CHIRP Maritime FEEDBACK
Issue No: 43 02/2016

Editorial

*We have received a varied and rich set of reports this time. For these, many thanks to our contributors who include a ship Master with a strong safety sense who occasionally sends us short outlines of cases he notes on his rounds (no doubt keeping his Chief Mate on his toes in the process), and some of **CHIRP's** ambassadors in different sectors and regions.*

*This edition starts with A MESSAGE TO SEA FISHERMEN. Theirs is dangerous work at the best of times; but we don't hear as much from them as we would like. Reporting near misses to **CHIRP** does not need to take long. A few lines will suffice. We are working in parallel to modernise the reporting system so it can be done even more simply and interactively at the press of a mobile or tablet button.*

*Is there a common theme in this edition of **Maritime FEEDBACK**? I might again emphasise the hardy perennial: safety culture. Almost all the reports we publish concern near-misses; in some cases they reflect positive and effective safety cultures through which incidents were averted onboard ships. We should laud these. In other cases, where safety measures have lapsed, a failure of safety culture is indicated. A good safety culture implies a sense throughout a vessel of safety consciousness, confidence at all levels to report lapses, professional alertness, and a ruthless 'mend it now' approach to shortcomings. If corrosion has rendered a lifeboat release mechanism ineffective, it is not good enough to say "tomorrow; next week; when we're next in harbour". FIX IT NOW. Of course safety culture comes from the top; a Master or Superintendant only has to been seen once walking past something which is not as it should be without taking action, and – hey presto – that's what everyone else will do.*

*Amongst the innovations introduced by **CHIRP's** Maritime Director recently is a series of videos which bring some of our reports to life. The next video will include the results of a simulation conducted by Warsash Maritime Academy – to whom huge thanks – of a very close quarters situation at the entrance to the NE-going deep water route (DWR) at Sandettie (published in **Maritime FEEDBACK 42**). It will bring the situation to life in a wholly new way.*

Be safe; good sailing to all.
Charles Style, Maritime Advisor

A call to sea fishermen ...

Fishermen don't need to be told that their form of seafaring is amongst the most hazardous.

They often operate in relatively small vessels with very small crews, in severe weather and operating conditions.

The word gets around about accidents and near misses. The vast majority of fishermen have themselves witnessed lesser accidents or 'near misses'. ***Maybe you have narrowly avoided injury yourself?***

Will you help us reduce experiences like this by spreading the word about near misses you have seen or been involved in? A 'near miss' shared and reviewed can directly prevent an actual accident in similar circumstances later; death, injury, damage, loss can all be avoided. You can best help to do so – make a real difference – by letting us at ***CHIRP*** know about 'near misses'.

SOME STATISTICS

In 2016 the UK Marine Accident Investigation Bureau (MAIB) has so far published three related reports:

- A collision between two fishing vessels, with the loss of one of them
- The capsize of another fishing vessel while attempting to recover a fouled trawl
- Fire in and sinking of a twin-rig prawn trawler.

In seven reports in 2015 relating to fishing vessels, accidents included ***two men overboard***, the disappearance of a vessel and subsequent crew rescue, ***two founderings***, and two scallop dredger incidents involving ***winch drums and severe injury***. All were serious. ***THREE RESULTED IN DEATHS!***

Across Europe as a whole – to take another example – 13% of casualties and incidents across the maritime sector occurred in fishing vessels, with the majority of these cases arising in trawlers and dredgers; onboard these vessels, the highest number of incidents arose in engine rooms, on 'boat decks', and 'overside'.

Sources: UK MAIB reports; EMSA's Annual Review of Maritime Casualties and Incidents 2015

It works like this. You see something happen which means that an accident is only narrowly averted at sea. It may be obvious why it happened, or it may not. This is the moment to email or write to ***CHIRP***. The format can be found on the ***CHIRP*** website: chirp.co.uk.

You may be put off by a number of things.

- CONCERN THAT YOUR IDENTITY WILL BECOME KNOWN when you would rather it didn't. We can reassure you about this. The ***CHIRP*** system ensures confidentially: this is taken very seriously indeed.
- WHERE A REPORT WILL LEAD. Again you have nothing to worry about. We clear every step we take after a report is received with the person who sent it. The conclusions we reach are strictly unattributable. We seek lessons, not blame.
- WHETHER ***CHIRP*** WILL REACH THE RIGHT CONCLUSIONS. We hope we can reassure you. The ***CHIRP*** Maritime Advisory Board which meets before publication of each group of reports ('***Maritime FEEDBACK***') counts amongst its members senior representatives from across the maritime sector with an overall combined experience at sea of about 700 years. Members take close personal interest in every incident reported.
- YOU'VE COMPLETED A TRIP, AND TIME IS SHORT. Seafarers all know this scenario; you're home and there are a million priorities to fit into a small amount of time. All we at ***CHIRP*** can do is reassure you as follows:

  IT TAKES A FEW MINUTES. It needn't take long. Just enter the key facts. If ***CHIRP*** needs more detail, we can deal with this easily and informally by email at your pace.

The message from our many contributors, via *CHIRP*, is: "Look out ... (this or that) nearly happened to me. Don't let it happen to you". Just send us a report and see how we turn it into lessons to help save others. If you do so, you will contribute directly to safety at sea.

Reports

Ship manoeuvring on approach to a lock: power loss, poor communications and design

This article outlines a pilot's experience on approaching a lock. **Slow response to his order for astern power, poor communication and ship design issues all come to light.**

What did the reporters tell us?

Whilst manoeuvring a large pure car carrier (PCC) into a lock, with the stern tug at 100% arresting power, more deceleration was needed. An astern engine order was given, but the vessel was slowing very slowly. The pilot was not told that the main engine had failed to start twice. At this point the Master, rather distraught, asked if the after tug was pulling. In response to a direct question, the pilot was then informed that there was a problem with the engine. The pilot took emergency steps to stop the vessel by laying her against the rubber coping fenders to act as a friction brake. At this point the main engine started astern and the vessel was stopped and moored. Wind at the time was well under the limiting speed for sailing. The ship's high minimum speed was another potentially complicating factor.

Visibility along the side of the ship was limited, and communications across the bridge difficult. The distance from centre line to bridge wing was of the order of 16 metres, and key instruments at the conning position were in three different positions.

What did the ship's operators tell us?

For environmental reasons newer electronic engines have reduced fuel injection when starting up. If the engine misfires, it will automatically try again after 10 seconds with a slightly increased fuel injection. According to the company's internal report, that is what happened in the lock and is normal. When proceeding at a low speed in narrow waters, this can of course be seen as a potential hazard; the standard procedure is therefore to have the thruster(s) ready for use in addition to sufficient tugboat assistance (in this case three in total). The company believes that both of these requirements were fulfilled. All three control positions (centre line and wings) are identical.

With a beam of 36.5 metres, this particular vessel follows the 'New Panamax' standard. The company forwards the vessels' details to agents in good time before arrivals.

The lessons to be learnt

Main propulsion. Modern propulsion systems with potential in-built delays and high minimum speeds present considerable complication and risk when manoeuvring at close quarters (for example approaching locks). The characteristics need to be carefully briefed and understood between Master and pilot in advance. A propulsion test should be part of pre-arrival checks. **Communication**. Very wide bridges complicate verbal communication; a procedure for conning and use of bridge wing control positions needs to be agreed and tested well in advance. This would have facilitated an alert to the pilot about the engine's failure to engage astern.

The lessons to be learnt – *continued*

The master-pilot information exchange is a crucial factor; see '***CHIRP*** suggests' below. Visibility. Lack of clear visibility down the ship's sides was a serious limiting factor for the pilot. He and the Master found they had to move rapidly between positions. **Ship design**. The reporter makes strong points in relation to visibility and communication on modern very large ships, minimum ships' speeds, and the 'engine fail start' dimension which (though explained by the 3rd party) represents a major risk in close manoeuvring. Failure to share best practice and ship design implications are also suggested.

CHIRP Suggests

Give high priority to timely **pre-arrival checks** (control position change overs, and machinery control for example), and to a comprehensive **master-pilot exchange** covering procedure, the sequence of events, engine control and limitations, the overall plan, recent defects and action in the event of potential failures. User input in design, and the practice of ships' crews standing by on build, have in many areas been diluted; at the very least **experienced deck officers including pilots should be involved in the design of conning positions**, especially in major shipyards which build standard design ships. This should embrace issues such as visibility from bridge wings, and – more broadly – machinery control.

A fouled anchor

A super yacht, while weighing, found her anchor fouled. While she was operating propulsion at very slow speed, a crew member jumped into the water, climbed onto the anchor to clear the fouled line, and was then recovered as the yacht gathered way.

What did the reporter tell us?

A crew member was seen on the starboard side standing on a ledge just above the waterline with no lifejacket or safety harness visible; he was hanging on to a single line from above. He balanced there for some time, before jumping into the sea and swimming up to the bow. He then climbed onto the anchor. The foredeck crew then continued raising the anchor whilst the man was busily working to clear the fouled rope.

Once he had cleared the anchor, he jumped back into the sea, drifting back down the starboard side of the yacht which was underway at slow speed. He was then recovered on board; the vessel departed.

Note man on starboard quarter platform

What did the vessel's management tell us?

The vessels's management were grateful that CHIRP had forwarded the report, and outlined a reactive process of which the aim is to ensure that health and safety awareness is improved onboard, that such unnecessary risks are not taken in future, and that a comprehensive drill is in place in the event of future fouled anchors.

The lessons to be learnt

The day was sunny; the conditions fair. Obviously a fouled anchor was not in the plan; so it is easy to visualise a quick reaction to the situation without proper safety arrangements in place.

The hazards are clear. A particularly serious one is entanglement in the fouled line while the man was attempting to clear it from the anchor to which he himself was clinging. It is not obvious whether the line was under tension or whether it was light or heavy. However a sudden increase or release in tension could have had the man trapped under water or potentially towed astern near the propellers. The vessel was operating propulsion at the time. It is not clear whether the man on the anchor was continuously supervised or not. He certainly should have been; it is very unlikely that he was visible from the bridge. He was not wearing a life jacket and did not have a lifeline/harness other than the line onto which it is reported he was hanging. These are severe safety lapses.

All was well, but it might not have been: a classic near miss in a realm of seafaring where the relatively relaxed routines of recreational boating in good weather can start to dilute the procedures necessary in larger vessels. Was an operational risk assessment undertaken?

AN OPERATIONAL RISK ASSESSMENT

In urgent situations, an abbreviated but considered risk assessment against a check list can be undertaken. Its key elements include:

- **The aim. How necessary is its achievement?**
- **The hazards; likelihood and severity of potential harm**
- **Who may it harm?**
- **How may it be done to minimise risk?**
- **How may unavoidable risk be mitigated?**
- **Preparedness in the event of harm**
- **AND AGAIN – HOW NECESSARY? Pause/consider. Don't get overtaken by the rush of the moment.**

The vessel's management has responded positively to CHIRP; their comments are welcome. They outline a comprehensive procedure which will be employed in future cases of fouled anchors. This procedure will include provision of a rescue boat (all crew donning life jackets), stationing of two crew members at the bow (for the anchor winch and to observe the boat), and VHF communications between boat, bow and bridge. The procedure will engage one tender crewman in release of the fouled line (ensuring it is not electrical) while the other manoeuvres. If this approach does not achieve the aim, boat and crew will be recovered, the anchor let go again, and commercial diver assistance sought.

CHIRP Suggests

Maintain professional standards; this depends on **safety culture** which itself in turn depends on the lead given by the Master and officers. Carry out a **risk assessment** and briefing before taking action in unusual circumstances; these may be short and crisp if need be, provided they are considered and conducted against a check-list (see above). **Guard against cutting corners** when the atmosphere is relaxed. **Remember key safety principles**: for example the wearing of life jackets always in exposed places, life lines, provision of a safety boat and supervision of risky work. **Remember ubiquitous risks at sea**: for example lines under tension, drowning.

CHIRP, Ancells Business Park, Ancells Road, Fleet, GU51 2UJ (UK only)
reports@chirp.co.uk Freefone (UK only): 0800 772 3243 or +44 (0) 1252 378947

MARPOL – regulation versus safety culture

CHIRP has received two reports related to possible non-compliance with MARPOL.

What did the reporter tell us?

In one case an officer ordered a reluctant crew to throw oily waste and a broken washing machine overboard. The exact location is not known, but the crew were sufficiently concerned to involve authorities at the next port of call.

The other report involved the master and chief engineer being requested by the shore to dump damaged oil drums "at a distance of more than 20 miles from the shore", with financial recompense; they declined.

The lessons to be learnt

The Maritime Advisory Board commented that failure to observe MARPOL, or indeed other similar regulations, was likely to be indicative of the level of general management and safety standards on board vessels or within companies. If either is found to have deliberately violated MARPOL, then P&I Clubs will not cover associated costs.

CHIRP Suggests

Obeying MARPOL rules is one thing; and it is necessary. However **acting in the true spirit of MARPOL regulation** in order to reduce disposal overboard to an absolute minimum (for instance by use of compactors or on board incineration) is a state of mind and shows a high level of safety and environmental maturity. This needs to come not only from on board management but also from the highest levels within companies themselves. Most have environmental policies; are these words to which we turn blind eyes, or do we **ensure that standards are met?**

The perils in traffic separation schemes (TSSs)

In the last edition we published two reports that showed how quickly things can go wrong in TSSs. One described an overtaking manoeuvre at dangerously close quarters; the other a head-on situation between ships crossing a TSS at a closing speed of about 35 knots.

To these we now add a third.

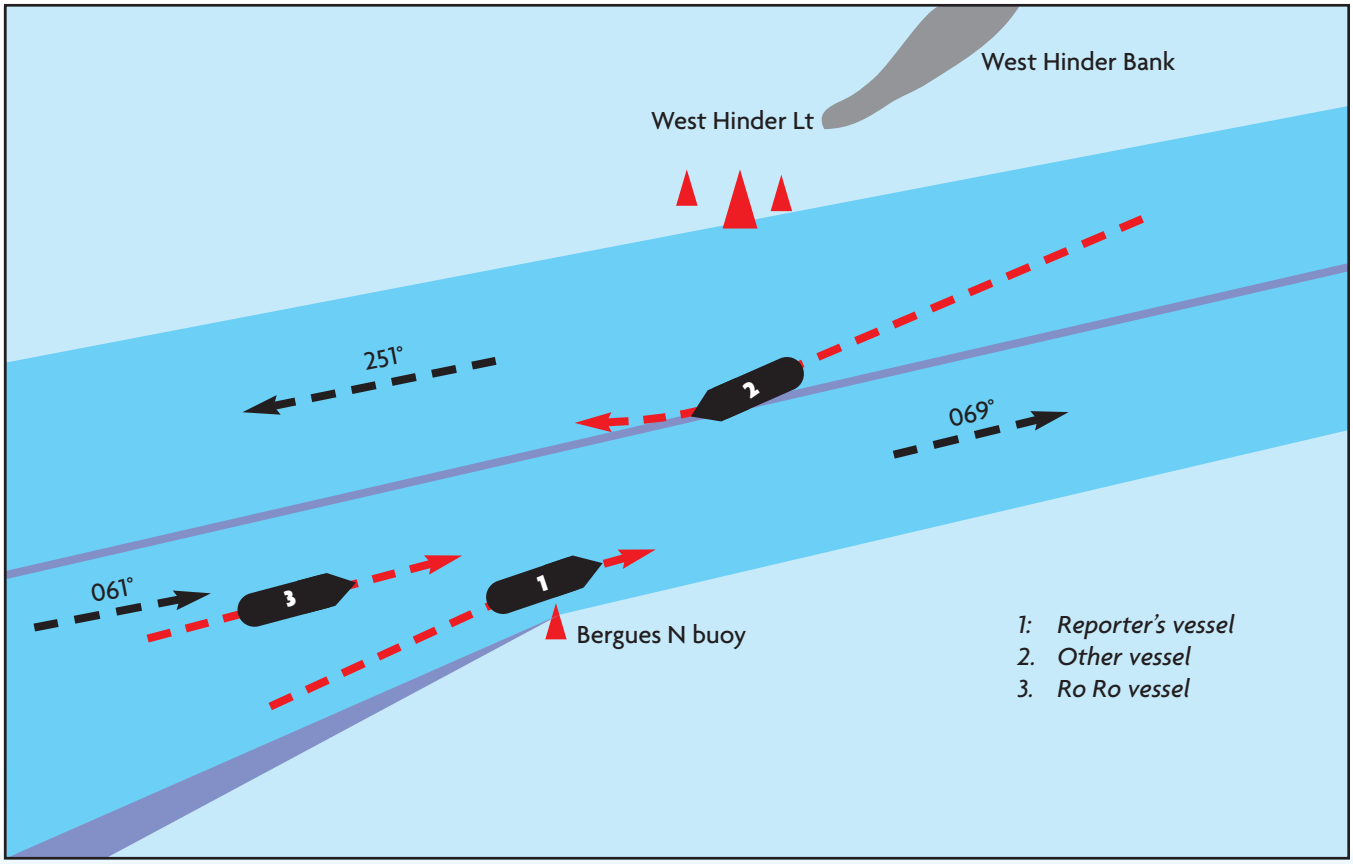
What did the reporter tell us?

The reporter's ship, while heading NE in the Westhinder TSS, experienced a tight closest point of approach (CPA) with another ship in the opposite lane which veered slowly onto the separation line, before turning slowly back to his own lane. This happened while the reporter's ship was being overtaken on his port side by a third ship with which the SW-bound ship placed herself for a period on a steady bearing.

Extracts from the information received by CHIRP

At approaches to Westhinder, ship 2 in the sketch was observed in the SW lane off Westhinder light tower. Own vessel was proceeding in the opposite direction in NE lane, passing close to Bergues North buoy, being overtaken by a ro-ro ship (ship 3 in the sketch) on port quarter. [ship 2] was then observed turning slowly to port and crossing the dividing line into the NE lane with a CPA of 3 cables to own vessel and collision course with [ship 3 in the reporter's sketch]. I called on VHF 60, no answer ... eventually [place] approach contacted ship 2 on VHF16 asking what were his intentions and that VHF 60 must be monitored ... which then occurred, with [ship 2] turning back to starboard on the extreme edge of the separation scheme.

The reporter offered the view that ship 2 was not keeping a proper lookout, was not monitoring her position, and was in contravention of rule 10 (TSSs). She also failed to respond on the VTS channel for that sector and placed own vessel and another in a potentially dangerous situation. He noted that the standard of English was poor in VHF communication, that he (the reporter) was tightly constrained to starboard by the Bergues North buoy, and that visibility was good.



The lessons to be learnt

We do not in this case have the identity of or comment from the third party (ship 2); so the exact circumstances onboard are a matter of conjecture. The most probable explanation of this event is a loss of concentration on the bridge. It is also possible, but there is no evidence, that a technical failure may have contributed: of automatic steering, or the steering gear itself for example.

A highly dangerous situation arose; had ship 2 progressed any further before her alteration back to starboard into the south west lane, she would have been at very close quarters with ship 3, and quite possibly in collision. We see again how quickly such a situation can develop, especially in dense shipping and constrained waters. The danger is further exacerbated when the constriction of a TSS brings – in this case – three large vessels into close proximity with almost no sea room to spare: the "sandwich effect".

CHIRP Suggests

Traffic separation Collision Regulations (COLREGS). Ship 2 certainly contravened COLREG 10(b)ii ("... keep clear separation line") by encroaching on the separation line, and at least came close to contravening COLREG 10(b)I ("... general direction of traffic").

CHIRP Suggests – *continued*

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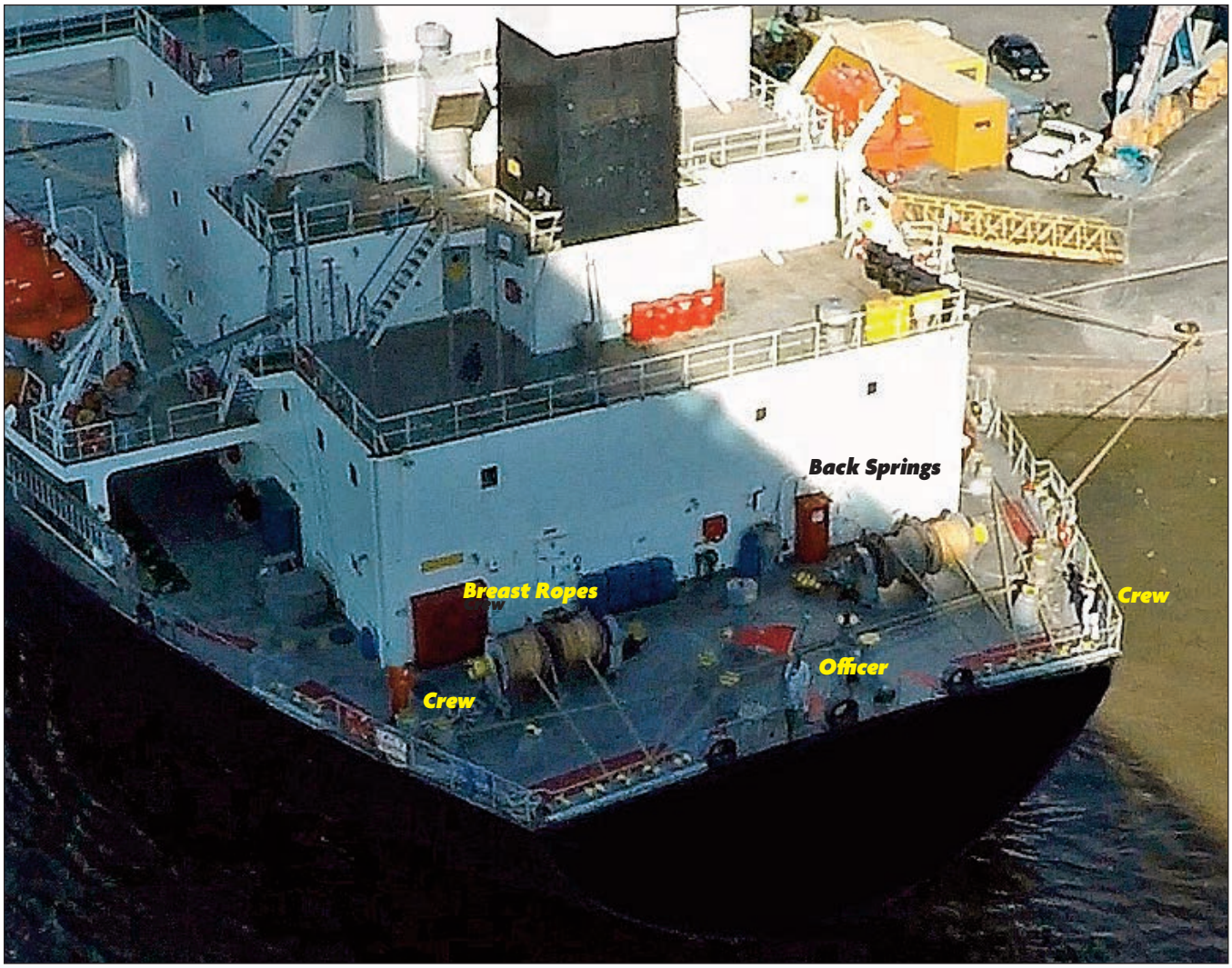
Other COLREGS. She also failed to take 'positive action in ample time', and was probably failing to keep a proper lookout. These failures may well have been exacerbated by overload, tiredness, distraction, undermanning, and/or failure to look up and out. Obviating these risks must be part of the passage planning process and supervision at the time.

Overtaking in a highly constrained part of a TSS or approaching a corner can be dangerous and reduces options. In this case the reporter's ship had no room to starboard as she approached the Bergues North buoy. Look and think ahead.

Safely moored?

A passenger ship was berthed close to the stern of another vessel. As the passenger ship cleared the berth on departure, the distance between the sterns of the two vessels reduced to 20 metres. The other vessel (pictured) had crew standing by to tend ropes if required. As shown below, they were in extremely hazardous positions. Fortunately, nothing went wrong; but the combination of poor design, berths ill matched to ships and snapback hazards can be lethal.



What did the reporter tell us?

The moored vessel does not fit the berth since stern lines cannot be run and the back spring and breast lines have poor leads. This led to excessive strain being placed on the lines as the departing passenger vessels wake interacted with the moored vessel.

The design of the ship's after mooring station appears poor; mooring lines may be at greater risk of parting due to the angled leads and the need to use roller leads across the deck. In this case the mooring bollards have not been employed.

There is an apparent lack of general awareness; the officer and crew members had placed themselves within the after mooring ropes snap back zone at a time when the mooring lines were likely to come under surge load.

The lessons to be learnt

A charterer's responsibility is to provide a safe berth for a ship. The Master's right and responsibility is to refuse the berth where – based on observation, professional judgement, and the prevalent conditions – he considers the standard not to have been met. Commercial pressures can of course make this a challenging call; there are suggestions that inappropriate berthing is on the increase under the weight of increasing maritime trade and ship sizes.

This is a good example of an inappropriate berth in relation to the size of vessel; it could have been refused. Ships' mooring arrangements are designed for conventional long leads forward and aft. The use of stern (and probably head) lines in reverse direction as shown greatly increases the stress on mooring arrangements, and encourages premature failure with obvious safety implications. In this case the passenger ship's manoeuvres at very close quarters may – through interaction and surge - have amplified the danger of mooring failure.

CHIRP Suggests

The whole mooring deck in this case is a "snap back zone" especially in such a confined area with multiple unconventional leads. Consideration may be given to identifying and marking alternative "**tension spots**". These carefully considered relatively safe points for mooring parties to stand and operate will limit exposure to snap back and discipline crew to remain in sheltered areas to the maximum extent possible. Mooring lines may be subject to surge at any time; **roaming and unauthorised movement on working decks should be forbidden**. Roaming 'safe areas' may well not be safe all of the time; snap back zones will vary according to leads and circumstances. For further information see Maritime FEEDBACK number 39, page 2; Code of Safe Working Practices for Merchant Seamen (COSWP) section 26.6; and the article on this subject published in the November 2015 edition of the 'Safety at Sea' magazine.

Safe "tension spots", training and mooring discipline represent a safer way forward in mooring practice.

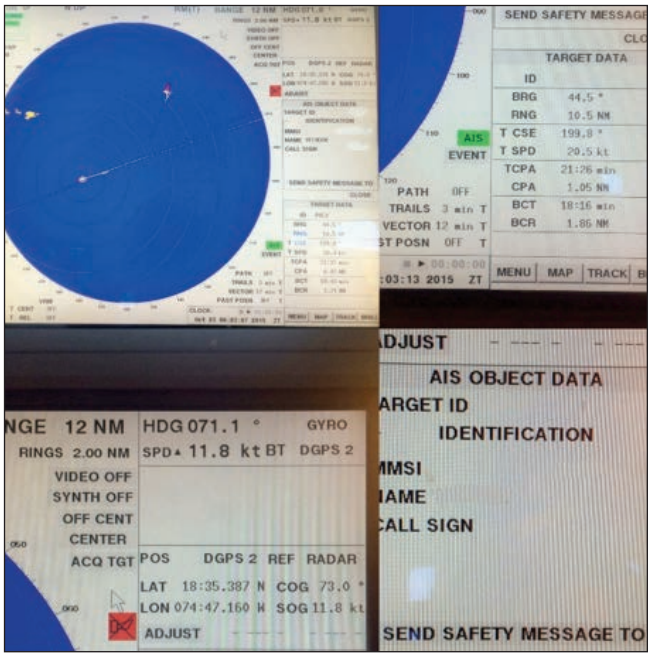
A crossing situation – collision avoidance)

A container vessel reported failure of a give way passenger ship – on the reporter's port bow with a closest point of approach (CPA) 'close' on the starboard bow – to alter course to starboard for him when requested. A VHF exchange showed that the passenger ship considered the CPA safe. The reporter (having maintained course and speed) remained concerned, made a 360 degree turn to starboard, and continued on his track, passing under the stern of the other vessel.

What did the reporter tell us?

The reporter considered that the passenger ship's crossing ahead distance (around 2 nautical miles (nm)) and CPA (around 1 nautical mile) were too small; this is shown on the automatic radar plotting aid (ARPA) screen shot below. It depicts true vectors in this case.

VHF communications were promptly established. The exchange may be summarised as follows: reporter – *"What are your intentions"*; passenger ship: "*I will maintain my course and speed*"; "*CPA less than 1nm ... you are in breach of COLREG 15; advise you pass astern*"; "*negative ... CPA more than 1nm; there is no risk of collision*".



ARPA screen shot; true vectors

What did the passenger ship's company tell us?

Company orders in the past have dictated a minimum CPA of 2 nautical miles 'when reasonable and practical'. This stipulation has changed; the decision is now left to individual Masters. In this case the Master considered the situation safe, and stood on. Others might have acted differently.

The lessons to be learnt

Were the crossing and CPA distances acceptable?

It is proper that judgement ultimately lies with ships' Masters given all the circumstances. That said, a minimum 2 nm CPA in open water is widely accepted as good practice. In this case, with a crossing range ahead of 2 nm, the CPA on the starboard bow of the stand-on vessel was bound to be around 1 nautical mile. The stand-on vessel had every right to express concern; in this event, it was incumbent on the other to act accordingly and to give way, even if she considered the stand-on CPA safe. This action would also have been consistent with traditional good manners and respect between seafarers.

A crucial principle is to think from the point of view of the other ship, especially if she is larger or more burdened. If she is concerned, doubt exists; **doubt = danger**. Mariners should also always consider how the position might look in the event of a machinery or steering gear breakdown, and stopping distances in such a case. From 1 nautical mile, very close quarters situations can develop very quickly.

Were the actions of the stand-on (reporter's) vessel correct?

The reporter considered a risk of collision to exist; he was well within his rights

The lessons to be learnt – *continued*

to do so. COLREG 7 is quite clear: "**If there is any doubt such risk [of collision] will be deemed to exist**".

In principle he could have slowed down, or he could have turned to port once the other vessel was across his bow (at which point a crossing situation would have no longer existed). What he could not have made is a turn to port before that time. In this circumstance a 360° turn to starboard is reasonable as an action of last resort. However caution is essential. Below a certain range, the manoeuvre can become dangerous. It must also take full account of all other vessels in the vicinity, including those astern and on either side, especially in constrained waters such as TSSs; situational awareness and orientation (in other words an alert all-round lookout) are therefore vital in such circumstances.

Notwithstanding these cautions, no criticism of the reporter is implied in this case; when the circumstances are suitable, a 360° turn can be safe, as in this instance; valuable time can be bought.

CHIRP Suggests

"**If there is doubt, a risk of collision exists**". Thus it is incumbent on a 'give-way' vessel' (and also a matter of good manners) in a crossing situation to alter if the stand-on vessel expresses concern. **Doubt is always accompanied by *danger and risk of miscalculation***. Avoid use of VHF if possible; it can be a distraction from the correct actions when time is tight. Think from the point of view of the other ship; what may seem safe and reasonable to one may not from the other's bridge. **Maintain the habit of constant 'what-ifing'**: "what if my steering gear failed now"?

Thorough inspections reveal hazardous occurrences

CHIRP regularly receives reports from vessels where inspections reveal defects that are then rectified prior to an incident occurring.

What did the reporter tell us?

During inspection and cleaning of the anchor chain locker several links were noted to be twisted. They were freed up by the Bosun using a chain hook.

An inspection revealed that a cofferdam adjacent to fuel tanks was not included in the list of spaces to be inspected. The vessel's list was subsequently updated. Inspections also revealed that the evacuation stretchers for enclosed spaces from the bow thruster room and engine room were fitted with D shackles without security pins fitted – replacements were ordered.

On a bridge, the X-band radar hadn't located the nearest targets. Investigation noted that the magnetron's planned life had been exceeded, hence its decreasing sensitivity. A replacement was ordered. Other items noted were lack of illumination of bridge wings repeaters, water inside both bridge wing navigation consoles, and frequent interruptions to the speed log data. All defects were rectified following remedial maintenance.

The lessons to be learnt

With respect to the chain locker, ***CHIRP's*** Maritime Advisory Board noted that twisted anchor chains are extremely hazardous should they "jump" on the windlass, and that any work inside a cable locker needs careful planning to avoid serious injury; particular attention to the communication between the locker and the windlass operator is also required.

The importance of listing all enclosed spaces, and precautions to be taken, are emphasised. Enclosed spaces were mentioned in the last edition of ***CHIRP Maritime FEEDBACK*** on pages 6/7. No apologies are given for

The lessons to be learnt – *continued*

repeating the message; partially open spaces may still be dangerous and qualify for inclusion in the 'enclosed space' list.

With respect to stretcher shackles an alternative to a split pin could be to mouse the shackle. Radar magnetrons' performance should be checked at regular intervals to determine any fall off in performance and a replacement schedule can be entered into the planned maintenance system. This is also a matter of "knowing your equipment".

CHIRP Suggests

Make inspections thorough, unpredictable, and a matter of the seaman's eye. In other words we should all be noticing and rectifying shortcomings whenever we are about our business in ships. **Alertness** amongst crews, from the most junior to the more senior, **should be rewarded and invariably acted upon**. It is all about incident and accident prevention; if crews feel confident to report shortcomings, without fear of negative reactions, then safety culture is probably fit and well; the opposite is also true.

Pipeline pressure surgess

CHIRP has recently received several reports relating to pressure surges in pipelines during tanker operations. The following reports show various scenarios where pressure surges can occur.

What did the reporter tell us?

One company noted an increase in loss of cargo containment incidents due to over pressurisation of pipelines during cargo operations, the incidents occurring during changeover of cargo tanks, blowing through cargo lines, and restarting cargo operations after a stoppage. Analysis showed common factors are incorrect cargo line-up, inadequate ship/shore communication, and inadequate supervision.

Another incident occurred during a topping–off operation on a tanker where communication with the terminal failed.

Finally, whilst discharging, the manifold watch heard a change of flow and also observed a pressure increase, immediately reporting this to the Cargo Control Room. The Officer of the Watch simultaneously noted an increase in pressure and suspended the discharge. The terminal informed the vessel that the pressure increase was due to an uncontrolled closing of an automatic shore line valve.

The lessons to be learnt

Any pressure surge carries a high risk of causing damage to a pipeline and pollution.

Cargo operations should be monitored closely and effectively, with any change in flow pressure being reported and investigated. If any doubt exists, transfer rates should be reduced or transfers suspended until the causes are investigated and obviated.

Personnel involved in cargo operations should be fully aware of cargo line-up, tank changeover and blowing-through procedures.

Communications between all participants including terminals should be pre-tested and are vital at all times, particularly at critical stages of an operation such as topping off.

CHIRP, Ancells Business Park, Ancells Road, Fleet, GU51 2UJ (UK only)
reports@chirp.co.uk Freefone (UK only): 0800 772 3243 or +44 (0) 1252 378947

CHIRP Suggests

Full compliance with the ISGOTT ship shore safety checklist including repeat checks where required are important, as are **thorough cargo planning** and understanding of the planned operation by all personnel. Procedures for any valve manipulation should be checked prior to operation, and a responsible officer should **double check cargo valve settings** before starting/restarting of cargo operations.

Short sharp lessons

CHIRP has received several reports with quick lessons that can be learnt from each.

What did the reporters tell us?

Life saving equipment: Three lifeboat incidents were reported. A hydrostatic locking device of a lifeboat release mechanism was found to be broken; a lifeboat release gear spring was missing from the release hook; and a freefall prevention device was not properly rigged during a drill.

Machinery spaces: Four incidents were recorded in engine rooms of lower deck plates or manhole covers left opened without any warning signs or guards. In addition two cases of safety chains to vertical ladders being unsecured were reported. All offered high potential for slips, falls and serious injury.

Galley fire risk: A galley oven was left 'on' while unattended at night; it was discovered during evening rounds.

Clogged with intake: During transit of a narrow shallow channel the engine room sea water intake became clogged with fish, with the potential for engine failure, grounding and closure of the channel.

The lessons to be learnt

Life saving equipments (including lifeboat release mechanisms) are not in regular use; and yet when they are required, the need for their perfect operation is instant and overriding. Thorough inspections and maintenance are of the highest priority.

The lessons to be learnt – *continued*

The sea suction incident quoted fish; other potential obstructions can include mud and plastic. Procedures should be in place to deal with blockages from these sources.

PREVENTING LOSS OF SUCTION WHEN TRANSITING SHALLOW CHANNELS

- Ensure high and low sea suction strainers are clean before transiting a narrow shallow channel.
- Have spare clean strainers and the necessary tools available.
- Ensure familiarity with changeover procedures for strainers when needed for cleaning.
- Consider switching from low to high suctions in the channel.
- Closely monitor the sea water cooling systems temperatures.

Unguarded open plates and manholes can be prevented by good housekeeping, planning, toolbox talks and supervision. **MIND THE GAP!**

An unattended galley poses a severe fire threat and risk to all on board. "Galley shut down" checklists, and provisions of external main power breakers outside galleys, are suggested as good means of ensuring that drills are observed and risks of inadvertent failure to 'switch off' are reduced to the minimum.

CHIRP Suggests

Be ready for probable failures in particular circumstances. 99% correct operation of life saving gear and arrangements is not good enough; by definition, the requirement is 100%. Put another way, in circumstances **in which you are unlikely to get a second chance; don't make one necessary**.

We are grateful to the sponsors of the ***CHIRP Maritime Programme***. They are:

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CHIRP, Ancells Business Park, Ancells Road, Fleet, GU51 2UJ (UK only)
reports@chirp.co.uk Freefone (UK only): 0800 772 3243 or +44 (0) 1252 378947