MARITIME FEEDBACK

An independent and confidential reporting system for the maritime industry

SUBMIT A REPORT
CHIRP always protects the identity of our reporters. All personal details are deleted from our system once a report is completed.

ONLINE
Reports can be submitted easily through our encrypted online form
www.chirpmaritime.org/submit-a-report/

BY EMAIL
You can send us a report by emailing CHIRP direct, we will always protect your identity – reports@chirp.co.uk

The CHIRP editorial

Speaking up about stress and safety

Adam Parnell
Director (Maritime)

When our Maritime Advisory Board (MAB) met to discuss this edition of MARITIME FEEDBACK there was unanimous agreement that the reports this time are of a very high standard. There is much to learn in these pages, and we thank all our reporters for the quality of their input and their concern for the safety of themselves and others. Without such dedicated people who take the time to report to us, we would not exist, so we take this opportunity to express our admiration and appreciation.

If anyone is considering sending us a report, but has questions about how the system works, we include a special article by our Director, Maritime, Adam Parnell, which describes the process and the benefits of reporting. Please read it carefully and keep your reports coming!

Visitors to our website may have noticed that the electronic version of our last edition was translated into Spanish, Portuguese, Chinese, Filipino and Indonesian, which means your reports are now available to even more of your fellow seafarers. We are extremely grateful to all the translators who have worked so diligently to make this possible. Of course, there are still more languages which we would like to include, so if anyone is prepared to assist we would be delighted to hear from you. If we could add translations into Russian, Greek and Ukranian, for example, we would be accessible to the vast majority of the world’s seafarers.

We begin this time with a report about an overworked chief officer who developed mental health issues. This is an increasing problem, particularly in light of COVID and the difficulty of performing crew changes, so please consult the guidance we refer to and be on the lookout for people who may need your help and support. This is followed by a topical report about a vessel which lost control in a canal, and we include valuable guidance about bank effect.

We have two interesting collision cases – the first was a result of a machinery malfunction, and the second because a mooring bollard failed. There are valuable lessons in both cases, and we highlight some problems you may not have thought about. Finally, we consider a case where an engineer received severe chemical burns because they were not wearing the correct personal protective equipment (PPE). It is particularly sad that an alternative, less dangerous chemical was available for the same job.

We analyse the human factors related to all our reports, and I believe it is significant that we generally frame our analysis in the form of questions. Most important, we constantly ask you to consider what you would do in similar circumstances. This is really getting to the heart of developing a robust safety culture – the ability to be aware of what is going on around you and to speak up when you notice something which might be dangerous or might lead to unintended consequences. This is something all seafarers should try to always do.

Until next time, stay safe and may all your journeys lead you safely home.

Please note all reports received by CHIRP are accepted in good faith. Whilst every effort is made to ensure the accuracy of any editorials, analyses and comments that are published in FEEDBACK, please remember that CHIRP does not possess any executive authority.
Chief Officer’s mental health issues

Initial Report
The reporter informed CHIRP of serious mental health issues due to fatigue and high levels of stress concerning a chief officer who was working on an LPG vessel.

The vessel was trading on a coastal voyage route with very short distances between ports. The contract time for the chief officer was 3 months but the chief officer had worked an additional 4 months while awaiting a relief. A deck officer had been repatriated on medical and disciplinary grounds, leaving the chief officer with only two other deck officers.

The reporter stated that cargo operations were extremely demanding due to the short port times and fast loading and unloading operations. The port rotations, and the grades and quantities of cargo, were never known until the last moment which made planning uncertain and stressful. Crew numbers were insufficient (the chief officer frequently had to take the helm due to the lack of crew), there was a lack of personal protective equipment and consumable stores on board, and mooring winch failures that could not be fixed by the ship’s staff.

These issues had been raised in the monthly safety meetings but had not been addressed by the management company. On board discipline was being affected by the management’s lack of concern about issues being raised by the ship.

The chief officer eventually had to leave the ship due to poor mental health and see a doctor for an unlimited time.

The company was asked to replace the third deck officer, increase the number of crew and develop a long-term recruitment strategy for all ranks. The charterers had also been requested to plan further ahead so that proper work/rest hours could be achieved. Shore management was asked to monitor crew discipline and appraisals, and to respond appropriately to issues raised during monthly safety committee meetings.

The reporter stated that he left his job 2 years previously due to similar health issues and suggested that extra care should be taken regarding seafarers having a mental health breakdown as there is no compensation for health or job loss.

CHIRP Comment
At what point do fatigue and stress lead to ill health? (See the article in the CHIRP Annual Digest 2020 on seafarers’ wellbeing during the Covid-19 pandemic) Was pressure a factor in this case, or were the crew just busy or dangerously overloaded?

Tankers are subject to SIRE inspections, given the manning levels, it is likely that there would have been a focus on the chief officer’s hours of work and rest, particularly given the fast turnarounds and short voyage lengths. Breaches of work and rest hours would easily be identified providing they had been correctly recorded. SIRE evaluation reports should include a comment on fatigue and mental health in the context of crewing levels.

Demanding work which is sustained over a long period without any respite will lead to high stress and a possible breakdown in the ability to perform that work. This is especially so if the person has a high personal standard for the work and high attention to detail. If this cannot be achieved, then a mental breakdown is possible.

In this case, the situation was made worse by the lack of management support and exacerbated by the resulting breakdown of crew discipline, which further increased the mental workload for the chief officer. Regrettably, a proactive preventative intervention was not undertaken prior to the chief officer being landed on grounds of ill health.

CHIRP is willing to engage with shipping organisations to promote seafarers’ mental health issues more widely so that they are understood and supported throughout the industry, and proposes that consideration should be given to making provisions for seafarers mental health in the ISM Code. This would provide some focus on this area of wellbeing and codify minimum standards regarding seafaring mental health (see A Standard for Seafarers’ Mental Health Awareness and Wellbeing Training, published in 2020 by Witherby Publishing Group). The Maritime Labour Convention 2006 (MLC) is the minimum standard, not the target!

CHIRP is willing to engage with shipping organisations to promote seafarers’ mental health issues more widely so that they are understood and supported throughout the industry, and proposes that consideration should be given to making provisions for seafarers mental health in the ISM Code.

Human Factors relating to this report
Pressure: Does your charterer understand the workload you are operating under? Has anyone from shore management explained to the charterers the extent of the pressure being placed on the crew? Does your management company provide more crew when the workload increases beyond the existing crew’s capacity?

Teamwork: Why did the master with overriding authority not demand that the company support the officers and crew given the issues identified in the report? This matter should have been identified much earlier if there was an active teamwork spirit on board.

Fatigue: Was anyone taking any action to help the chief officer, or was nobody able to recognise the signs of failing mental health? The high workload on board, combined with other operational and behaviour issues affecting the crew, caused an officer to suffer severe fatigue and eventually a mental breakdown.

Does your company or vessel have a Fatigue Management Plan that spells out the management and crew responsibilities to reduce the risk of fatigue?

Capability: Does your shipping company have the necessary competence to manage the mental health issues of its seafarers? Until ship managers understand the factors associated with mental health and receive the necessary training for themselves and their crews, then cases such as this one will continue to occur.

Culture: Given what has been reported, do you feel that there is a poor culture of safety in your ship/shore management teams? Is this something that you have experienced and voiced concerns about but have not been listened to?
Vessel touches bottom during canal transit

Initial Report

The tanker was transiting a canal with 2 pilots on the bridge in addition to the master, chief officer, helm and lookout. The pilot ordered a turn to starboard later than planned, but this was not challenged by the bridge team. As the vessel approached the channel’s port side the bank effect pulled the stern to port just as starboard rudder was applied. In combination, these caused the vessel to cross to the channel’s starboard side where bank effect pushed the bow to port. The vessel re-crossed the channel and touched bottom on her port side, breaching the water ballast tanks.

The vessel's track at the time of the incident is shown on the ECDIS screenshot below.

CHIRP Comment

The latent causes of this incident were in place long before the vessel touched bottom. During the planning stage, the available depth of water and the narrow breadth of the channel should have prompted the master and navigator to consider the possibility that bank effect and squat could affect manoeuvrability and to determine the speed at which these might take effect. If this speed was below the minimum steerage speed, then the use of tugs should have been considered. The need for tugs should have been revisited during the master/pilot exchange (see IMO Resolution A.960(23) Annex 2 for more details).

The port authorities were aware that vessels often touched the bottom in the canal, which could indicate out of date or inaccurate chart data, the need for maintenance dredging, or missing or inaccurate aids to navigation. An investigation revealed that this type of manoeuvring incident frequently occurred in this canal.

The vessel’s track at the time of the incident is shown on the ECDIS screenshot below.

Collison with bridge and barge after moorings parted in high winds

Initial Report

A heavy-lift vessel was berthed alongside with 3 stern lines and 2 springs aft, 3 headlines and 2 springs forward. The three stern lines were all on the same bollard. During the afternoon the port authority issued a strong wind warning and the crew checked that the mooring lines were
adequate. Later that afternoon a car carrier berthed astern of the vessel, adding another 3 lines to the same bollard used to hold the heavy lift vessel’s three stern ropes.

At approximately 22:00 the heavy lift ship shook considerably when 50 knot winds gusts through the port. The master saw the ship’s 3 stern lines detach from the dock, followed by the 2 after springs, allowing the stern to swing quickly into the centre of the dock basin, causing one of the forward springs and one headline to part. The master contacted the engine room and ordered the main engine to be made ready as soon as possible. They then called the port control and requested tug assistance, as did the vessel astern.

The vessel was now attached to the dock with just 2 headlines and one fore spring, and as it continued to swing it hit a berthed bunker barge and a railway bridge, sustaining damage to the starboard side amidships as well as on the starboard quarter. A piece of cargo was also discovered to be hanging over the starboard side.

The Master called port control via VHF to advise that the vessel had contacted the railway bridge and requested them to inform the rail authorities. He also informed the local agent and the vessel’s technical superintendent of what had happened.

Tugs were deployed and the vessel was re-secured to the dock at 0300 hrs. A memorandum of class was subsequently issued due to impact damages to the vessel and cargo. There was some minor damage to the bunker barge and the rail bridge.

An investigation revealed that the mooring bollard to which the stern lines of both vessels were attached had been pulled completely out of its foundations due to the wind loading on the side of the vessels. It also concluded that the crew could not have prevented the incident.

While not an exact science, it is possible to estimate the likely forces generated by high winds on a high-sided vessel so long as the windage area is known.

Tugs were deployed and the vessel was re-secured to the dock at 0300 hrs. A memorandum of class was subsequently issued due to impact damages to the vessel and cargo. There was some minor damage to the bunker barge and the rail bridge.

An investigation revealed that the mooring bollard to which the stern lines of both vessels were attached had been pulled completely out of its foundations due to the wind loading on the side of the vessels. It also concluded that the crew could not have prevented the incident.

While not an exact science, it is possible to estimate the likely forces generated by high winds on a high-sided vessel so long as the windage area is known.

Strong wind warnings should not come as a surprise!

CHIRP draws your attention to the OCIMF Mooring Equipment Guidelines (MEG4), which contain valuable advice on this and related topics.

Human Factors

Local Practices: Vessels and port authorities are encouraged to develop and use a windage ‘ready reckoner’ to assist in the allocation of berths and the bollards to be used. Does the port authority periodically test quayside bollards to assess their holding capacity?

Communication: Do your ship/shore information exchanges include mention of bollard requirements for the current and forecast weather conditions?

Would you communicate with the car carrier which berthed astern of your vessel and discuss reducing the number of lines secured to the bollard?

Culture: Is it an accepted local practice in your port or vessel to put all lines onto one bollard? If so, why? Is this a training issue?

Alerting: Do you feel empowered to question why so many ropes have been placed onto one bollard? Does your port
or vessel view such questions as good teamwork or as a criticism? Do you alert all the ship’s crew to the expected strong winds especially the engineers? Alerting is part of good teamwork behaviour.

**Teamwork:** Do you feel that your ship operates with a good teamwork spirit (good teamwork encourages everyone to think and contribute; a “group think” approach means everyone can help in thinking about the situation)?

**Situational awareness:** Does your port or vessel monitor changes to the situation such as another vessel coming alongside and using the same bollards?

---

**M1819**

**Machinery breakdown leads to a collision**

**Initial Report**

While proceeding for berthing, a tanker experienced main engine failure and collided with a barge that was berthed outboard of another vessel moored alongside a breakwater.

Prior to berthing, pre-departure tests were carried out following company procedures before embarking the pilot and all were found satisfactory. Weather conditions at the time of the incident were light wind, a calm sea with no swell, and good visibility. The bridge was manned by the master, second officer, lookout, helmsman and pilot. ECDIS was used as the primary means of navigation. The vessel's draught was 10.10m even keel and was fully loaded with gas oil.

As the vessel entered the breakwater at a speed of 8.3 knots and was swinging to starboard the main engine was stopped. The pilot ordered hard to port and dead slow ahead as the vessel continued to swing to starboard, but the main engine failed to respond. The vessel’s speed was now 7.2 knots.

The pilot ordered bow thruster full to port, although the master advised it would be ineffective at speeds over 6 knots. Vessel speed at this time was 6.5 knots and the pilot ordered an anchor be readied to let go while the engine control was transferred to the Engine Control Room (ECR). Thereafter engine movements were attempted from the ECR, but all attempts failed.

The vessel's speed was still above 5 knots, so the pilot ordered that both anchors be let go. The vessel speed had reduced to 4.5 knots when it contacted a barge that had been berthed outboard of another.

Engine control was eventually transferred to the emergency engine control station allowing the engine to be used. Two tugs were dispatched to assist, and the pilot directed that both anchors be weighed. Engine control was transferred back to the bridge and after confirmatory checks the vessel proceeded to the berth where it safely moored.

A detailed inspection was carried out by the ship’s staff, followed later by an inspection by class. Non-penetrating hull damage was identified, with significant indents and minor deformation to internal strength members that required repairs.

The investigation revealed that maintenance work conducted 6 days before on the engine control system had not been properly completed nor had it been inspected afterwards. The red locking pin (see photos below) had not been correctly secured back into position and during manœuvreing it had shaken loose due to vibration. This activated the emergency manœuvreing system which over-rode both the bridge and engine room control systems.

The emergency manœuvreing system located on the side of the engine is fitted with a locking arrangement which under normal conditions rests firmly inside the groove indicated in the photos below.

The investigation revealed that the direct cause of this incident was the disengagement of the emergency manœuvreing system’s locking arrangement.

The root causes for this incident were found to be a lack of understanding of the risks by the engineering officers carrying out the checks, which were not overseen by a supervising officer – a procedural requirement that is stated in the SMS procedures for working on critical equipment. It is likely therefore that the engineering officers failed to appreciate the criticality and impact of the locking system.

The investigation revealed that the navigation had been entirely left to the pilot once they had embarked, and there was little evidence of their integration into the bridge team or monitoring of their actions. The investigation report directed that the pre-arrival and departure checklists be immediately amended to include physical verification of the emergency manœuvreing system’s locking arrangement. Additionally, an independent navigational and engine room audit was arranged.

The investigator also proposed that the master be psychometrically assessed to determine their suitability for command and that the chief engineer be brought to the office for a thorough debriefing on the importance of maintenance of critical equipment. The management company agreed with these proposals.

**CHIRP Comment**

Critical equipment defined in the company SMS must be inspected on completion of any maintenance by a
supervising officer. Crucially, single points of failure must also be checked as part of routine pre-arrival and pre-departure checks.

In this case, there appears to be a fundamental design flaw with this equipment, given that it can be vibrated out of its secured position when the engine is running.

It is the master’s responsibility to ensure that there is an effective bridge team working with the pilot. A master should develop communication and leadership skills as part of the natural progression to the rank of master. It is important that once promoted to master these skills are continually improved. The bridge team must never leave the navigation of the vessel to the pilot.

**Human factors relating to this report**

**Local Practices:** Navigational risk assessments should include the risk of engine or control failures and consider whether tugs on stand-by would be an appropriate control measure. Ordering tugs as a precautionary measure is always cheaper than the cost of repairs!

Does your crew regularly practice breakdown drills and transferring control between the bridge and ECR and switching between the bridge and emergency manoeuvring systems?

**Situational Awareness:** Letting go an anchor while still making way incurs significant risk of damaging or holing the bow near or below the waterline and is an emergency measure of last resort. With no other immediate option, would you have followed this course of action given the situation?

**Culture:** Does work on critical equipment on your ship involve a senior officer checking the work? Do you have the confidence to insist that your work is checked on completion if for some reason it is not carried out?

**Teamwork:** It is vital to integrate the pilot into the bridge team and to provide support while they have the conn. Why was the pilot left to conn the vessel without support from the bridge team? Is this a training gap?

**Communications:** The use of ‘closed loop’ communications is strongly encouraged, especially when working with an embarked pilot who may be unfamiliar with on board procedures. Does your bridge team adequately communicate and support the pilot in all phases of pilotage operations?

**Capability:** Is your selection process for senior positions within your company thorough enough to ensure that people with the right level of proficiency and leadership are selected for senior ranks? What process does your company use to ensure that the right person is selected? Is this a training gap?

**M1821**

**Chemical burn to body**

**Initial Report**

During maintenance work on the purifier, an engineer was instructed to bring a specific chemical (carbon remover) from the chemical locker to clean the purifier. The engineer went into the chemical locker to transfer a quantity of the above-mentioned chemical from the drum to a small can. However, during this activity a quantity of the chemical liquid was spilt on their thigh, resulting in a severe chemical burn.

First aid and medical treatment were provided on board before the engineer was landed ashore two days later when the ship reached port. The engineer was subsequently repatriated for further treatment.

The company’s safety instructions which were posted at the entrance to the chemical locker were not reviewed, nor was the chemical personal protective equipment (which was also positioned at the locker entrance) used.

Cleaning the purifier was a planned work activity that took place almost every day. The company’s documented

---

**Risk Management Diagram:**

- **Elimination**: Physically remove the hazard
- **Substitution**: Replace the hazard
- **Engineering Controls**: Isolate people from the hazard
- **Administrative Controls**: Change the way people work
- **PPE**: Protect the worker with personal protective equipment

**Most effective**

**Least effective**
Taking shortcuts by not wearing PPE for a job that is done regularly and which takes a very short time is common. It is a typical example of “it won’t happen to me” syndrome.
What do I report?
Safety-related incidents or events involving:
• Yourself
• Your organisation or your vessel
• Other people
• Your organisation or organisations you deal with

Incidents/events can include:
• Errors
• Individual performance
• Regulatory aspects
• Unsafe practices or design

What don’t I report?
• Incidents or events with no safety content
• Issues involving conflicts of personalities
• Industrial relations and/or terms and conditions of employment problems

When do I report?
• When you are concerned and wish to protect your identity (please note that anonymous reports are not accepted)
• When you wish others to benefit from an important “Lesson Learned”
• When other reporting procedures are not appropriate or are not available
• When you have exhausted company/regulatory reporting procedures without the issue having been addressed

How do I report?
Reporting can be sent via:
• Email: reports@chirp.co.uk
• Online: www.chirp.co.uk
• Telephone: +44 (0) 1252 378947