

# CHIRP MARITIME FEEDBACK

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## EDITORIAL

### COLLISION AVOIDANCE

The major Protection and Indemnity (P&I) Clubs provide insurance to ship-owners and are also a valuable source of information for mariners. For example, an article by the Britannia Club in Volume 19 of its "Risk Watch" journal published on its website may be of particular interest to navigators. This describes the outcome of a court case regarding a collision in the Gulf of Aden in 2007 between a container ship and a large tanker. The Court had taken expert advice from Trinity House. The article highlights that "instead of taking the action required by the Collision Regulations, the Officer of the Watch of the containership chose to commence a conversation by VHF when the ships were closing each other with a combined speed of 40 knots and were only about 3 miles apart. At such times VHF conversations may result in valuable time being lost, lead to confusion and distract from adherence to the Collision Regulations....."

CHIRP has frequently received reports of close encounters between vessels in which it appears that the use of VHF may not have helped, and indeed may have been counter-productive. If your vessel has been involved in a close encounter with another for any reason, please do send us a report. Typically, and provided you agree, we then send a copy of the report to the manager of the other ship for their investigation and comment. Learning can thereby be taken from such a near-miss, thus reducing the future risk of actual collisions. As with all reports we receive, we never disclose the identity of the reporter.

### THE FIVE WHYS

The Swedish P&I Club has published its annual analysis entitled "Claims at a Glance 2012". This includes an article promoting a simple technique to find and identify the root causes to a problem. By asking "Why?" five times successively you move beyond symptoms and delve more deeply into the root causes. By the time you get to the fourth or fifth "Why?" you will probably be looking at the management practices at the root of the problem.

The article contains eleven case studies. As an example, one of them describes an incident in an engine room. A pump had been dismantled and an eyebolt had been screwed into a threaded hole in the shaft. This was then lifted by a chain-block attached to the eyebolt. The shaft suddenly detached from the eyebolt and fell, crushing the engineer's hand.

The root cause analysis is summarised in the article as follows:

*What? Engineer severely injured during routine maintenance.*

- 1. Why? The shaft unscrewed and dropped.*
- 2. Why? It was not correctly secured.*
- 3. Why? Not paying enough attention and lack of experience.*
- 4. Why? Lack of proper preparation and procedures. No work permit issued and no risk assessment performed.*
- 5. Why? The company and crew members involved had not recognised that this job was dangerous prior to the accident, as there was no available risk assessment and the chief engineer did not require a work permit. This would indicate that there was a lack of safety culture onboard the vessel.*

CHIRP would like to make the following comments. Firstly, the "Five Why's" appears to be a simple but effective technique. We would welcome hearing from mariners their experience of using this or other analytical tools.

Secondly, one indicator of a company with a good safety culture is that it has a well-established system for internal reporting of near-misses. Had this been so on the ship on which the engineer lost his hand, would there previously have been reports of near-misses attributable to the absence of risk assessment and effective permit-to-work system? Probably yes.

If you have concerns about the safety culture on your vessel and do not feel that these are being addressed by the master or the ship's manager, please do contact us. Every report to us is treated in complete confidence, and the proposed course of action is discussed with you beforehand. Do be the person who sends the report. As we noted in a previous editorial, the phrase "I must do something about this" is much more powerful than saying "something must be done."

### FACEBOOK

We are encouraged by the response to our Facebook page. Please do join us there. If you enter "Facebook CHIRP Maritime" into your search engine, you will easily find us. Or use the link from our website [www.chirp.co.uk](http://www.chirp.co.uk).

*Chris Rowsell*

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**CHIRP receives reports on a range of hazardous incidents that have occurred within the commercial, fishing and leisure sectors of the maritime community. Here are a number of reports which will be of wider interest, together with the "lessons learned" as described by the reporter. The CHIRP comments have been reviewed by the CHIRP Maritime Advisory Board which has members from a wide range of maritime organisations. Full details of the membership can be found on our website - [www.chirp.co.uk](http://www.chirp.co.uk).**

## COMMERCIAL SECTOR REPORTS

### MASTER / PILOT RELATIONSHIP

**Report Text:** This incident occurred while leaving a port in the Asia Pacific region. The pilot was booked for 1200 hours. At 1115 the engineers reported that they had trouble with a main engine and could not start it. Due to the strong spring tides I decided to wait in the harbour alongside rather than leave on one engine. I called the pilot to advise the delay. He boarded at 1200 anyway and I explained the situation to him. He said it was not a problem and just to give him two hours notice when needed. At 1230 the engineers had fixed the minor electrical fault in the engines control system and I gave the pilot 2 hours notice.

The pilot boarded at 1430 this time with a trainee pilot. We moved off the berth and proceeded on the passage out, and increased speed to 10knots. The trainee pilot was requesting courses which I was monitoring and my 3rd Officer, acting as helmsman, was answering. The 1st Officer was also on watch, he was maintaining the log, charting positions and monitoring passage and traffic.

As we came to starboard to pass through the narrow entrance cut, the trainee pilot started coming round too early. It is a narrow channel with high rocky sides and the currents that pass through are very strong. High water was at 1653 so we were on the flood tide in springs. The 1st Officer immediately voiced his concerns to me which reflected my own.

I voiced my concern to the pilot as we were very close to the shore on the starboard side. I had been through this channel several times with other pilots. I requested that he not alter course any further to starboard until the vessel was further out from the shore. The channel was empty of any other traffic. When I voiced my concern, both pilots started to shout at me that this was the outbound channel and I did not understand. We exited the cut without incident.

The pilot then asked me to sign the pilotage slip. I agreed and reminded the pilots gently that they were there in an advisory capacity and really should communicate a little more with their intentions to the bridge team. I felt this even more prudent for the trainee pilot to take onboard.

The pilot then told my helmsman to alter course to port - a course that would take us across and out of the buoyed channel. I immediately asked the pilot his intentions and mentioned to him that this was what I meant previously. The lead pilot then immediately started shouting at me a string of verbal abuse. He

punched the chart table, stamped his feet and started making ridiculous orders such as Stop Engines.

In this condition with two pilots shouting at the bridge team, who are legally responsible for the safety of the ship and its personnel, the safety of navigation was my primary concern - especially due to the high concentration of fishing gear with marker buoys. I did eventually manage to placate the pilots who then departed by pilot boat. We altered course back to starboard and continued passage without incident. After the pilots departed the vessel both the 1st Officer and the 3rd Officer remarked that they were stunned and appalled by the behaviour of both lead and trainee pilot.

I believe this serves as a reminder that at all times the Master remains in full control and with full responsibility for the vessel. Yes - we need the pilot; we need him to help us, not to take over and especially not to hinder the bridge team.

**CHIRP Comment:** There are a number of positive aspects to this report:

- 1) The Master assessed the risk of trying to leave at the scheduled time and prudently decided against it. He thereby gave the engineers additional time to rectify the technical problem.
- 2) The vessel's bridge team had been carefully monitoring the vessel's passage.
- 3) The 1st Officer and the Master had the professionalism and confidence to voice their concerns immediately regarding the course being taken approaching the entrance.

Whilst the responsibility of the Master is clear, the potential liability of a pilot differs between the various national legal regimes. Whatever legal responsibility a pilot may have, it is important that there is good communication between the pilot and the bridge team.

One of the attributes of a good team is that individuals (including senior members) are receptive to questioning and challenges from other team members. However, in the case reported, the pilot appears to have taken such questioning as an insult to his professionalism. The opportunity for establishing a more positive relationship is when the pilot first boards and the passage plan is discussed. The test of the effectiveness of the dialogue is that would be no surprise during the pilotage passage. This may sound obvious, but does it always happen? We welcome your comments.

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### NORTH SEA ENCOUNTER

**Report Text:** My vessel was heading on a course of 310°, approx 1nm west of Haisborough Sands, at approx 15kts. A passenger ferry was slowly overtaking me, and was 0.5nm on my starboard beam. A vessel heading south was detected early on radar and an ARPA plot made. AIS named the vessel as XXX. A CPA of 0.2nm was given. After closely monitoring the XXX, her CPA did not change, and she approached from almost right ahead. VHF contact was made at 4.0nm to ascertain her intentions as I was limited in my ability to turn to starboard because of the overtaking ferry. She

replied "I will keep my course & speed". I then requested she altered to starboard as I was restricted in my ability to do so whilst she had open water on her own starboard side. No response was heard from XXX despite calling twice more, and she maintained her course and speed. She was less than 3nm away at this point.

I immediately contacted the Engine Control Room and reduced speed to allow my vessel to drop astern of the overtaking ferry, engaged hand steering and altered course to starboard. I also called the master to the Bridge. As our speed reduced I continued to turn to starboard until the CPA with XXX was 0.5nm. Once she was clear speed was increased and original course resumed.

Lessons learned: It was clear from an early stage that my own ability to alter to starboard was restricted due to the overtaking ferry and proximity of Haisborough Sands. XXX had open water on her own starboard side but refused to alter course putting my own vessel in a difficult position.

**CHIRP Comment:** In many reports we receive there appears to be a reluctance to adjust speed. However, in this report the action of the reporter in slowing down was prudent as it gave sufficient room from the overtaking ship to alter course to starboard to avoid the approaching vessel.

**We have alerted the manager of XXX to this incident.**

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## I AM GOING FAST – KEEP CLEAR

**Report Text:** Our yacht was on passage in the Caribbean with 2 persons on board. At around 1300 hours local she was located between two islands sailing downwind under mainsail and poled out headsail at 6 knots on a course of 294 magnetic. Weather was fair, visibility was good and the surrounding area has a depth of over 1,500 metres. A large ship was spotted about 7 NM to the South West on our yacht's port quarter, identified on our active AIS as XXXX under power at 22.6 knots on a course of 001 with a CPA of 0.1 - 0.3 NM. As her course was steady and this was considered too close, contact on Channel 16 was established and she acknowledged our presence. We sought confirmation of her intentions. The response in limited English was that as she was going very fast and that we should keep clear. We advised that we were a sailing vessel and crossing from her starboard side and were therefore the stand-on vessel. She again replied that she was going very fast and that we should keep clear. We requested the radio operator consult a superior officer and, after a pause, the same operator responded that using good seamanship XXXX would try to avoid us by passing ahead but that our yacht should slow down. Observing that XXXX was maintaining her course and speed and that the CPA remained less than 0.5 NM, we furled our headsail and turned sharply to port sailing slowly away from the track of XXXX. At no time did visual observation or our AIS indicate that she changed her course or speed. After XXXX had passed safely ahead, we radioed to register concern that she had demonstrably failed to comply with the collision regulations. XXXX's response in limited English failed to

acknowledge the situation so we advised that the incident would be reported.

**CHIRP Comment:** We sent a copy of the report to the manager of the ship. As per our standard practice, we did not disclose the identity of the yacht or the reporter. The manager provided a positive response, acknowledging that the incident had occurred and providing a comprehensive summary of the action being taken across its fleet to improve compliance with the ColRegs.

This is a good example of the value of hazardous incident reporting. The yachtsman acted responsibly in reporting the encounter. The ship manager appears to have been diligent in following up the report and applying the lessons not only on that particular ship but across his fleet.

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## COLREG COMPLIANCE IN TSS

**Report Text:** Own vessel was on eastbound passage at night in good visibility in the Southern North Sea intending to cross the Traffic Separation Scheme at the Foxtrot 3 junction (F3). At about 20 minutes prior to arriving at the TSS, the crossing of the TSS was discussed, looking ahead on the radar identifying any ships in the area of the TSS during our crossing. There were five identified vessels including XXXXX, course 222, speed 14.5 knots, in the SW lane. There were three other vessels close together east of the F3 junction and one vessel astern of this group all heading westerly towards the F3.

It was determined that XXXXX was on a steady bearing with a potential close quarter's situation. At 4.5 miles we flashed at XXXXX with the Aldis, followed by a VHF call on CH 16. On a working channel, the situation was explained, requesting he complied with the COLREGS and alter course to starboard and pass astern of me – XXXXX agreed to this request. At 2 miles XXXXX from the AIS data showed a small alteration to port to a heading of 213 to follow the traffic lane. Own ship commenced turning to starboard until on a near parallel heading and 1mile away, it was decided that due to the relative speeds and other vessels in the TSS the safest option was to continue a controlled turn to starboard, completing a round turn before resuming our passage.

There appears to be a false belief by some crews of following a traffic lane gives a right of way over crossing traffic.

**CHIRP Comment:** We have decided to publish this report:

**1. As an example of the good practice on the reporter's vessel of the planning of the crossing of the TSS, with good communication of the plan with the bridge team.**

**2 To emphasise the point made in the report and in the MCA Marine Guidance Note 364 that vessels proceeding in a Traffic Separation Scheme do not have priority over crossing traffic.**

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## BIO-DIESEL

**Report Text:** A small passenger ferry was on passage when the vessel suffered intermittent power loss on both engines. The vessel managed to complete its return passage without incident; however it was then removed from service and did not complete its final run. Subsequent investigations found the engines fuel filters had become blocked with a black slimy substance.

**Lessons Learned:** I suspect the fuel filter blockage could have been caused by fuel bugs. My concerns are not only over the fuel husbandry on this vessel but in general on the type of fuel being supplied for marine use. Some vessels are being forced down the route of having to use diesel with bio fuel content and this is more prone to bacterial attacks.

**CHIRP Comment:** Increased care is needed on small vessels in the storage of diesel where this contains biodiesel. The Royal Yachting Association has published a useful guidance note on the subject on their website (<http://www.rya.org.uk/infoadvice/regssafety/reddiesel/Pages/fuelstorage.aspx>)

For ease of reference, here is the RYA advice:

*Due to their hygroscopic nature, biodiesel blends can contain more water than 'normal' diesel which can result in accelerated corrosion, sediment formation, and filter blocking. All of this can be controlled by good housekeeping and fuel management.*

*All diesel is contaminated with water to some extent either because it is suspended in the fuel itself or it gets into fuel tanks through faulty seals and vent pipes and from condensation caused by changes in ambient temperature. The latter is a particular problem in common rail diesel injector systems. Because biodiesel is hygroscopic, it exacerbates the problem and biodiesel blends are more susceptible to biological attack by micro-organisms. Aerobic micro-organisms that consume hydrocarbons, such as fungi, bacteria, and yeast, usually grow at the interface between fuel and water in fuel tanks. Anaerobic species can actively grow on tank sides.*

*Bacterial growth can result in the blockage of fuel pipes and filters and increase the problems of corrosion. Prolonged use of contaminated fuel may result in damage to engines. Bacterial growth can be prevented by eliminating water from fuel tanks and conducting regular checks to ensure that tanks remain free of water. Where a bacterial growth outbreak has occurred, this can be addressed either by emptying and cleaning the tanks, or by tackling the outbreak with biocide additives and filtering.*

*Biodiesel is a better solvent than 'normal' diesel. As a result it may pick up deposits already in fuel systems and in fuel tanks. To prevent those deposits from blocking filters, a one-time replacement of fuel filters, outside the regular service interval, after 2 to 3 tank throughputs of biodiesel is recommended. In addition, fuel seals in sight gauges on older fuel storage tanks may be incompatible with sulphur free diesel, irrespective of whether it contains biodiesel, and may require replacing. Users should examine seals and if*

*there are signs of leakage, they will need a one-off replacement of these seals.*

*The oxidation stability of biodiesel is poorer than that of 'normal' diesel. Over time oxidation can precipitate solids with the potential to block filters in fuel distribution systems. To minimise the likelihood of this occurring, it is recommended that users take particular care to ensure a fuel turnover period of once every 6 months and, in any event, no longer than once every 12 months. Bio-diesel blends have a higher Cold Filter Plug Point (CFPP) than 'normal' diesel which means it may not flow as well (a phenomenon known as 'waxing') in cold weather or stop altogether. However, the fuels made available to the latest standards (BS EN 2869:2010) include additives to prevent waxing and maintain oxidation stability.*

*Current advice based on good practice recommends that:*

- fuel in any tank is turned over regularly, at least every 6 months and certainly no more than 12 months;*
- when in use, tanks are kept as full as possible, to reduce condensation, however this must be balanced against the amount you use and how long a tankful is likely to last you*
- water must be drained off regularly (although it is rarely possible to remove it all) in order to discourage MBC (micro biological contamination). Consideration should be given to modifying the drain facilities to make them more effective*
- seals and components in the fuel system are inspected and, where necessary, replaced*
- strainers and filters are checked and cleaned more regularly*

*It is understood that this is easier said than done. Smaller marinas and boatyards may only have one supply tank and may not sell enough fuel to turn it over regularly particularly in the winter months. Many recreational craft are laid up over the winter with full tanks for 6 months or more in some cases. A balance must therefore be struck between the amount of fuel bought and the amount of fuel you use. Where possible you should try to buy diesel that does not have biodiesel in it (See the RYA leaflet on fuel supplies). But remember that the problems described here also affect 'normal' diesel as well, albeit to a lesser extent.*

*If you are concerned about biodiesel and whether there is something nasty in your tank, test kits are now available, which can identify whether contamination is present and its severity. These have been demonstrated to give quick and accurate results on-site.*

**We thank the RYA for their permission to reproduce this article.**

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