 0,9 m from same level.  
At around 12:45-1250 the bunker door got stuck with the pier fender.

##### EXTENT OF DAMAGE

Port-side bunker shell door was severely damaged by the contact with the pier fender.  
In order to clear the shell door from the fender and remove it for repair, it was necessary to use engines and bow thrusters .  
Local PSC boarded the ship; due to extent of damage affecting the watertight integrity of the ship, ship departure was delayed to the day after in order to allow proper temporary repairs under Class surveillance.  
The repairs were finally approved by Class surveyor attending the ship in the night and ship allowed to sail.



##### WHY DID THIS HAPPEN?

Lack of instruction to the personnel in charge of water bunkering operations and those in charge for surveillance of side shell doors; (outward opening) ;  
The initial arrangement of the side shell openings was not re-assessed in the light of the continuous changes of the tide level when at around 12:00 the Staff Captain was visiting the gangway on deck 3.  
Lack of communication between the Bridge (OOW) and personnel in charge of the gangway/s and fresh water bunkering.  
Lack of supervision by ships senior management.  
Design of the side shell doors: the outward-opening shipside doors, may represent an hazard in those ports affected by significant tidal variations.

##### ROOT CAUSE / CONTRIBUTORY FACTORS

External conditions:  
Significant tidal conditions in the harbour affecting safe mooring .

Human errors :  
ineffective communications between shipboard personnel and key persons on board;  
Inattention and failure to detect or be aware of critical information  
Procedural error : failure to follow an established procedures



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Incorrect assessment of the situation and relevant decision making

Organizational management failure :

Insufficient or inaccurate procedures for ship in port ;

Manufacturer design of the equipment that may lead to hazard when operated under normal conditions;

Lack of supervision and absence of an appropriate situational instruction to operating personnel ;

Poor oversight and failure of shipboard management to effectively oversee assigned personnel ;

### PROPOSED CORRECTIVE / PREVENTIVE ACTIONS

Tidal predictions for ports affected by significant tidal variation to be posted on the Bridge and at gangways.

Shipboard command should provide clear instruction to the designated crew for safe operations and control of all side doors, upon assessment of the prevailing external conditions and relevant predictions for the ship stay in port (tide, wind ect).

Shipboard command to designate a responsible person for control of the side shell doors in port , other than gangway/s.

Company required to improve the procedures relevant to safe mooring and management of side shell doors.

Incident report to be circulated to all managed ships to ensure appropriate lessons are learnt from the safety issues identified by the incident investigation .

### INTERNATIONAL REQUIREMENTS

ISM Code , Part A , Section 5 , Master's responsibility and Authority ;

ISM Code , Part A, Section 7 , Shipboard Operations

Solas II-1 B-2

ICLL 03 Amend / Reg. 21





## V. Ships Leisure S.A.M.

### INCIDENT / NEAR MISS - CASE STUDY Nr. 5 -2012/ 9 August 2012

#### GROUNDING IN SVALBARD ARCHIPELAGO

##### WHAT HAPPENED

A Vessel grounded in an uncharted shoal while approaching Austfonna Glacier ( Svalbard Archipelago).  
At 20:05 LT the vessel was making her way to anchor at sheltered water.  
Weather condition : foggy with visibility reduced to 0,5 ntm; wind Est 20 kn , 1 mt swell,  
Vessel draft: Fwd 4.6 m – Aft 4.7 m  
Bridge team at the time of the incident :  
Master – Staff Captain – OOW ( 20/24) – OOW (16/20) – Helmsman on duty - Deck Cadet – Expedition Leader  
Variable depths from 14 to 68 mt were reported under keel.  
Charted depth was 15 meters, immediately after depth reported under keel was 12 meters. Speed reduced to minimum required for steering - approx. 2.5 kn.  
At 20:12 LT depth under keel dropped to 9.8m, and decision was taken not to proceed further on this course. Master ordered helm hard to starboard, commencing manoeuvre for turning the vessel back and make away from the glacier when few minutes later the speed dropped suddenly to 0 kts with engines running ahead.  
The vessel quickly refloated without assistance and continued on her voyage.  
There were no injuries or damage to the vessel, and there was no pollution.  
Guests on board duly informed by the Master.

##### EXTENT OF DAMAGE

Damage was limited to minor cracks of the bottom tanks. No oil leaks occurred. Limited water ingress in :  
No. 3 Port O.F. Double Bottom Tank  
No. 8 Double Bottom Tank  
Starboard Aft Propeller oil Double bottom tank  
Temporary repairs done in Longyearbyen on July 26/27 under Class surveillance  
COC issued to be dealt with at next dry-dock (Oct.2012)  
Norwegian Authorities boarded the ship together with Flag Inspector in order to conduct an investigation that was completed in the same port.

##### WHY DID THIS HAPPEN?

Safety issues directly contributing to the accident which have resulted in the hereafter listed recommendations:  
The route plan took the vessel with a medium draft 4.6 t m to approaching the Glacier in an area with uncharted depths.  
The nautical chart (507 Norwegian Mapping Authorities) scale 1:700.000 in use at the time of accident was updated to the last for the area .  
The Arctic ice deformation and contraction process has caused significant changes of the coastline in some areas.  
These modifications and likely the shallow waters like the one in proximity of the Glacier, have not yet been reported on the Norwegian chart 507 .  
It may be that the master, having considered the adverse weather conditions and nautical information available, upon consultation with the ship operator had decided not to proceed into unknown waters, the incident would not have occurred.  
The voyage plan risk assessment for the new itinerary was not carried out by the shipboard command.  
The entire cruise was modified by the Shipboard Command in order to offer a more attractive places for zodiacs landings to guests on board . The proposal for the new itinerary was sent in advance to the Owner's Marine Operation Dept.  
The ship's echo sounder was in use in combination with the sonar (2 monitors on the wheelhouse) .Nevertheless there was no evidence that the relevant shallow water alarm was set on the echo sounder when the ship approaching the anchorage.

##### ROOT CAUSE / CONTRIBUTORY FACTORS

###### Human Error :

- Inattention : failure to detect or be aware of critical or significant information ;
- Procedural error : unintentional deviation from or failure to follow the established procedures such as the risk assessment for the new Passage Plan and the risks associated with the trading areas;
- Lack of situational awareness and Bridge Team Management, failing to :
  - Identify problems in a timely manner, providing information in advance
  - Identify critical elements of information and continually assess and reassess the situation.
  - effectively bridge team communications



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Organizational management failure : inadequate implementation of procedures and policy.

Improper equipment use: equipment not used to full potential and properly operated for effective situational guidance and information.

Unfavourable external conditions : the fog has hidden the coast to the view of guests on board , likely leading the master to get close the glacier in uncharted waters (since two cruise ships were operating in the area) .

Furthermore the strong wind in the area had not permitted the use of zodiacs to go in front of the vessel into shallow water for soundings , (general practice for vessels cruising in these uncharted areas) .

### PROPOSED CORRECTIVE / PREVENTIVE ACTIONS

The Company :

will carry out a review of the shipboard procedures in order to verify potential improvements with regard safe operations of ships in remote areas and a review of the risk assessment for navigation in polar areas;

will be progressively providing all bridge team officers with training in crew resource management;

will make sure that sms procedures on passage planning – as recently revised - are being effectively followed by all managed ships, including but not limited to those operating in polar areas, taking into account the IMO's guidelines for Voyage planning, and whether appropriate, the guidelines for passenger vessel operating in remote areas;

will propose recommendations to shipowner as operator of unit/s trading in polar/remote areas to revise its own policies about scheduled /unscheduled modification or deviations from planned itinerary with regard to go / no go situations for appropriate instruction to masters .

Proposal for inclusion of this incident scenario in the in-house marine resource management training programme to ensure appropriate lessons are learnt from the safety issues identified in this report, including recommendations for proper use of navigational systems and monitoring of vessel's position in relation to the existing navigational hazards.

Shipboard Commands will be reminded of:

the importance of the chart source data, its age, and accuracy when operating with limited under keel clearance or in shallow water.

the importance of proper use of all bridge equipment including echo sounder and to navigate by using to all potential the equipment available on board.

Solas Reg. V/34 about safe navigation and avoidance of dangerous situations.

Norwegian Authorities have been informed of the uncharted shoal ; the survey in areas where the Glaciers are retrieving or to issue Regular Navigation Warning to prevent vessels navigating in potential dangerous areas (incident occurred at 79 43.147 N , 026 38,992 E).

This report will be circulated fleet-wide highlighting the circumstances and probable causes of this incident as part of experience sharing and lessons learnt.

### INTERNATIONAL REQUIREMENTS

Solas Chapter V Regulation 34 Safe Navigation and avoidance of dangerous situations ; V 34-1 Master's discretion

IMO Resolution A.893(21), Guidelines For Voyage Planning,

STCW A-VIII/2, Part 2 (Voyage planning)

Bridge Procedures Guide – Passage Planning

ISM Code 1.2.2.2 - objectives ; 7 – Shipboard operations



## V. Ships Leisure S.A.M.

### INCIDENT / NEAR MISS - CASE STUDY Nr. 6 -2012/ 14 August 2012:

#### IMPROPER MIXING OF SWIMMING POOL WATER TREATMENT CHEMICALS

##### WHAT HAPPENED

A plumber was in the process of topping up the chlorine drum of the ship Pool, located in the Engine Pump Room .  
He accidentally added the Hydrochloric (Muriatic) Acid into the Chlorine drum instead to add Sodium Hypochlorite (Chlorine) generating a toxic vapor release in the engine Pump room .  
Three (3) fitters that were in the same engine compartment for their daily job activities were injured by the toxic vapors.  
The plumber that was wearing the appropriate PPE (chemical goggles, gloves, and apron) was not affected by the toxic vapors.  
He immediately closed immediately the Chlorine container and evacuated the area, reporting the incident in ECR ; the ventilation of the affected compartment –Pump Room No.1 was promptly started.  
The three fitters injured by toxic gas inhalation were evacuated and hospitalized by ambulance.

##### ROOT CAUSE / CONTRIBUTORY FACTORS

Human Error: Inattention - Failure to detect or be aware of critical information and  
Procedural Error – Unintentional deviation from, or failure to follow an established procedure  
Inadvertent mixing of chemicals  
Different Pool chemicals contained in very similar drums having same colour .  
Inadequate product labelling of the chemical containers (information provided in Italian language only)  
Location of swimming pool chemicals top up drums in the same local may have led the plumber to handle both chemicals at the same time (nevertheless swimming pool water treatment chemicals are stored in separate lockers) .

##### PROPOSED CORRECTIVE / PREVENTIVE ACTIONS

To conduct review of chemical storage arrangements and chemicals handling tasks to identify situation where chemicals could be intentionally or accidentally mixed.  
Consider separate designated tools and colour-coded containers for each chemical so that they can be easily identified and distinguished from each other, in addition to the original manufacturer labelling,  
Handle only one chemical at a time.  
Only allow those who have been trained in safe chemical storage and handling practices to handle pool chemicals.  
Post instructions on safe chemical handling practices in the chemical storage area and pump room.  
These messages should include:  
Read product labels or MSDSs;  
Read the product name and directions before each use. Do *not* simply rely on the container's shape, size, or color to identify its contents.  
Optimize posted instructions and drums labeling by using same chemical products denomination.  
This report will be circulated fleet-wide highlighting the circumstances and probable causes of this incident as part of experience sharing and lessons learnt.



Chlorine (Sodium Hypochlorite)



Acid (Hydrochloric Acid)



##### INTERNATIONAL REQUIREMENTS

ISM Code 7 - Development of plans for shipboard operations  
ILO - Accident prevention on board ship at sea and in port  
MCA - Code of Safe Working Practices for Merchant Seamen  
CDC - Recommendations for Preventing Pool Chemical- Associated Injuries  
EPA - Safe Storage and Handling of Swimming Pool Chemicals



**V. Ships Leisure S.A.M.**

**INCIDENT/ NEAR MISS – CASE STUDY Nr. 7/ 2012 (20 September 2012)**  
**IMPROPER RECORDKEEPING/ MISSING ENTRIES IN OIL RECORD BOOK**

**WHAT HAPPENED**

A recent inspection onboard a managed vessel by Local Authority found out missing entries in the Oil Record Book (ORB). It was established that at least on one occasion a bunkering of fuel (code H26) was not recorded in the ORB, as well as that the engineers consistently failed to record the required weekly quantities of the manually initiated oil residues transfers (code C11.4).

The inspection ended with personal monetary fines for the Master, Chief Engineer and 2<sup>nd</sup> Engineer in charge.

**ROOT CAUSE/ CONTRIBUTORY FACTORS**

Human Error: Communications; Procedural Error

Organizational/ Management Failure: Inadequate Training; Poor Oversight; Failure to follow an established procedure

Engineer officers were unaware of the latest requirements and guidance (implemented more than a year ago by IMO MEPC.1/Circ.736 "Guidance for the Recording of Operations in the Oil Record Book Part I –Machinery Space Operations (All Ships)" and Company Bulletin #47 "ORB Entries" from Sept11 (now superseded by the training package)) for the recording of operations in the ORB Part I – Machinery spaces, and failed to understand due to lack of adequate training onboard.

Master and Chief Engineer failed to detect missing ORB entries and comply, due to inadequate training on latest requirements and/ or failure to effectively oversee recordkeeping in the ORB by the Engineers in charge.

**PROPOSED CORRECTIVE/ PREVENTIVE ACTIONS**

The onboard training package CD to be reviewed for availability of the latest version 7/ September 2011 of Company's training presentation "Brief on Review and Audit on Oil Record Books (ORB)" (herewith attached again).

To improve the implementation on board of the related Company's training program (per form SAF58).

Personnel making entries in the ORB and ship Masters to undertake regular refreshment of their knowledge on the subject as necessary.

Masters and Chief Engineers to perform consistent overseeing of ORB entries, made by Engineers in charge for early detection and correction of any irregularities.

**INTERNATIONAL REQUIREMENTS**

1. Guidance for the Recording of Operations in the Oil Record Book Part I –Machinery Space Operations (All Ships) -IMO MEPC.1/Circ.736 -rev.1 (25 Aug 2011)
2. A Guide for Correct Entries in the Oil Record Book (Part I) –Intertanko, 2<sup>nd</sup> edition Nov 2009
3. Oil Record Book Entries Machinery Space Operations -UK P&I Technical Bulletin 35 (amd 24)
4. Oil Record Book -Bahamas Maritime Administration Bulletin #84, rev.02
5. Interim Guidance on the Use of the ORB concerning Voluntary Declaration of Quantities Retained on Board in Oily Bilge Water Holding Tanks and Heating of Oil Residue (Sludge) -IMO MEPC.1/Circ 640
6. Marpol I, as amended (as of 01 Jan 2011 by IMO MEPC 187 (59))