

## Editorial

This edition of Maritime FEEDBACK is rather special, because it is the first edition ever to be published in two languages. Once the normal English layout is completed, it will be sent to Dalian Maritime University for translation into Potunghua (sometimes called Mandarin Chinese) and will then be printed and distributed by Wallem Shipmanagement Ltd. A copy will also be posted on the CHIRP Maritime website, of course, and we hope companies with Chinese employees will make full use of it.

Most seafarers speak good English, but we believe it is much easier to absorb information if it is presented in the native language of the reader. With this new initiative, the safety lessons can also reach Chinese speakers who work in the coastal and river trades and might not speak any English at all. We are most grateful to the sponsors for making this possible.

In the future, we would like to publish in other maritime languages and would love to hear from companies and organisations which would be prepared to assist. Tagalog, anyone?

Turning to the content, we have another diverse and often worrying set of lessons in this edition. We begin with a ship where alleged violations of MARPOL were routine, and many of the crew were afraid to speak out for fear of losing their jobs. Luckily, one person was brave enough to contact us. There are worrying medical cases and a report of tugs which insist on using ship's mooring lines – something which is totally unacceptable in modern towage. All the reports can teach us important safety lessons, and we thank all the reporters for sharing the lessons with us. Without them, there would be no Maritime FEEDBACK.

Finally, it is encouraging to share some Best Practices forwarded to us by a ship manager. They demonstrate various ways in which the workplace can be made safer if people are invited to offer up their ideas.

再見 zài jian (goodbye for now)

## REPORTS ...

### MARPOL violations and safety management failings

**OUTLINE: A reporter has alleged serious violations of MARPOL and corrupt practices with serious safety management failings which CHIRP has passed to the flag state authority for investigation.**

#### What the Reporter told us:

Since I joined the vessel I have observed several non-compliances with MARPOL regulations.

- After discharging vegetable oils, the vessel carried out tank cleaning and a mixture of noxious liquid substances and seawater was directly discharged to the sea using a cargo hose from the ship's manifold. The last cargo was MARPOL II Category Y (pollution hazard) and even though the cargo was vegetable oil, it can still pollute the sea and the requirements of MARPOL Annex II were being violated. (Regulation 13 2.1.2 – the discharge must be made below the waterline through underwater outlets, whilst not exceeding the maximum rate for which the underwater discharge outlet is designed). This method of cleaning is being carried out every time the vessel conducts a tank cleaning operation.
- Just before arriving at an anchorage I saw an engineer discharging oily waste from the engine room directly into the sea without passing through the oily water separator.
- The vessel was at anchor and a newly promoted engineer and duty oiler discharged oily waste directly to sea as ordered by the Chief Engineer. They believed that they had no choice but to follow instructions or else they would be sent home. On that occasion, the company's Marine Superintendent saw the incident and did nothing to stop it. He is the company representative but instead of following the rules he was tolerating wrongdoings.

- At a different anchorage, oily residues were once again discharged. I have some videos that will prove that MARPOL regulations were violated.

In addition, the reporter advised the following:

- A vetting inspection was carried out (which typically occurs every six months on tankers). I was with the vetting inspector and he noted many major and detainable deficiencies, for example:
  - High/Overfill tank alarms not working properly;
  - Fixed Gas Monitoring system not working;
  - Oil Discharge Monitoring Equipment not working - the inspector searched the equipment for a testing date but this was not available. In the Oil Record Book, it was recorded as being tested monthly, and
  - Personnel including engineers were not familiar with the operation of the monitoring equipment.

It was alleged that after the closing meeting following the inspection, the inspector's remarks and findings were not acted upon. The reporter advised "They just said to us that the vessel passed the inspection".

The ship has been in other ports where Port State Control carried out inspections and noted major deficiencies, but following the inspection someone (allegedly) paid the inspector in order to pass. Most of the time harbour pilots complain about the steering system of the vessel. On one occasion, we entered a river and the steering system failed - the vessel almost grounded in shallow water. The pilot wanted to report the incident to Port Control, but after the Master (allegedly) paid the pilot the vessel continued to the berth. They hide the truth - the ship has had problems with the steering gear for a long time. The vessel suddenly turns whilst in auto pilot and hand steering reportedly does not work properly. Once in a congested traffic area the vessel lost steering and nearly collided with other ships in the vicinity. Repairs were attempted but we noticed they were just experimenting

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### SUBMIT A REPORT –

**CHIRP** always protects the identity of our reporters. We are a confidential programme and, as such, we only keep reporters personal details for as long as we need to keep in contact with them.

#### ONLINE

Reports can be submitted online, through our secure encrypted online form.

<https://www.chirpmaritime.org/submit-a-report/>

#### BY EMAIL

Reports can be submitted online, through our secure encrypted online form.

[reports@chirp.co.uk](mailto:reports@chirp.co.uk)

by transferring the spare parts from steering system number 1 to number 2 and vice versa – we still have steering problems.

Another concern was the mooring winches which have two drums. On one of the winches one drum cannot be disengaged – it is very dangerous during mooring and unmooring operations, but has not been repaired. The company just said it is for dry-dock work, but the lives of the crew engaged in mooring operations are still in great danger. If an accident happens to the crew, they are just not concerned for our safety. We have also family waiting for us at home.

I believe that my vessel is not the only one that has problems and that there are many others out there. Most are afraid to report deficiencies or malpractice, which takes courage. I still believe that the priority must be the lives of persons working on board, because without seafarers there is no shipping industry”.

### What the Third Party told us

As the report states, a company superintendent was in attendance in at least one instance, so the reporter asked **CHIRP** not to contact the Company. The reporter did, however, wish the report to be followed up and thus **CHIRP** contacted the vessel’s Flag State, which investigated the MARPOL allegations.

### CHIRP Comment

The discussion of this report by the Maritime Advisory Board was wide ranging. It was agreed that there was potential for Port, Coastal and Flag State legal intervention, so all positions and geographical references have been removed from the report. The relevant Flag State has been informed and they have agreed to make their own investigation.

There are other details in the report given to **CHIRP** which are not specifically safety related, and **CHIRP** is aware of the involvement of both the International Seafarers Welfare and Assistance Network, (ISWAN), and the International Transport Workers Federation, (ITF).

The Board congratulated the reporter for his or her extremely brave action in submitting this report to **CHIRP**. Whatever the outcome of this harrowing case, it demonstrates that alleged illegal activity and serious management failings in safety and environmental issues will be acted upon by **CHIRP** and passed to appropriate authorities with a request for their further investigation.

However, it should be noted that **CHIRP** is not an organisation that can be used for ‘whistleblowing’ reporting; we cannot accept such reports as we can never satisfactorily deal with criminal acts that are knowingly and wilfully being committed by either shore or ship management.

----- *REPORT ENDS*

## Abuse of MLC 2006

**Outline: An injury on board to a Second Engineer, where the company did not assist with medical treatment, repatriation, or medical expenses.**

### What the Reporter told us:

I was sailing as a 2nd Engineer, and whilst the ship was getting ready to leave the anchorage and berth for cargo operations on 05th December at 0700 hours, I fell by accident and fractured my ankle. The Captain tried to send me to the local hospital, but the company rejected the

request. I called the company superintendent, and was told, “It is not an argument of right and wrong. How can I get a relief 2nd Engineer to the vessel with such short notice?” Following cargo operations, the ship departed Port “A” South Korea on 05th December, and anchored off Port “B”, China on 06th December for 5 days. My ankle was still fractured though and it has not recovered yet.

I asked them to send me to the hospital, but the company said, “Don’t stir this up into a big thing. We will get you off when we arrive back in South Korea. There is going to be a major inspection. Stop making such a fuss and be quiet!”. We berthed at Port “B” on 12th December, where an inspection was conducted concurrently with the cargo operations. The inspection whilst I was injured is recorded in the log book. For 10 days, from the day of the accident until we arrived back in South Korea on 14th December, I was not able to get any prescribed medicine, not even pain-relieving tablets. The only thing that the company provided was a pain relief patch. I even passed out due to the pain during this period.

I asked the company whether the Korean Coast Guard could help in getting me off safely when we were about to anchor off Ulsan port, but this was rejected because they said it might increase insurance premiums. Eventually, on the evening of 14th December, I was disembarked by means of the provision net, (which is normally used for loading groceries etc.). At the time, there were strong winds and the sea was quite rough. Moreover, it was very dark and the ship was rolling because she was in ballast condition. As I was lifted by the crane, I sprained my ankle once again. As a seaman, I believe that was beyond the call of duty - it was very dangerous given the situation.

After I got off, I went to the Ulsan customs office, but nobody from our company came to assist, so I took a taxi to the hospital accident and emergency department. At the hospital, my ankle was swollen up so much they could not perform the operation I needed. It took a month to get the operation.

It was an occupational accident, but the company did not pay my salary or any medical expenses, so I reported it to the Korean Maritime and Port Administration. This did not resolve the problem so I presented a petition to a labour supervisor in the Regional Office of Maritime Affairs and Fisheries. The company urged me to drop charges against them. They said if I dropped the charges they would pay my salary. I answered, “Pay first, then I will drop the charges”. Finally, they deposited my money the day before the problem was due to be investigated. The Regional Office of Maritime Affairs and Fisheries regard the accident as an occupational injury, and said the company should take full responsibility for the matter since otherwise they would be neglecting their employee’s welfare.

I required a second operation, but the company stated that I could not get any operation without their confirmation. I trusted my doctor but the Company did not, so I suggested other medical centres for third party advice - those doctors stated that a second operation was appropriate. I am still under treatment which has now been going on for 35 months. I have had two operations on my ankle and still have a trapped spinal nerve.

The argument continues with the company. They have made it clear that getting an operation is out of the question. They never took the moral responsibility - I am only someone who got injured due to the nature of my job and it is not their problem.

I hope nobody else will have to go through what I had to go through. The company treats their crew in a very unfair manner even though we are their representatives on board. The first priority should be the safety of the crew - the MLC agreement says so.

### CHIRP Comment

CHIRP does not know the name of the company, as it is the MLC principles that the reporter wishes to put before a wider audience. The Maritime Advisory Board commented that this report highlights the fact that commercial considerations have overridden safety and humanitarian concerns, particularly highlighting that:

- Seafarers are advised that in cases like this the ship owner's medical costs are covered by P&I Club insurance, so money should not be an issue.
- Masters should send injured crew members to a shore doctor when in port and do not need company authorisation to do this.
- At sea there are Radio Medical Services which can be utilised.
- With respect to the Safe Manning Certificate, this allows for the vessel to sail short-handed for a limited period so long as Flag State are informed of the extenuating circumstances.
- Finally it was noted that disembarking via a provisions crane that was not rated for personnel transfer was hazardous in the extreme, particularly when alternative means to disembark had been mentioned.

----- REPORT ENDS

## Safety when handling tugs

**Outline: CHIRP has received a number of reports relating to communication and procedures when handling tugs and during mooring operations. Two high risk incidents are detailed below.**

### What the reporter told us (1)

The assisting tugs in this East African port utilize vessel-provided lines when docking and undocking. The docking pilots routinely ask for the best line and then wait while the tugs make fast. Communication with the tugs – when making fast, letting go or working the vessel – is generally conducted in Swahili. While making fast, particularly on departure, the tugs take a heavy strain on the line as it is paid out to them, and there is much screaming from the tug for “Slack, slack!” The vessel will be instructed to make fast the line while the tug is still moving away from the vessel, and there is still a heavy strain on the line. This type of evolution puts crew members involved at risk of serious injury.

While this situation was last observed on 28 December 2016, it has been witnessed by the reporter for at least the past 7 years.

The reporter advised the following lessons have been learned:

1. Request pilots to converse in English, or confirm their orders to the tugs in English as soon as they are given, so the bridge team can maintain awareness.
2. Closely monitor the evolution when making tugs fast. The Chief Officer or Master should monitor the process and bring any unsafe actions to the pilot's attention.
3. Pilots in this port do not appear cognizant of the effect of reduced manning on the speed of mooring evolutions. With only three crew forward and three aft, multiple tasks (i.e. heaving in mooring lines and making fast the tug) cannot be completed at the same time.
4. Deck officers on the bow and stern have been instructed to put the eye at the bitter end of the tug line on a bitt to ensure the tug does

- not pull the entire line off the vessel, as has happened in the past.
5. Crew on the bow and stern are instructed to stand clear of the line as it is being paid out, and maintain control of the line by having at least one round turn on a bitt.
6. Crew are instructed that, if excessive force is put on the line by a tug, they must get clear and take cover. Tug lines have parted in this port in the past when sudden loads were placed on them

### What the Third Party told us (1)

CHIRP wrote to the Director General of the port in question and also the Port Manager. There was no response and the matter was followed up, but still without a response, which from a government department is most disappointing.

### What the reporter told us (2)



Parted mooring tail following recovery of mooring line

Vessel commenced unmooring operations from berth No 2 of the terminal at 05:24 hrs/Lt.

Following the unmooring plan agreed with the pilot during the Master/Pilot exchange process, headlines and stern lines were released first, and then the breast lines.

During the last stages of unmooring the pilot ordered the tug skippers to pull the vessel away from the dock without first releasing the spring lines. During the pulling operation, the forward spring mooring tail parted.

The investigation noted that:

- According to the vessel's report the parted mooring tail had been in service for 12 months with 798 working hours, and was in very good condition. The minimum breaking load (MBL) was 146T.
- All related machinery and equipment was in good operational condition, and tested successfully prior to departure.
- A risk assessment had been completed and the hazards and risk control measures relating to the mooring and unmooring operations had been addressed.
- The pilot instructed the tug to pull without informing the Master or the bridge team.
- The pilot instructed the tug skippers to start pulling although the spring lines had not been slacked or released.
- This action was not noticed by the Master or OOW immediately.
- At the time of the incident the wind was reported as SW Force 2.
- No damage was caused to the vessel or terminal facilities. No injury occurred.

It was concluded that the incident was caused due to improper instructions from the pilot to the tug skippers, inadequate monitoring of pilot orders by the vessel's Master and OOW, and inadequate communication procedures between the pilot and the bridge team.

### CHIRP Comment

Having discussed these reports, the Maritime Advisory Board recommends the use of best and now common practice whereby only the use of tugs lines is permitted – a system utilised in the vast majority of ports. The Board emphasised that handling lines with tugs involves risk which can be mitigated with proper planning

and that specific guidance is needed for ships crews when ships lines have to be used for tug operations. This includes;

- The need for a comprehensive exchange of information between the Master and Pilot before securing tugs, including when and how tugs will take/release the lines.
- Similarly, the personnel involved in handling the line(s) need to be properly briefed.
- Mooring crews should put the eye of the bitter end of the tug line on a bollard, and then ensure the tug does not pull the entire line off the vessel in an uncontrolled manner. Effective communication is essential in this respect.
- Mooring crews should be instructed to stand clear of the line as it is being paid out and maintain control of the line by at least one round turn on a bollard.
- Mooring crews should be instructed that once the tug is fast they must keep well clear; and if excessive force is put on the line by a tug, they must take cover. Tug lines have often parted in the past when sudden loads were placed on them.

Although the port is not named in the report it is known, and there is absolutely no tidal or other reason for the tugs to start pulling off before all lines are sighted and clear. Thus, this case would appear to be about communication, complacency, and (possibly) time pressure. It is absolutely essential that relevant personnel are clear of tugs' lines prior to the tugs pulling/pushing, so effective communication between the Pilot / Master / Bridge Team and the mooring stations is vital.

Effective communication is vital throughout all mooring and tug handling operations. Where English is not the common language then pilots communicating in their native tongue to the tugs is advisable, but the context of the discussion must be reported to the Master and thence to the mooring stations, preferably before the instruction is given.

People are still being killed and injured in mooring and line handling operations, so the foregoing is not simply common sense – it is essential advice.

----- REPORT ENDS

## Hygiene – medical condition in the galley

**Outline: A report detailing a medical condition in the Catering Department that worsened, yet the patient was required to continue working in the galley.**

### What the Reporter told us:

I have been working for a passenger vessel company, as a Commis de Cuisine since 2011. I joined my last ship on 20th September. While working on board my duty was in the cold galley night shift. In March, after six months on board, the fingers on both of my hands got infected with fungal bacteria. I went to the ships clinic and our doctor gave me antiseptic cream to apply to my hands and authorised me to return to work. A few days passed and I kept on applying the cream, but it did not work at all...

I complained to my Sous Chef, and asked my department head, the Executive Chef, to change my work place but they refused and instructed me to keep working. Three months passed and both my hands and 6

finger nails became completely damaged with fungal bacteria. In June, the ship's doctor sent me to a shore clinic in Italy, and told me that I would not need to pay for any written prescription from the shore doctor because the Company would arrange it for me. After visiting the doctor in Italy eight days passed and the ships doctor still did not give me any kind of medicine. Finally, on 25th June the ships doctor decided to send me home on medical repatriation to receive medical treatment in my home town.

I have been on medical leave since 25th June undergoing treatment with two dermatologists here in India. Both hands have five finger nails that are completely damaged and the skin folds that frame and support the nails on three sides are critically damaged forever. This means I cannot work anymore as a food handler and my total career has been lost due to the negligence of a ships doctor and my supervisor. They never transferred me to a more suitable workplace, while the ship's doctor misdiagnosed my condition for four months.

The ship's clinic and doctor failed to provide adequate medical treatment to me. I was suffering with a fungal infection but the doctor, my Sous Chef, and department head kept me working in the knowledge that I was a food handler - if any kind of cross contamination could happen to the food then this was both dangerous and hazardous with respect to the health and safety of passengers.

### What the Third Party told us

CHIRP wrote to the managers of the vessel in question but they declined to respond.

### CHIRP Comment

CHIRP sought expert advice, and asked if good hygiene practice in the cruise sector indicates that the reporter should have been removed from food contact to reduce the risk of food contamination at an earlier stage? We were advised that approximately 25% of crew visits to cruise ship doctors concern skin conditions, and a large proportion of the people involved are food handlers. Most light or moderate skin conditions, even when they involve the hands, will be permitted in active food handlers, but it is now an absolute requirement that food handlers wear gloves - both to avoid contamination of the food and also to protect their own skin.

CHIRP was advised that fungal and bacterial infections are relatively rare on hands, and usually secondary to other conditions. Most common are wounds (injuries), or contact dermatitis. These are not contagious but can lead to secondary infections from bacteria or fungus. Gloves are to be used while working, but accumulation of moisture during the use of gloves may aggravate the conditions and promote infections. Most skin conditions that are limited to the hands will heal quickly with proper supportive care, (such as not using strong soaps or disinfectants, proper drying of hands, plus the use of moisturizers and mild topical steroids), and above all with proper follow-up and TIME!

Fungal infections can be made worse through overly eager hand sanitation: frequent washing, in particular with strong soaps or disinfectants, removes nature's barrier protection, thus promoting fungal growth.

CHIRP suggests that the overall lesson is for all companies to ensure that they have robust procedures in place to ensure that recurrent medical conditions are thoroughly followed up. The management of such hand conditions in food workers, including

communication between medical staff, the patient and his/her superiors should also be in place. This should improve management of the condition, and clarify what tasks should be avoided if possible and the likely recovery time.

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## Damage to an anchor windlass hydraulic motor

**Outline: An unexpected windlass failure – things always go wrong at the most inconvenient time and place!**

### What the Reporter told us:

The vessel anchored off port at an open anchorage, with no navigational hazards in the vicinity, on 31 December. On 02 January, at about 02:00 hours, the weather started worsening with strong winds up to 30-35 knots, gusting to 40 knots, and heavy rain. The crew observed that the anchor chain started slipping continuously from the brake and through the chain stopper. The Master was called and the engine room was notified. At 02:30 hours the Master commenced heaving up the anchor. At about 02:40 hours, when the 4th chain shackle was on deck, the windlass control unit and hydraulic motor developed a leak. Simultaneously, the crew realised that the windlass motor had lost power and they could no longer heave up the anchor.

A spare motor was available onboard and the crew replaced the defective motor. The job was completed at 13.50 hours and the anchor was heaved up safely at 14.50 hours.

During the repairs, the Master used the engines and managed to maintain the vessel in a safe position.

From the investigation that was carried out, the following should be noted:

- The vessel was anchored in a water depth of 34 meters with 6 shackles in the water.
- The vessel was in normal ballast condition. The drafts were 6.0 m (F) and 8.0 m (A).
- The prevailing weather conditions during the incident were NW winds 30-35 knots with gusts up to 40 knots and the sea state was high, with swell up to 4 meters. The deterioration of the weather had been predicted and relevant weather forecasts, via NAVTEX and INM-C, were available onboard.
- The Officer of the Watch (OOW) did not alert the master promptly when the weather started deteriorating. However, no instructions had been given on this issue in the Night Order Book or anywhere else.
- The windlass and anchor motor were in good operational condition prior to the incident. However, the ability of the windlass and the anchoring system to withstand the excessive loads/stresses that are applied in heavy weather was not assessed properly.
- The anchor chain stopper and its securing pin were damaged, most probably due to the high forces applied, leaving a gap which enabled the anchor chain to slip.

### CHIRP Comment

CHIRP and the UK's Marine Accident Investigation Branch (MAIB) have several cases of dragging anchors, the latest for CHIRP was published in Maritime Feedback 45. MAIB report 28-2012 details an incident where windlass damage was the precursor to a series of incidents.

Mariners do not always appreciate the limitations of an anchor, even when they take into consideration the depth of water and amount of cable to be used. If winds of Force 6 are expected, the generic advice is for ships to heave anchor and go to safe waters or out to sea. Wind, wave and current limitations for an anchor system are given in the DNV-GL article highlighted below. Procedures and training should cover an understanding of the environmental and operational limitations of the anchoring equipment. Proper maintenance following manufacturer's recommendations is essential. It is important to note that the wind speed limit should be greatly reduced as the wave height increases, because the anchor design assumes that anchoring takes place in sheltered waters. In addition, the effect of windage is much greater on a ballasted vessel, particularly larger vessels.

DNV-GL, The Swedish Club and GARD have published some excellent advice. Most anchor losses are avoidable. References within the DNV-GL article include an anchor loss video "Anchor loss prevention" which is well worth watching.

In addition, the Board highlighted the fact that there have been several cases of anchor windlass motor explosions, some causing serious injury. An article from the Maritime Accident Casebook further discusses these. "Maritime Accident Casebook – exploding windlass" refers.

DNV-GL anchor loss article states that 34% of anchor losses are due to weather, 24% due to winch or motor failures, and 21% due to operational procedures. The web sites are well worth visiting to ensure you do not become another anchoring statistic.

All of the references mentioned above can be accessed from the publications page of the CHIRP MARITIME website <https://www.chirpmaritime.org/publications/>

----- *REPORT ENDS*

## Hazards associated with fuel oil leakage

**Outline: CHIRP has received several near miss reports relating to fuel oil leakage and the following examples demonstrate the high risk of a fire due to human errors.**

### What the Reporter told us (1)

A company reports that recently the number of fuel oil leakages from main engine fuel oil high pressure pipes has been increasing. Fuel oil leaks from high pressure pipes carry a risk of fire in the engine room. Most of the incidents were caused by human errors, such as overconfidence and carelessness. Some examples are as follows:

**Case 1:** While the vessel was underway, a slight fuel oil leak was observed at the connection between No.6 cylinder fuel oil pump of the main engine and its high pressure pipe. Immediately, the vessel stopped her main engine and replaced the high pressure pipe. Upon investigation, it was found that the coupling nut had become loose. The cause of this incident was inappropriate torque management of the coupling nut.

**Case 2:** Whilst underway, the crew discovered a fuel oil leak between No.8 unit fuel oil high pressure pipe connection of the main engine and the injection control unit. The vessel stopped her main engine and replaced the fuel oil high pressure pipe. On further investigation, the sealing surface of the removed fuel oil high pressure pipe showed slight press marks.



To help eradicate fuel oil leaks from the main engine fuel oil high pressure pipes, the following key actions for fitting and unfitting the fuel oil high pressure pipes should be followed:

- Close Inspection: seating surface/screw parts of the pipe at both ends and their mating parts should be inspected and cleaned carefully. For close inspection, the fuel oil high pressure pipe should be removed completely when it is dismantled for maintenance, such as during fuel valve replacement, etc.
- Proper reconditioning: if any damage to the seat surface is observed, the relevant seat surface is to be ground by the special tool on board. Also, the lapping special tool must NOT be deformed or damaged.
- Proper tightening: the fuel oil high pressure pipe should be tightened to the proper torque in accordance with the manufacturer's instructions.

**What the Reporter told us (2)**

During daily inspection, the 3rd engineer noticed that fuel oil was present inside the Purifier Room, the source being from the fuel oil heater of No 1 auxiliary boiler. The engineer isolated the heater, drained the piping of No 1 boiler, and put No.2 auxiliary boiler fuel oil heater into service.

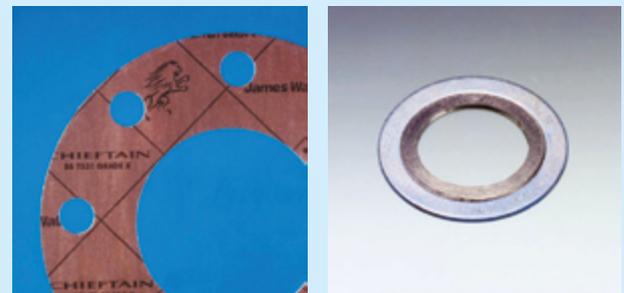
Investigating the cause of the defect, it was found that the leakage occurred due to the poor condition of a gasket, which was replaced with a spare. The damaged gasket was found to be of the ordinary type and not the spiral high temperature gasket which is used for high temperature piping systems. The investigation also noted that the last visual inspection of the system was conducted the evening before, in accordance with the UMS check list, and no problems were identified. Following the incident, a thorough inspection of the piping system was carried out. No defects or leaks were identified and the piping was found in good condition. It was concluded that inadequate inventory management of the vessel's spare parts was a potential factor, and there was improper planning during the fitting of the original gasket. It was highlighted that:

- Machinery spaces, and especially purifier rooms, are very fire-prone areas. Therefore, it is essential that these spaces are inspected carefully during all daily and UMS inspections.
- Maintenance of critical systems such as the fuel system should be properly planned and executed, ensuring that the spare parts used are fit for purpose.
- Effective inventory management, proper tagging and control of spare parts onboard and proper checking of the condition and suitability of spare parts prior to use are essential safety issues.
- Fuel oil high pressure piping systems should be fitted with spare parts/consumables appropriate for the high temperatures involved.

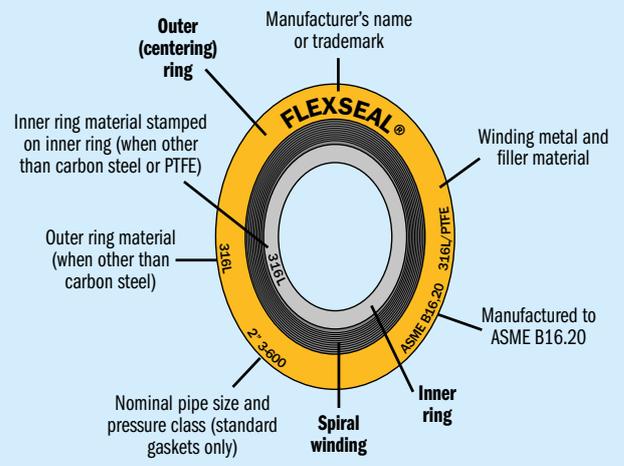
**CHIRP Comment**

Having discussed the reports, the Maritime Advisory Board agreed that fuel oil systems are high risk, and that particular attention should be paid during maintenance. The correct identification of gaskets is essential for high pressure/temperature systems. The Board also stressed the need for careful oversight during maintenance or repairs. When a defect regarding an incorrect type of gasket/joint being fitted has been identified at one location in the high temperature pipework, it would be a good risk control measure to open up the remaining similar joints in the pipework, to ensure that correct spiral-wound gaskets/joints have been fitted.

The 1998 HMAS Westralia fire with subsequent fatalities caused by fuel leakage from non-genuine flexible pipes was referenced. In addition, a first response to fuel fires should be foam blanket cover. It was also highlighted that low pressure piping does not require shielding, so if a leak occurs the consequences could be severe.



A standard gasket and spiral ring gasket



Schematic of a typical spiral wound gasket.

----- REPORT ENDS

**Damage to a fixed CO2 system remote control cabinet**

**Outline: An unusual account from a ship operator of the failure of a remote CO2 control cabinet, with a high potential for a serious incident to occur.**

**What the Reporter told us:**

Whilst the vessel was underway at sea, the crew working on deck heard a hissing sound coming from the CO2 room. Upon inspection of the CO2

room, the crew observed that the cabinet of the CO2 pilot bottles was lying on the floor damaged, and its wall mounting had completely failed.

The crew was mustered and it was confirmed that they were all safe. It was also confirmed that no CO2 leakage had occurred to the engine room or pump room. The CO2 bottles were inspected / measured at the next port of call and were found almost full.



Damage to CO2 remote release cabinet

From the investigation that was carried out, the following should be noted:

- The vessel reported that inspections and tests of the CO2 fixed system were carried out regularly. Damage to the support brackets for the cabinet had not been noted during inspections.
- The cabinet was constructed of plastic. It was concluded that the incident was caused due to wear and tear of the wall mountings of the CO2 pilot cabinet box.
- All fleet vessels were instructed to thoroughly inspect their remote CO2 cabinets and revert with findings.

**CHIRP Comment**

CHIRP occasionally receives CO2 related near misses – Maritime Feedback 44 reported upon the accidental release caused by brittle O-rings, and an article relating to misuse of locking pins was published in Maritime Feedback 17. MAIB has an incident report (number 23-2012) where pilot valves were not isolated during servicing, and the system activated. The USCG described an accidental CO2 release when the CO2 release valves were mistaken for quick closing valves and the system was activated by mistake. USCG Safety Alert 15-2014 refers.

This incident could have resulted in multiple casualties if the pilot bottles have been triggered when the control box failed. How secure is your remote release cabinet? Do not let the something like this happen to you. For CO2 system manufacturers – is your cabinet robust enough to withstand the vibrations experienced on a vessel?

----- REPORT ENDS

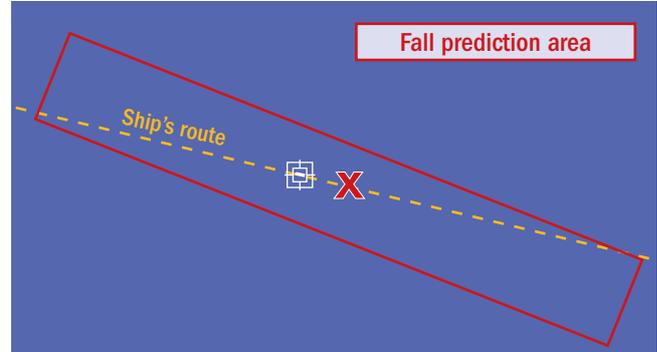
## NAVAREA Warnings are issued for a reason

**Outline: A report from a management company, describing how an important NAVAREA warning was overlooked and led to a near miss.**

**What the Reporter told us:**

Recently, we received a near miss report in which parts of a booster rocket launched from xxx fell near a vessel due to the failure of the bridge team to note a navigation warning regarding the area and the risk of falling debris.

A NAVAREA message about the launching of a rocket, including the area at risk from falling debris, was issued by a national coast guard. However, the Master and duty officer overlooked it and did not plot the risk area on the chart or ECDIS. The vessel entered a hazardous area with considerable risk to the ship's safety, resulting in a serious near miss in which the vessel came close to being hit by falling debris from the booster rocket.



Schematic showing ships track and fall prediction area of rocket debris

Regarding lessons learned, the company advised that in order to avoid any re-occurrence, bridge teams should have the following processes in place for navigation warnings:

- All available means are to be used to receive navigation warnings concerning areas near the ship's intended route.
- Navigation warnings must be properly checked by the duty officer, always supervised by the Master.
- Appropriate navigation warnings are to be marked on the chart, recorded in the notebook (or designated file), and shared with the bridge team.

**CHIRP Comment**

The Maritime Advisory Board agreed with the lessons learned. All Navigation Area warnings, NAVTEX transmissions and Enhanced Group Call (EGC) messages should be checked and acted upon where necessary. A procedure should be in place on the bridge to ensure that this is done. Chart Management Systems routinely provide a system which can be used.

----- REPORT ENDS

## Correspondence Received

### Look out above!!

A ship manager has reported an incident to a radar antenna as follows: While the vessel was at sea, heavy adverse weather conditions were experienced, with 9-10 Beaufort and wind speed more than 45 knots. The Master reduced speed in order to minimize the weather impact. Suddenly the S-Band radar antenna became detached from its base and landed on the masthead platform. The antenna was damaged and could not be repaired by the crew. The cause of the failure was determined to be improper installation of the S-Band Antenna by shipyard personnel. The antenna should have been mounted on the foundation plate (base) with eight bolts rated M12 but was actually secured with four bolts of M10, which were not adequate to withstand the applied wind forces.

This incident underlines the need for thorough inspection of all equipment, systems and arrangements on new vessels during their

first period of operation. These inspections should verify that all equipment, systems and machinery comply with the manufacturer’s specifications and industry standards and do not present any safety risks. Any defect or malfunction or low standard item should be reported to the company so they can issue a guarantee claim to the ship builder.

“Another very useful summary in MFB 46 which has been circulated to all our vessels and our shore management. With respect to the actions of the individual trapped under the dinghy, the correspondent’s calmness and recall of his training undoubtedly saved his life. I would however suggest all concerned should be reminded that standing under a hot shower after cold water immersion poses a serious risk of collapse; with a gradual warm up in a prone or, failing that, a seated position being preferable. Survivors need to be monitored during re-warming and also for the first 24 hours after immersion for the symptoms of secondary drowning. Neither of these aspects were given prominence in Basic Sea Survival training 30 years ago but both are now included in Personal Survival Training and Proficiency in Survival Craft and Rescue Boat courses including refreshers.”

## Personal Survival Training

CHIRP has received the following, after publishing the article related to “Trapped in an overturned dinghy” in Maritime FEEDBACK 46

## Best Practice

CHIRP has received some examples of best practice from a ship manager and these are replicated below:



Muster stations marked with designated place for the ship staff to stand as per the muster list sequence



A pocket size emergency duty card made as per the duties assigned in the muster list and attached to each lifejacket.



Anchor chain marked with the help of retro-reflective tape at a position easily visible from the bridge. At night time the officer of the watch can use binoculars and a search light to reflect on the tape so as to make sure the chain did not slip.



Mooring ropes covered with canvas in way of the Panama lead to prevent chafing damage.



Quick closing valves in the engine room marked to help identify the valves during testing and operation.



The entrance and exit ladders of the accommodation and other areas marked with zebra markings for cautioning staff.

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