The Standard

Standard Safety

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Special Feature - Stowaways

An analysis of the problem

Since 2000, the club has had to deal with 982 stowaway claims. These claims have involved 2,051 stowaways resulting in claims costing $9.2 million.

Stowaways cause considerable difficulties for the master and owner if their presence is only detected after leaving the port of embarkation. It is essential to prevent their boarding initially or to find them before a ship leaves port.

Stowaways can board a ship at any port, but certain areas have a statistically higher level of incidence such as Africa, Caribbean, and South America. These areas will probably remain high-risk areas for the foreseeable future.

Certain areas have become high-risk because of dramatic events such as civil war or natural disaster. The recent economic downturn may also increase the number of stowaway attempts. The master and the shipowner must be aware of changes in the threat of stowaways and this means a continual monitoring of current events in the ships' trading areas.

When a stowaway is found it is far better to deal with the incident at the port of embarkation, if possible. This includes managing the situation on board, liaising with the club, agents and authorities. This can cause delays on sailing or entering port. The costs alone from disruption of the ship's schedule can be considerable. The best course of action is to ensure that stowaways are prevented from boarding and finding them before the ship departs port. There should be comprehensive and effective stowaway searches and procedures for all ships trading to areas susceptible to stowaways.

The ISPS Code has provided ships with procedures to prevent stowaways from boarding the ship. In ports and terminals where there are stringent restrictions on people entering the facility, together with a vigilant deck watch, no stowaways should be able to board at these locations. However, vigilance in these circumstances should then be focused on the outboard side of the ship.

The high risk threat is from ports and terminals where the ISPS Code is not being implemented with any vigour and this includes the ports of North, South, East and West Africa, certain South American countries and the Caribbean. The task of preventing the stowaways in these ports from coming on board is more difficult and it is here that masters and shipowners must focus their efforts. For example, shipowners should train their crews, issue the correct instructions and procedures to enable the ship to provide a determined deterrent stopping stowaways from boarding and /or sailing with the ship.

In this issue

The Standard Steamship Owners' Protection & Indemnity Association (Bermuda) Limited

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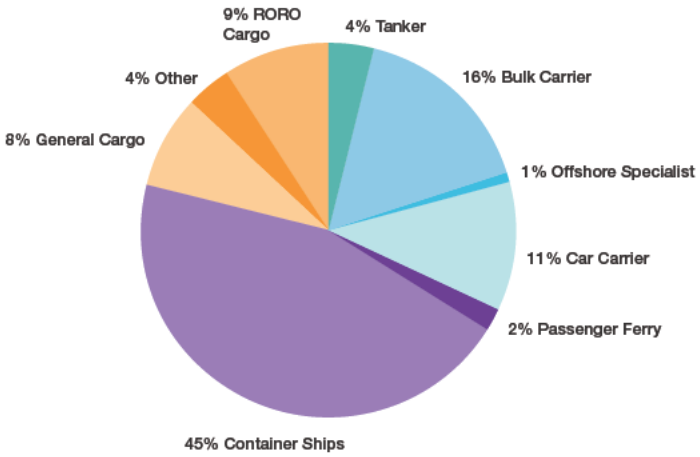
Which ships are most at risk?

The analysis of ship type where most stowaways are found is of no great surprise, as it reflects the type of ships trading to the most prevalent geographical stowaway areas. Stowaways are likely to be found in container ships, and geared multipurpose ships and this is consistent with the trade. A significant number of stowaways are also found on bulk carriers, car carriers, general cargo and ro-ro ships.

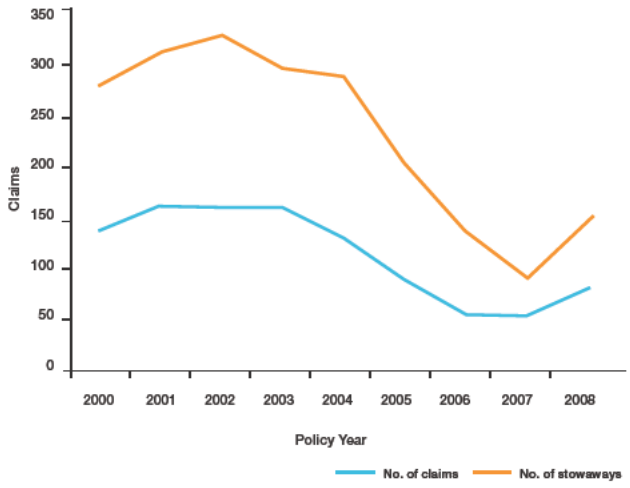
Where stowaways were found - ship type (2000-2008)



How many?

The graph below shows the number of claims and number of stowaways between 2000-2008. The graph indicates that there is a beginning of an upward trend which bottomed out in years 2006 to 2007. This may continue to increase owing to the recent economic turmoil.

Stowaways claims data (2000-2008)



The geographical areas of risk

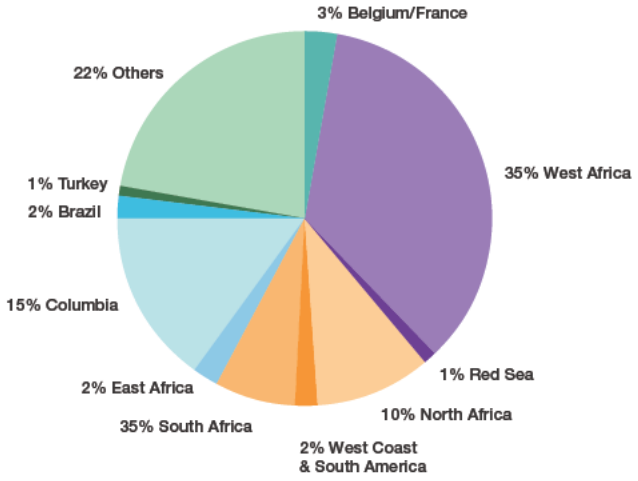
The majority of stowaway incidents for the ships entered in the club came from West Africa, North Africa, South Africa, Colombia and the Caribbean region. There are other significant areas, including west coast of South America (Chile, Ecuador, and Peru), Red Sea ports (Djibouti, Yemen, and Port Sudan) and East Africa (Mombasa and Dar-es-Salam).

The analysis shows the geographical distribution of stowaways. The records show that the vast majority of stowaways are all discovered after the ship has sailed. The majority of stowaways are often not nationals of the last port, but have used this as the embarkation port. An example is ports in North France (Le Havre) and Belgium (Zeebrugge). These stowaways are often from Pakistan, the Indian sub continent and West Africa. Also a significant number of stowaways originating from China have embarked in Korean ports (Pusan for example).

Nearly 50% of stowaways come from West Africa. The obvious economic pressures, poor governance, medical and educational facilities suggest that this area is going to continue to be the embarkation point for considerable numbers of stowaways for sometime to come. Masters must ensure that robust counter-stowaway measures are implemented in all West African ports. All African ports are in fact major potential embarkation points.

West Africa is further broken down in the graph on the next page. This shows clearly that the point of embarkation of stowaways is predominantly from Nigeria (Lagos), Ivory Coast (Abidjan), Ghana (Tema and Takoradi), Cameroon (Douala), Congo (Pointe Noire), Guinea (Conakry), Senegal (Dakar). Luanda in Angola is also a significant port for embarkation.

Geographical risk areas (2003-2008)



For ships entered in the club, the second most prevalent area for stowaway embarkation is North Africa, particularly ports in Algeria and Morocco.

The South African ports of Durban, Richards Bay and Port Elizabeth are also favoured by stowaways. Here the stowaways are not necessarily from South Africa but from Tanzania, Mozambique, Rwanda and Zimbabwe.

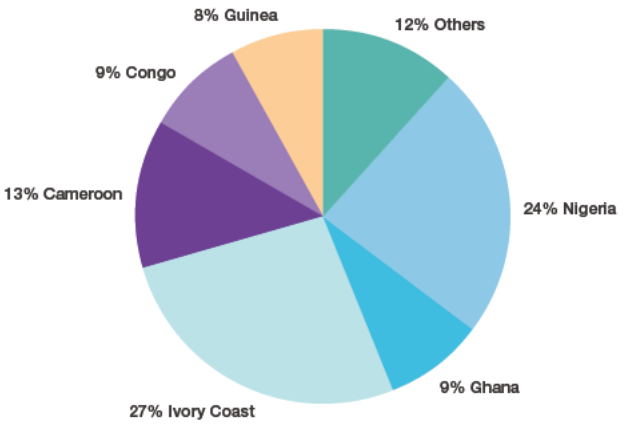
Almost all African ports show a lack of robustness in the implementation of the ISPS Code.

With the increase of migration from North and West Africa a significant number of stowaways have boarded ships in the ports of North France (Le Havre) and Belgium (Zeebrugge). Whether by design or default these ships are usually bound for the UK or Scandinavia.

The Caribbean coast of South America, particularly the ports in Columbia and Venezuela are of concern. These stowaways are intending to make a passage to US ports. There are also significant number of stowaways boarding ships in Brazilian ports and the ports in Chile, Ecuador and Peru.

Ports in South East Asia / and the Bay of Bengal, Chittagong/ Myanmar/Colombo are all ports where there is probable significant risk –although the data available is not conclusive for these ports.

Stowaways embarking West Africa (2000-2008)



Precautions to prevent stowaways

Through the ISPS Code and information from the Company Security Officer (CSO) the master should have knowledge of high risk ports.

The ship's Safety Management System (SMS) should include comprehensive stowaway procedures.

Prevention

- do not just rely on port security
- master to ensure all crew are aware of the threat of stowaways before arriving in port. Watch keepers and deck watch should be briefed, to report ports /door seals broken and or spaces open. Consider restricting deck work to ensure effective monitoring. Ensure regular and random patrols are maintained by ship's staff
- master to be provided with the latest knowledge from agents / CSO
- ensure the ship is equipped with securing wire, tape, padlocks, seals and taped stickers to show spaces have been sealed and inspected.
- lock and seal all outside doors, hatches, accesses to holds, spaces, store rooms, electrical and machinery spaces on all decks including funnel decks and poops.
- ISPS protocols for emergency access
- only keep one door available for accommodation
- keep vigilant account of all people boarding the ship including checking identification
- consider using local "security staff" augmented by ship's staff
- ship's staff to regularly patrol and check ship's spaces, doors locked, seals in place, check containers if possible
- ensure lighting is good on all deck spaces
- ensure good overboard lighting on the outboard side

Stowaway search

- as part of the drills programme – include a stowaway search when trading to high risk areas
- always carry out a thorough stowaway search in a systematic manner. A ship specific check list should be available and the ship divided into sections or areas and systematically searched prior to departure. Breaking the ship into three areas for example and searching them under the guidance of an officer is the most efficient method of ensuring an effective search is carried out. It is very important the owner, master (and charterer) allow sufficient time for the stowaway search
- the master should acknowledge that he is satisfied that a thorough stowaway search has been carried out, keep a record of the fact and enter a remark in the official log book
- after sailing from high risk ports maintain the locked down status and restricted accommodation access for at least 24 hours
- for at least 48 hours after sailing, a deck patrol should be maintained for the whole ship. The checks should include checking containers and sealed spaces. Train the crew to be alert

What a master should do if stowaways are found

All stowaways must be treated in a humane but firm manner. Stowaways should not be made to work as there are numerous legal, health, safety and security issues.

DO

- inform the shipowner, local agent and P&I club
- provide stowaways with food, water and if necessary appropriate clothing
- keep stowaways in a secure area or in a spare cabin or an area that is dry, warm and well ventilated, with proper sleeping facilities, if available, and access to toilet facilities
- if possible separate stowaways, one person to a cabin, if facilities allow
- treat them well and fairly, for example, giving access to reading materials. Reassuring stowaways that they are to be well treated can ensure stowaways are more compliant, less of a problem and less of a security and safety risk
- inform stowaways of the emergency procedures; in the event of fire or abandon ship
- search all stowaways for concealed weapons, drugs and identification documents

- interview all stowaways if possible to find:
  - name and residence/address
  - nationality
  - date and place of birth
  - contact details, place of birth of both parents
  - document details
  - how they boarded, are there any others
  - confirm the stowaway's state of heath, injury / illness, including mental state (photograph if necessary)
  - keep a meticulous record of all events, log all activities

DO NOT

- treat stowaways in a rough or aggressive manner
- allow any crew member to become familiar or friendly with the stowaways
- enter a room or space unless two crewmembers are present. Always operate in pairs
- allow stowaways access to any part of the ship without being accompanied
- allow stowaways with any materials, tools or implements that may be used as a weapon. All eating implements should be counted
- add them to the crew list
- try to hide their presence from the immigration authorities. Stowaways must always be declared to the Agents and Authorities. Severe penalties could ensue if stowaways are not declared

Shipowner response

- ensure the master is advised of probable stowaway geographical areas (use CSO)
- ensure the master has good guidance and comprehensive stowaway procedures and check lists
- ensure the master is given the resources to carry out effective stowaway searches, this includes time and manpower
- advise the P&I club

Master's response

- inform the shipowner agents and P&I club correspondents when stowaways are discovered. Liaise with agents
- if the master thinks sufficient information or resources are not being provided contact the Designated Person Ashore (DPA), as stowaways can also cause a significant security risk if not handled correctly
- follow shipowner's detailed procedures, tailored to meet the circumstances at the time
- brief the officers and crew as to what is expected and how the situation will be managed
- keep detailed records, log all activities

How the club can help

The club can cover the costs of repatriating stowaways (rule 3.4). The cover includes port and other charges solely incurred for the purpose of landing and repatriating the stowaways, plus the net loss in respect of fuel, insurance, wages, stores and provisions.

Early notice to the club allows prompt advice to be given on the available options for repatriation and the possible consequences of trying to arrange this at each potential/actual port of call. In liner trades it may be possible to retain the stowaways on board and repatriate them upon the return call to the port of embarkation. Diversion to a nearby port en-route may also be cost-effective if no return to the port of embarkation is anticipated in the immediate future and when the ship is still within a reasonable distance to a suitable port. Some shipowners even arrange ship to ship transfers if a sister ship is nearby that is going to the port of embarkation or at least towards the same area. Generally though, the ship will continue its intended voyage and when it reaches the next suitable port of call, the club will liaise with its network of correspondents to ensure the stowaways are removed and repatriated as swiftly and cost-effectively as possible.

The club's correspondents are used to dealing with these issues and practised at:-

- liaising with immigration authorities
- arranging security guards/restraints
- liaising with embassy/consulate officials to obtain temporary travel documents
- obtaining medical treatment and suitable clothing, if required/necessary
- arranging repatriation by the most cost-effective method, e.g. land, sea or air

The club recognises that the costs and delays incurred by shipowners can seriously impact their commercial operations but repatriation is a complex process and often unique to each country. The basic rule though is that the greater the distance to repatriate, the greater the cost. Accordingly, it will always be the case that prevention is better then cure.

Conclusion

It is likely to get worse particularly with the present global economic problems, the situation in areas such as Africa and Central/South America are going to present increased incidents of stowaways.

Shipowners should review their stowaway procedures and give the resources to masters and crew to prevent stowaways from boarding.

Safety & Loss Advisory Committee Meetings

The club has for some time had a Safety and Loss Advisory Committee, made up from invited senior technical personnel drawn from a cross section of the club's members. The Safety and Loss Advisory Committee discuss all the claims over $500,000 and also any significant claims that are pending and likely to be over that amount.

The following is a brief précis of a number of incidents which provide valuable lessons. The first rule of a Safety Management System (SMS) is to learn from your mistakes. Hence we have the very useful tool in the ISM Code – near miss reporting.

These articles are headed 'KEEP TO THE BASICS'. Each one of the incidents described below could have been prevented by simple adherence to good seamanship practice. It could be argued that you do not need a sophisticated SMS to prevent incidents like those described below.

1. Working on the stern tube seal – keep to the basics

A ship was having work carried out on the stern tube seal. The ship did not go into a dry-dock but remained alongside a secure berth close to a repair yard. To gain access to the stern seals, the ship was 'tipped' by the head and scaffolding was erected around the stern. The work was being carried out by shore technicians. The ship's owners took the opportunity to carry out other maintenance including having a specialised technician attend to carry out repairs and adjustments to the main engine.

Whilst carrying out the main engine adjustments, the shore technician disengaged the turning gear, the propeller shaft rotated, the blades turned and the scaffolding around the stern collapsed. As a result the shore workers were severely injured.

Lessons learned:

- all repair work should be done with a risk assessment and work permit system completed
- all work carried out by shore staff technicians should be properly supervised by the responsible officer, in this case the chief engineer
- all personnel working on the ship should be informed of other work that may impact on the work they are doing. Have morning meetings to inform and discuss the work to be done during the day. Good communication is an effective safety tool.

2. Working aloft – keep to the basics

A tanker was steaming and carrying out routine work on deck. Two experienced able seamen (AB) were about to start painting one of the mast posts. The first AB had to return to the store room to get some additional equipment, so the second AB decided to continue with the work and started to climb an aluminium ladder resting against the derrick post in order to climb into a bosun's chair. The portable ladder was not fixed and when the AB was about 4 metres above the deck, the portable ladder slipped and the AB fell to the deck below. The fall resulted in a severe head injury, even though the AB was wearing a protective helmet.

Lessons learned:

- there was no risk assessment or permit to work (aloft) in place, and there should have been
- there was a lack of a safety culture; no one should climb a ladder ashore let alone onboard a rolling ship that is not fixed or safely fastened
- working aloft should always be done with two persons in attendance, refer to the UK MCA Code of Safe Working Practice for Merchant Seamen

Keep to the basics of good seamanship and accidents will be prevented.

3. Cargo damage – ballast water – keep to the basics

A bulk carrier loaded with cement was on an ocean crossing in winter. After leaving the load port, additional ballast was pumped into the upper wings tanks to reduce the GM (meta-centric height) so as to make the rolling motion onboard more comfortable in the seaway.

During the voyage a ballast exchange was carried out. This ship was constructed with common double bottom and upper wing ballast tanks' made common through a metre square trunking, equipped with an inspection /access ladder leading to the lower double bottom tanks. This is a common enough arrangement on 'panamax' ships. During the ballast exchange and a few days later it was thought that one of the upper wings had not been filled fully so was pumped full with further ballast.

On arrival at the discharge port, when carrying out the draft survey it was calculated that the ship had substantially more cargo onboard than when it left the load port three weeks earlier. Of course this was not possible and it transpired that there was over 1,000 tonnes of sea water ballast onboard and this was all in one hold. The cement had by this time started to harden; there was a hold full of solid and solidifying condemned cement cargo, which took six weeks to dig out. Total costs, excluding off hire, were over $1.5m.

After inspection a corrosion hole was found in the connecting trunking between the double bottom tank and the upper wing tanks.

Lessons learned:

- consider whether to ballast at all when loaded with water sensitive cargo; ballast water can leak through tank top manhole lids, poor bilge and ballast valves, faulty non return valves, damaged air and sounding pipes, poor or damaged ballast tank or hold bulkheads
- good practice for ballasting is to gravitate in ballast if possible; this can prevent overpressure of the ballast tanks
- when ballasting, carry out diligent and recorded soundings (weather permitting)
- ensure that regular soundings of all accessible spaces, including hold bilges, duct keels, bow thruster spaces, tanks, cofferdams and voids are taken at all times at sea (weather permitting). Monitoring the watertight integrity of the ship is a basic seamanship task
- all ships must have a rigorous tank inspection programme, particularly ballast tanks. This must be a part of the Planned Maintenance System (PMS). It needs to be recorded and monitored by the shore managers. A tank inspection schedule should be drawn up and the officers and crew involved, trained in what should be inspected and recorded

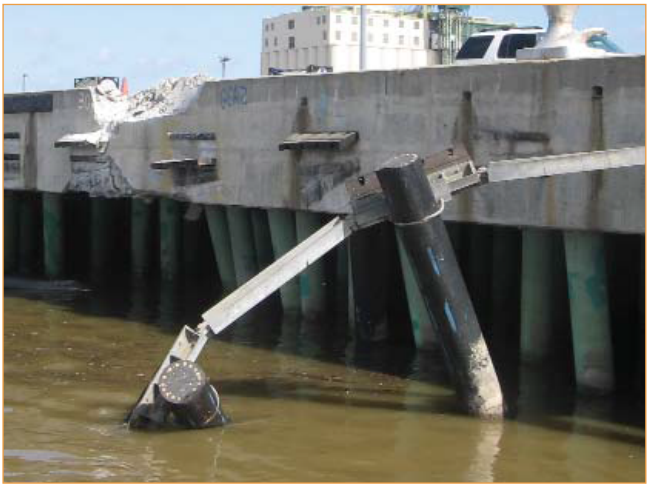
4. Fixed and floating objects – keep to the basics – communication is the safety tool

A loaded ship had left an inland river port and proceeded down a major navigable river with pilots onboard. After leaving the port the chief engineer advised the master that there was a problem with the main engine, which needed to be repaired; this repair was to not so vital that the ship had to stop immediately. The master, after consulting with the pilots, was advised that the ship would be passing a river anchorage area in about 20 minutes time. The chief engineer was advised that the repair could safely be carried out at the anchorage.

Along the river bank upriver to the anchorage a new cargo terminal on a T jetty had only recently been built. As the ship approached the anchorage the pilot stopped the main engine so that he could assess the ships' movement in the strong astern current prior to making the final approach to dropping the anchor.

At this moment the engine staff – thinking that the ship had stopped decided to immobilise the main engine to effect repairs. The pilot after a minute of stopped engines seeing that the ship was veering to starboard required 'ahead' engine movements to gain steerage. When the engines were put ahead there was no engine reaction. A phone call to the engine room revealed that the engine was immobilised. The ship was now moving at 1 to 2 knots through the water with the strong current from astern and veering more to starboard. Crew members were already on the forecastle ready to let go the anchor.

The master and pilot decided to let go the starboard anchor; the ship still veering to starboard, the anchor was let go but it was not possible to hold onto the anchor with the brake and the chain was ran out; the ship's speed hardly diminished. The main engine was soon brought back and an astern movement given but it was too late and the ship hit the T jetty, damaging foundation dolphins, and the terminal loading equipment. The cost of the two minutes of poor seamanship was weeks off hire, repairs to the ship and tens of millions of dollars for the repairs and lost revenue to the jetty.



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Lessons learned:

- good communication is a Safety Tool – use it
- the master must take control of the situation at all times. He must command his ship. He must instruct the pilots and chief engineers under his command with vigour and authority
- chief engineers must never immobilise a main engine, particularly when navigating in a narrow channel or in restricted waters without the express permission of the master
- any change to the plan, even in this case the passage plan must ring the proverbial alarms bells. A changing situation is always a potential for danger
- windlass brakes must be inspected in the Planned Maintenance System (PMS). Windlass brakes should be tested every year to ensure that they are in a good condition
- shipowners must instil in their crews the basics of good seamanship

5. Cargo contamination – keep to the basics

A chemical tanker on her maiden voyage was loaded in the far east with high value non toxic products. In one set of tanks one grade of product was loaded in a port tank and another high value cargo was loaded in a starboard tank. During the loading operations blanks were fitted in the cargo lines to segregate the high value products. Although the chemical tanker had dedicated cargo lines for each set of port and starboard cargo tanks, she was built with only one valve separation.

At the discharge port the blanks were removed from the cargo lines. The chief officer in the fully automated Cargo Control Room (CCR), with a mimic board allowing all valves to be opened or closed and pumps to be started and stopped, was asked to discharge product from the port tank. After a few minutes pumping the starboard tank high level alarm activated. He accepted the alarm but thought it was a spurious alarm and took no further action. After another minute the starboard tank 'high-high' level alarm activated. At this moment the officer told the bosun to investigate but continued to pump product from the port tank. As the bosun appeared on deck he noticed product spraying from the Pressure Valves (PV). The alarm was raised by the bosun and the pumps shut down.

Product had been pumped from the port tank to the starboard tank, leaking past the single faulty crossover cargo valve and contaminated the high value product in the starboard tank.

It later was found that the automatic crossover valve was faulty, and although the mimic board indicated that the valve was closed it was in fact 25% open.

Lessons learned:

- single valve segregation is fraught with risk; why is two valve segregation the preferred option? Consider using blanks if only single valve segregation is available
- management of change procedures should be included in any SMS. Rigorous checking of all valves on the maiden voyage must be a recorded procedure, if necessary carried out by additional and competent staff
- rigorous and careful cargo valve testing and inspection should be carried out before cargo discharge. Consider pressure testing lines with nitrogen to check valve integrity
- instruct all personnel in charge of a cargo watch that when a high level tank alarm sounds all plant should be shut down until the cause can be identified

The Gulf of Aden

The world has been pre-occupied with piracy this past year. The shipping press and the international media have made it headline news. However, it has all been concentrated on the Gulf of Aden. The piracy problem in the Gulf of Aden has not gone away, far from it, but the international community, in particular the European Union, has stepped in and provided an effective naval presence and the threat has been somewhat reduced. A new east /west corridor has been drawn up, keeping clear of the main fishing grounds and 'convoy' times have been implemented. The web site; http://www.mschoa.org/ has sufficient information to keep an owner appraised of the situation. However certain ship types, small or slow steaming ships with low freeboards, are still at risk. The naval forces in the Gulf of Aden also recommend that ships transiting to/from the Arabian Gulf to the Cape of Good Hope register with them.

With all the naval activity being concentrated in the Gulf of Aden there is a greater threat to shipping using the Indian Ocean adjacent to the Somali and Kenyan coast. A number of recorded attacks, where the pirates have fired weapons including rocket propelled grenade launchers (RPGs), have taken place over 450 miles off the Somali coast using mother ships. The Indian Ocean is now designated a war risk area as far as 600 miles off the Somali coast. Continued vigilance is needed when navigating in these areas.

Nigeria

Nigeria has long been an area of high risk for pirate activity and the crews of ships trading in these waters are usually aware of the dangers. However, shipowners should be aware of a recent and worrying development that was reported in February 2009.

The incident

A fully laden panamax crude oil tanker was attacked on 10 February at 1900hrs LT by pirates 20 miles off the Nigerian coast after having left the Brass crude oil terminal en route for Tema in Ghana. This is the first time that a large steaming ship has been so violently attacked at sea off Nigeria.

The attack took place at a Lat 05 59N, Long 005 47E, approximately 22 miles south east of the Pennington Terminal in Nigeria.

The ship was approached from astern by a small fast craft with at least 10 heavily armed pirates who attempted to stop and board the ship. The pirates hailed the ship by loud speaker ordering her to stop immediately. The master declined and they started to shoot at the ship with small (AK47) type machine guns and also a heavy machine gun (10mm).

The ship did not stop, the general alarm was raised and all the crew alerted by use of the ship's internal public address system. She tried to shut down the accommodation doors, during which time she came under heavy gun fire. The heavy machine gun penetrated the accommodation steel bulkheads.

The pirates tried many times to board the ship, from the fore part and also from the stern but the master was able to take evasive manoeuvres which prevented the pirates from boarding. The crew also had rigged fire hoses and the fire monitors were used.

A mother ship, described as being a fishing vessel, also initially tried to use subterfuge in wanting to assist the tanker. The master had to threaten the pirate ship with collision in order for it to keep its distance – about 4 miles away. The pirates eventually gave up after 65 minutes and the master steered the ship for deeper waters and the pirate boat appeared to return to a mother ship at Lat 04 00N,Long 005 44E.

The Distress Alert system was activated. Communication was used on VHF16, requesting assistance from ships in the area and shore authorities and the incident reported to the IMB; http://www.icc-ccs.org/ . There was no recorded response from the Nigerian authorities.

Background

The Nigerian coast is notorious for pirate attacks. In 2008 there were over 100 incidents reported; 27 ships boarded and five hijacked with 39 crew taken hostage. It is thought that the number of incidents has been under reported. Early in January 2009, a VLCC tanker was attacked alongside the Bonny Terminal, an LNG vessel attached alongside and a 6000dwt coastal tanker severely damaged by pirate attack.

Offshore incidents, particularly in the Gulf of Guinea, involving offshore ships and installations are well known and there have been a number of well documented hostage incidents; ships moving in and around the delta region, Port Harcourt and Warri for example know that there is a threat from pirates or armed thieves. This recent incident appears to indicate that the Nigerian pirates are taking a leaf out of the Somali pirates' handbook, moving further offshore, to deep sea shipping and using motherships.

General advice for ships calling ports West Africa – Nigeria in particular

Most owners with ships regularly calling Nigeria and Nigerian coastal trading will already have procedures in place. For those owners who have not called at Lagos, Port Harcourt and Warri, Nigeria presents its own security challenges.

The waters and anchorage at Lagos Roads can be generally considered unsafe particularly at night. Although it is rare for thieves or pirates at Lagos Roads to severely injure personnel, it is not unknown.

A ship at anchor at Lagos Roads was attacked by 21 pirates armed with guns and knives at the end of February 2009. The pirates were unable to get onboard on this occasion, and even though the authorities were alerted, there was no response. Masters should consider not anchoring in these waters at night.

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The following should be considered when trading to Nigerian ports

- appoint an experienced and trustworthy agency. Maintain good contact with that agency. The shipowner should speak to them directly for local advice
- the master should consider not anchoring at Lagos Roads at any time except for a short period during daylight hours
- do not anchor overnight at Lagos Roads or off any Nigerian pilot station. Calling the authorities for assistance has rarely been productive, even though at Lagos Roads the naval base is just inside the breakwater
- the master should consider arriving in daylight hours when the berth is immediately available
- if the berth is not immediately available, consider slow steaming to ensure daylight arrival or drift offshore, at least 40 to 50 miles, the further out the better
- keep VHF communications to a minimum on arrival. If possible, communicate with agents by cell phone / satellite phone and ask them to arrange the pilot. This is of particular importance in ports such as Port Harcourt and Warri or Calabar, as pirates and thieves listen to VHF Ch16 too
- ensure the ship is at least at a security level 2 for the time approaching Nigerian ports and alongside
- if the ship is proceeding up river to Warri it is worth considering arranging with charterers to take a naval escort from the river entrance and across the bar.
- when trading in Nigerian waters, only one door to the accommodation should be available. Ensure this is manned by responsible crewmen
- ensure that all doors, funnel doors, vents , skylights, access points are made secure and locked during the transit through Nigerian waters. No door should be left open, even for a short time without someone attending. All spaces/doors leading to and from car and ro-ro decks should be locked

Operating in the oil fields off Nigeria

These waters are particularly hazardous. Operators in these waters must have contingency plans available because there is significant risk of a piracy attack and ship hijack. The waters to the east [or west] of the delta region, in the Gulf of Guinea, near to the disputed Bokassi Peninsula, close to the Nigerian /Cameroon border have seen a number of recent attacks. Often these have been ostensibly carried out under the guise of 'freedom fighters' for the Bokassi Peninsula, but this is only a smoke screen for Nigerian pirates operating in this area.

Shipowners operating ships in these areas should have their contingency plans co-ordinated with the oil majors operating there. Diplomatic lines should also be established.

Advice for ships transiting Nigerian waters

Ships trading in this area should be informed of the incident described above and the anti piracy advice given on the club's website standard-club.com and the EU NAVFOR web sites http://www.mschoa.org/. This web site has good advice for masters, although it is specifically for ships in the Gulf of Aden. It would be prudent for ships to be alerted and take the anti piracy precautions when navigating east of Tema/Ghana and into the Gulf of Guinea and off the Nigerian coast. Masters should be advised to consider their passage plans accordingly.

The use of 'motherships' in this area is a disturbing escalation of a problem that has been there for many years. The difference in the manner of the piracy attacks in Nigerian waters is that a significant number of personnel have been severely injured whereas in the Gulf of Aden they have not.

US Environmental Protection Agency (EPA)

United States Clean Water Act (CWA)

New effluent (including ballast) permits required following confirmation of the final rules by the US Environmental Protection Agency – February 2009

Masters trading ships to the US should be aware of the following new regulations that the US Environmental Protection Agency (EPA) has confirmed will be enacted as from 6 February 2009. The EPA will allow ships further time to develop compliance programmes.

These environmental regulations will impact ships calling and trading within US waters. The regulations have in effect been forced upon the EPA to introduce as a result of legal actions taken by citizen groups within the US. Therefore the regulations have been rushed through and hence the allowed grace period for shipowners to implement their programmes.

The regulations require a Vessel General Permit (VGP) to be applied for and issued. Ships within US waters are required to:

- control (inspections)
- monitor (analyse)
- record

all effluents and discharges from the ship in its normal operations; including ballast, bilge and grey water discharges.

Managers and shipowners should ensure that they have advised their masters of requirements of these regulations.

Proposed requirements

The EPA issued the following proposed regulations and permits required by commercial ships navigating in US waters. These permits are necessary for all effluents generated from the ship in normal operations.

Vessel General Permit (VGP) requirements

- applicable to all commercial ships over 79 feet in length or over 300 gt or have a ballast capacity of over 8 cubic metres navigating in US waters (up to 3 miles offshore)
- permit term maximum 5 years and applicable to all US waters
- ships being used as energy or mining facility, a storage facility, a seafood processing facility or where secured to the sea bed for mineral or oil exploration or development do not require a VGP
- ship operators are required to submit a Notice of Intent (NOI) - (can be done online), to operate under the provisions of the VGP, beginning six months after the permits issue date
- a non-compliance with the VGP is a violation of the CWA
- NOI is simple to complete and submit, and identifies which discharges are relevant to each ship. Once issued the ship is considered acting under the provisions of the VGP
- the VGP will be subject to verification by USCG and local port officials
- the VGP incorporates the USCGs' mandatory ballast water management and ballast exchange requirements for ballast water. In addition a further 27 other discharge types, including:-

  - deck run off
  - bilge water discharge
  - grey water discharge
  - boiler blow down
  - chain locker discharge
  - fire main discharge
  - stern tube oily water discharge
  - grey water mixed with sewage
  - refrigeration and air condensate discharge
  - seawater cooling discharge
  - biofouling prevention
  - exhaust-gas scrubber
  - controllable pitch propeller hydraulic fluid

  For full list of discharge types see under categories:

  http://www.epa.gov/npdes/pubs/ship_commercial_permit.pdf
- some effluent categories comply with existing MARPOL requirements. Most do not.

Inspections, monitoring, reporting and record keeping

Inspections:

- conduct routine visual inspections of all areas addressed by the VGP including:

  - cargo holds
  - deck areas
  - machinery storage areas
  - boiler areas

  to ensure spaces are clear of garbage, exposed raw materials, oil or visible pollutants
- weekly visual inspection of:

  - decks and cargo areas where chemicals, oils, dry cargo, or other materials stored, mixed or used
  - confirmation that monitoring, training, and inspections are logged

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- watch keepers should check the water around and astern of the ship
- attention paid to deck run off water, ballast and bilge water
- at least every 3 months a sample of the discharge stream of the bilge water and/or grey water that are not usually visible is to be inspected for signs of visible pollutants

There are numerous routine and annual comprehensive inspections, drydock inspections, ballast tank records covering various aspects of pollution to be recorded and the manager and shipowners should prepare the programme accordingly

Cruise ships have specific additional requirements. Barges (hopper, chemical, tank, crane, dry bulk barges) and oil tankers have their own specific requirements

Recommendations

Most mature Safety Management Systems (SMS) will only require minor adjustments to comply with the VGP regulations. The interim regulations should be used as preparation for the NOI and adjustments to shipboard procedures.

1. ensure EPA/NPDES - Ship General Permit for discharges incidental to the normal operation of commercial ships is reviewed
2. download a copy of the NOI and determine which discharges are applicable
3. review existing sampling, monitoring, and record keeping procedures. These will include: OLB, SMS requirements. Planned maintenance system records, oil record book, ballast management place records
4. determine existing hull coatings and records and certificates
5. ensure drydock specifications include cleaning of chain lockers, cable, and ballast tanks
6. keep drydock records as per the VGP
7. devise maintenance records to include the VGP effluent requirements
8. review masters/ ship inspection requirements and record keeping
9. advise ships of the impending requirements

Timing

More specific guidance is included in the submission of the NOI which is due to start 19 June 2009 and must be submitted online. For ships newly trading to the US after 19 September 2009, the NOI must be submitted 30 days prior to the expected arrival in the US.

Additional information

There is substantial information available on the EPA and USCG websites below:

http://www.epa.gov/npdes/ships.

http://www.epa.gov/npdes/pubs/ship_overview.pdf,

http://www.epa.gov/npdes/pubs/ship_commercial_permit.pdf

Anchoring Offshore

Last October the club published a *Standard Safety* bulletin dedicated to safe anchoring. The issue has not gone away.

The club has seen a number of recent anchoring incidents that are specifically related to ships anchoring in or near undersea pipelines or cables near to oil and gas installations, offshore rigs and / or terminals and production facilities. However all ships' Masters should be aware of the dangers presented by undersea cables and pipelines.

The International Cable Protection Committee which was formed in 1958 by the submarine cable industry has recently determined that since 2007 nearly 50% of submarine cable damage is done by ship anchors. (Previously cable damage was predominantly thought to be caused by the fishing industry).

Shipowners should also be aware that since the introduction of AIS successful identification of the ship causing the damage has increased.

These incidents often concern offshore ships servicing installations and offshore terminals, FSOs and FPSOs or a mixture of these. They also may be engaged in other duties such as moving personnel, or small amounts of cargo and maintenance equipment from one offshore unit to another, or may be being called upon to act as a tug or a guard ship for offshore tankers berthing and unberthing. The routine of the ship may be irregular, being there and 'on call' to carry out the various duties whenever called upon. As a result the charterer, or the terminal or field operator, will often need the ship to be available at short notice.

The master

Every master before anchoring must be absolutely certain that there are no underwater obstructions in or near to the anchoring position. When operating in a field or close to installations where there are underwater oil/gas/communication/power lines the master should:

- know with certainty the location of the underwater lines. It is not sufficient when operating in a busy and changing field to rely just on the 'admiralty charts'
- get written or emailed confirmation from the charterer or field operator where the safe anchorage areas are with up to date local field charts. These should be controlled documents, issued by the field not just random photo copies
- demand that this information (if necessary via the owners) is supplied
- demand that underwater charts are regularly issued and provided, even if there is no change from the previous chart
- not anchor in a location where there is even the slightest uncertainty of the sea bed pipeline distribution
- not accept a verbal 'OK' from the field operator or unit
- not accept the fact that the previous master or previous ship always anchored here and it was 'OK'. Check the facts for himself
- not accept that the charterer or field operator or his owner has considered the problems that he may encounter. Often the problems of the master are low on the scale of priorities of a major field development. The master should not be afraid to voice his concerns over operational safety issues
- keep a vigilant anchor watch to ensure the ship does not drag onto a pipeline or cable

What do you do if you have snagged a cable or line?

Often the ship is unaware what it has lifted on the anchor flukes. In this situation assistance should always be requested so that further damage is prevented. Dropping the anchor to remove a cable (which may be a high powered electric cable) should not be attempted as this may damage the cable. Power lines and cables are well protected, but also very expensive to repair and replace and can present a serious hazard.

If the ship is anchored in an area where pipelines are located and there is a possibility when heaving on the anchor an obstruction has been snagged assistance from the shipowners and from ashore should be sought. This may involve using a diver to ascertain whether the anchor has caught a pipeline or not. In an area of subsea pipelines, continuing to pull up on the anchor may cause considerable damage and all the consequences that follow, such as pollution, claims for loss of pipeline usage and field shut downs.

Shipowners and managers

Shipowners and operators of these ships have a duty to ensure that the masters are fully supported and it is evident that often the root cause of these incidents usually comes back directly to the shipowners and managers.

Shipowners and mangers fail in a number of ways:

- charterparties do not give due regard to the operational difficulties likely to be encountered by the master. (Operational managers are often not consulted in the charter negotiations)
- the charterparty does not provide for the charterer to supply controlled charts of the operating areas, particularly in a changing offshore field environment
- the charterparty does not provide that a field operational manual for the ship is provided by the charterer
- no risk assessments are carried out by the owner /manager as to the difficulties and expected risks. Are there sufficient people onboard to carry out the tasks required of the ship? Is the ship able to comply with the STCW working hours regulations?
- once the charter is fixed, the master is left on his own to sort out the 'local' operational difficulties. The master is often not given or introduced to a local focal point with whom he can discuss local operational problems

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- masters are not given specific guidelines and procedures. These are often written (on purpose) to be open so that the onus is on the master on location. This is not how an effective safety management system should be implemented

Charterers

Charterers also have a responsibility. Charterers will always place the onus of where the ship anchors on the master. The charterer may require the ship to be available at a moments notice.

Charterers should provide a forum where masters can communicate safety issues, if not shipowners should suggest a forum.

However, if the master is not given the correct or sufficient information from the charterer, field operator or his shipowners, then the master should either;

- not anchor and drift (explaining his actions clearly)
- anchor in a location where he knows is safe. This may be a distance from where the charterer may ideally want the ship. The master should clearly explain in writing why he has had to anchor in this location

Anchoring in an area which there are undersea pipelines is a potentially hazardous operation. Masters must use good judgement and be forceful with their charterers and shipowners to ensure that he is always given the correct and up to date information. Do not assume that charterers and shipowners have done the thinking for you.

Although many incidents relate to offshore ships all ship's masters should be aware of the dangers of subsea cables and pipelines when anchoring.

Anchoring special edition of Standard Safety

The club published a special edition of Standard Safety in October 2008 that focused on anchoring. Please contact us at the club if you would like additional copies of this edition, or go to the website www.standard-club.com

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Fuel & lubricating oil fires - hot surface insulation protection

During a number of recent condition survey inspections carried out by the club's loss prevention surveyors, a number of main engine and generator exhausts have been identified as not being adequately insulated and covered. Some of these deficiencies were even found on passenger ferries. Not always considered a P&I matter and more often thought of coming under 'Hull and Machinery', the effects of a engine room fire have a direct impact on the safety of the crew and passengers, and can result in the ship grounding (wreck removal), and / or a general average situation where the club could be liable for the cargo interests proportion of general average.

It is universally accepted that the majority of fires in engine rooms are caused by a lubricating or fuel oil pipe failing and spraying oil onto a hot exhaust. This could be because of a failed pipe connection or olive, a pipe fracture caused by fretting due to vibration or over tightening. The hot exhaust is available as the source of ignition because the insulation is either not adequate, already oil soaked or has not been fitted correctly. Often, as can be seen from the picture below, the insulation is not there at all. For example, the turbo charger has just been overhauled or the generator has been opened up for survey and the insulation has not yet been replaced. Fuel or 'lub' oil pipe failure can occur at any time resulting in a major engine room fire.

Generator exhaust – without any insulation; a major safety defect

SOLAS states that 'all surfaces above 220 deg Celsius which may be impinged as a result of a fuel system failure shall be properly insulated'. Consider also the exhaust insulation near lubricating oil pipes. A fractured lubricating oil pipe can as easily cause a fire as a fuel oil pipe fracture.

Another example – a major safety hazard

What should you do? Keep to the basics

1. Masters should perform a weekly or fortnightly inspection that should include an inspection of the engine room. The master should not leave the inspection of the engine room to the chief engineer alone. The master can see if there are any major defective housekeeping issues, fuel/water/lub oil leaks, defective safety barriers and poor protective insulation on hot exhausts. Take a proactive approach to safety.
2. Good housekeeping is a major loss prevention tool. Keeping the engine room and other spaces clean, tidy and free of oil is vital for a safe ship.
3. Include, as part of a machine overhaul, a risk assessment requiring that the chief engineer checks that the insulation has been correctly replaced and fitted after the overhaul. Masters should know who checks that the insulation material has been correctly fitted.
4. The risk assessment and work permit must include a thorough check on the insulation when shore technicians have been used. Shore technicians are notorious in cutting corners and not replacing the insulation correctly. Supervision of shore-side overhauls is a crucial safety procedure. Just because the protective covers have been placed does not mean that the insulation has been effectively fitted.
5. Consider as a company procedure that old insulation is always replaced with new insulation material. Trying to save a few dollars in not replacing damaged/unfit insulation is definitely not cost effective.
6. Train all the engineering staff in the importance of making sure that hot pipe work and exhausts are correctly insulated. The smallest gaps can result in a fire.
7. Superintendent inspections should formally include insulation checks.

What else? Thermal imaging cameras

8. A visual inspection is the main tool to prevent fires, but experience suggests that visual examination is not sufficient. What appears as good, tight insulation may have gaps where the insulation is not tight fitting. New technology has provided an answer. The use of infra red thermo-imaging cameras is one method of ensuring that the hot surface insulation protection is in good order. These are small, robust and easy to use. Senior ships staff can easily be trained to use this equipment, the data can be downloaded and presented on computer, easily analysed and read in the management office. Alternatively outside companies can be used to carry out a survey on the insulation at times of docking or repair periods. The use of the cheaper infra red guns is better than just a visual check, however, unless great care is taken over the inspection it is easy to miss a gap in the insulation covering and their use can give rise to complacency.

For example: A major shipowner had a fire in early 2008 in the engine room caused by fuel oil spraying from a pipe connection to a differential gauge mounted on a main engine duplex fuel filter. The high pressure diesel oil was deflected to hot surfaces. The resulting fire was extinguished using the CO2 system and the ship towed into port for repairs and general average declared. This company has initiated a fleet wide campaign to reveal 'hot spots' in exhaust systems using infrared thermography. The technology is there – use it.

'Prevention is better than cure'. There can be no argument not to implement proper inspection techniques when you weigh up the potential human cost, dollar cost, downtime and loss of reputation versus the minimal prevention efforts required to prevent an engine room fire.

All members and/or their managers should consider using infra red thermo-imaging cameras as part of their planned maintenance system.

A dirty engine room is an unsafe engine room

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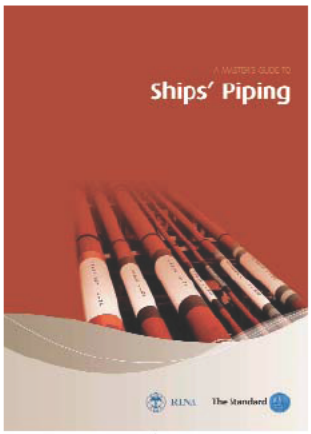

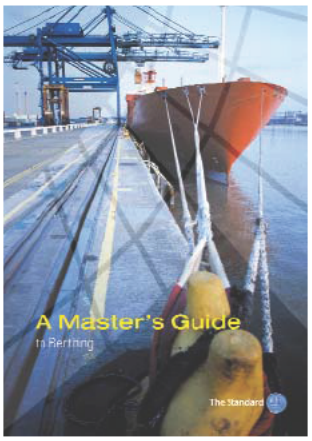

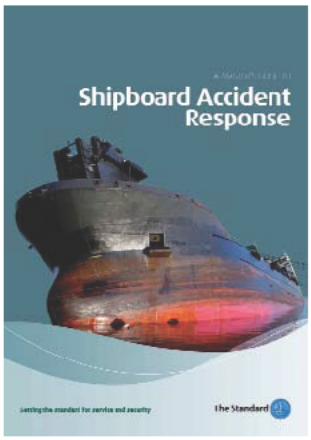

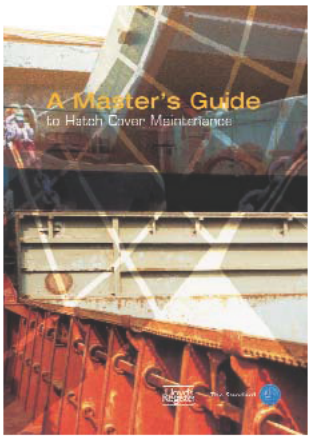

Masters Guides

The Standard Club's loss prevention programme focuses on best practice to avert those claims that are avoidable and that often result from crew error or equipment failure. In its continuing commitment to safety at sea and the prevention of accidents, casualties and pollution, the Club issues a variety of publications on safety-related subjects. Please contact Chris Spencer, Director of Loss Prevention on chris.spencer@ctcplc.com if you would like copies of these publications.