

Editorial

We start 2017 with new reports highlighting the risks and exposure to potential danger that marine pilots routinely encounter. Poor design often plays a part in creating the dangers, but there are human factors at work as well. All too often at sea we concentrate on completing a task, even if it may be dangerous.

This edition of Maritime FEEDBACK contains examples of pilot boat coxswains having to take risks to get close to the embarkation point, and of pilots risking their lives to get aboard a ship when they should probably have refused and aborted the attempt.

Professionals are naturally reluctant to abandon any endeavour they undertake, and most pilots probably know that a ship will be safer with them than without them in the approaches to a port, but there comes a point when personal safety must take priority. The challenge for any professional is to know when that point is reached.

We also include an example of how safety training saved a reporter's life, even though the training took place 30 years ago.

Perhaps the miracle is not that the training lessons were still held somewhere in the reporter's memory, but that he or she was able to remain calm and think back to the lessons learned a generation earlier. In any personal survival situation panic can be a killer, but our report shows how keeping calm can turn the odds in your favour.

We are always delighted to receive feedback from our readers, and there are some excellent examples at the end of this edition. We like to think that FEEDBACK works both ways – we tell you what our reporters send in, and you tell us more about many of the topics. Please keep both your reports and your responses coming, because both contribute to the success of Maritime FEEDBACK.

Finally, we have noted an increase in the aviation sector of reports which touch upon subjects involving the use of recreational drugs, inappropriate consumption of alcohol, bullying or sexual harassment, which may have affected performance in a safety critical environment. We seldom hear of such things in the maritime world, but please let us know if you have witnessed similar things at sea.

REPORTS ...

The hazards of Pilot boarding

Throughout 2016, the International Maritime Pilots' Association (IMPA) held a safety campaign focused upon the standard of pilot ladders and associated equipment. **CHIRP** supported this campaign and received many reports on the subject, several of which are highlighted below.

OUTLINE: The first report describes issues concerning pilot access near the non-parallel ends of a ship, and use of a retractable platform.

What the reporter told us

This vessel, like her sister ships, has a pilot boarding point located too far aft. Access is by means of a side door with a platform and pilot ladder. The position of the access point becomes dangerous at shallow drafts because it is directly over a non-parallel hull area on the aft quarter (see photograph below). This is particularly dangerous because it affects the safe performance of the pilot boat, especially in a swell, bad weather, or when the vessel is turning. Furthermore, the platform used in the arrangement also makes it dangerous at deeper drafts because its height is less than 5 metres above the water line. The danger is greater when the ladder is rigged FORWARD of the platform.

The pilot transfer operation should be carefully planned depending on the vessel's draft, and the vessel should not alter course whilst the pilot transfer is in progress and until the pilot boat is clear of the vessel's side. At deeper drafts, it may be necessary to remove the platform so as not to obstruct the pilot boat.

What the Third Party told us

Our investigations yielded the following results:

- in way of the pilot door the vertical part of the hull starts at a draught of 9.60 metres;
- 10 metres further aft the vertical part of the hull starts at a draught of 12.40 metres;

- the position of the pilot ladder and with it the position of the foldable embarkation platform is dictated by the structural conditions of the vessel; there is a lashing bridge right ahead and a lifeboat right astern of the reel with the ladder, so it cannot be relocated;
- obviously, the location of the pilot door itself is also dictated by structural factors and cannot be changed;
- there is no other location where a pilot ladder could be rigged that would meet the requirements of SOLAS V/23 and IMO Resolution A.1045(27);

Based on the above facts it is obvious that a certain risk cannot be excluded, and the pilot boat might get into trouble with the non-parallel part of the hull especially at shallow draughts and/or in adverse weather conditions. Likewise, it is obvious that little can be done in regard to the location of the pilot ladder and/or the pilot door without major structural alterations to the ship, the cost of which is prohibitive.

We have therefore concentrated on improving the existing arrangement to ensure maximum safety for pilots and pilot boats and have issued instructions concerning the embarkation/disembarkation of pilots.

These are, in particular:

- the embarkation platform is foldable and is in fact used or not used in close collaboration between the vessel and pilot boat depending on the individual situation; the vessels use a table that shows the clearance of the pilot door and platform from the water line in relation to the vessel's draught, which allows the Master to inform the pilot boat precisely about the clearance available and eliminates "guestimates";
- in cases where the embarkation platform is folded away and not used, an additional removable handhold stanchion was fabricated and is used to allow the pilot a safe transfer from the ladder into the ship (see photograph below);
- vessels were instructed to carefully plan the pilot transfer in close collaboration with the pilot boat and not to alter course during pilot transfer or while the pilot boat is alongside the vessel;

We are confident that these measures will further enhance the safety of all parties involved.

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.

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/>

OR

BY EMAIL

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

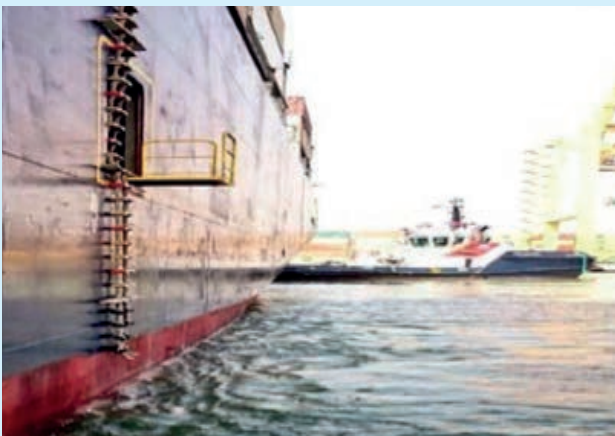
reports@chirp.co.uk

CHIRP Comment

The Maritime Advisory Board commented upon the quality of the report and the response from the managers, which point to an active learning environment regarding these new builds. The Board agreed that structural modifications were unrealistic (although it was noted that some existing vessels were not constructed in line with the original pilot boarding regulations which included the “mid half length” parallel body requirement), and specifically noted that regarding modifications some quality control would be necessary for the additional handhold stanchion. This should involve the modification being inspected and certified by Class to ensure that it is safe to use.

Not explicitly mentioned by the reporter, but inferred, is that an approach from astern by a pilot boat may give the Coxswain some problems when trying to come alongside a flare, rather than the flat side of the vessel. Additionally, again inferred, the line of sight to the platform is reduced if the platform is placed abaft the ladder and this may cause the pilot boat superstructure and mast to come too close to the platform for comfort. The Coxswain may be unable to see exactly how much available room he has when manoeuvring the pilot boat.

For the future, the Board noted that a particular challenge will be ensuring that, at the design stage of a vessel, all the latest IMO regulations encompassed within SOLAS Chapter V regulation 23 are incorporated. This takes on a greater importance as most companies, when purchasing a new build, accept the shipyard standard and are becoming less involved in the design and construction. It should be noted that since July 2012, pilot ladders are an integral part of the Life Saving Appliances certification within a Safety Equipment Certificate.



Retractable platform access – looking aft



Proposed modification and fabrication by the third party

CHIRP Comment – continued

For this, and the other pilot access and boarding reports below, reference can be made to the following documentation:

- **Safety at Sea – Safety Focus: Pilot ladder neglect**
- **MPA Safety Campaign 2016**
- **IMPA Guidance for Naval Architects & Shipyards – Provision of Pilot Boarding Arrangements 2012**
- **Guidance for Naval Architects and Shipyards on the Provision of Pilot Boarding Arrangement, principal documents relating to specification**
- **IMPA – Boarding Arrangements Poster**

Plus the following supplementary material:

- **Shipping Industry Guidance on Pilot Boarding Arrangements 2012**
- **SOLAS Chapter V – Regulation 23**
- **The Nautical Institute Seaways October 2016 – Securing pilot ladders**
- **IMO Assembly Resolution 1045(27)**

All of the above publications can be downloaded from the publications page of our web site

<https://www.chirpmaritime.org/publications>

----- **REPORT ENDS**

OUTLINE: Our second report highlights the difficult challenges facing the Master and the pilot boat skipper during a pilot boarding operation in adverse weather. A pilot should not feel pressured to board and should abort any boarding where conditions are considered to be too hazardous.

What the reporter told us

MV xxx arrived at the pilot station around midnight. Weather was improving after a day of strong northeast winds and a swell of up to 2.5 metres. By midnight the swell was still between 1.5 and 2 metres although the wind speed had decreased to 15 knots. The pilot ladder was ordered port side, 1 metre above the waterline. Vessel draft was more than 12 metres. The pilot was just finishing an outbound vessel prior to proceeding to MV xxx. Crossing with outbound traffic was arranged to be starboard to starboard. The pilot disembarked from the outbound vessel and requested MV xxx to proceed towards the entrance on course 300°, in order to create a good lee and arrange the desired crossing with an outbound vessel.

MV xxx kept a course of 320° which resulted in passing the outbound vessel port to port. The pilot boarding operation was attempted 2.5 miles from the port entrance, at 00:20 hours, at a boarding speed of 8 knots, with some swell because not enough lee was provided. Furthermore, the combination arrangement for boarding (not requested) was dangerous, with the vessel's accommodation ladder less than 3 m above the surface of the water. With a 1.5 metre swell coming from aft and the pilot boat's handrail 2.6 metres above the water, the boarding was done in very poor conditions and the pilot boat's performance was restricted by the lower platform of the accommodation ladder. There was a moment when the pilot was on the ladder and the pilot boat deck was above him, forcing the coxswain to put the engine full astern to avoid a probable serious incident.

These vessels are well known for their non-compliant arrangements (see photographs), although there has been some improvement due to our continuous complaints. This near miss resulted from a combination of unsuitable

equipment, a disregard of recent SOLAS regulations and an alarming lack of common sense.

Pilot boarding information is given to vessels over VHF prior to arrival and should be revised. It should include an instruction that SOLAS-compliant boarding arrangements are required.

What the Third Party told us

I think this case is not as straight forward as the informant would like to make it.

It is obvious that the required heading was not achieved by the vessel as requested by the pilot, yet the pilot still boarded the vessel in the prevailing sea/swell conditions thus jeopardizing the safety of both the pilot and pilot boat. It would have been prudent for the pilot boat to communicate with the vessel and achieve the desired heading to eliminate the risk caused by the reduced freeboard.

It is easy to 'blame' the technical installation, but in my view there was a serious lack of safety aptitude on the part of the pilot who, despite identifying the risk, proceeded with the boarding.

The pilot boat should have mutually agreed with the vessel that it would wait until the desired heading was achieved for safe boarding of the pilot.

I'm sure you are aware that the new SOLAS amendments for pilot transfer arrangements entered into force on 1 July 2012, and one of the items states that "The lower platform of the accommodation ladder should be in a horizontal position and secured to the ship's side when in use. The lower platform should be a minimum of 5 metres above the sea level." However, the above amendment does not apply to MV xxx as she was built in 2007.

As per the extract from SOLAS Ch-5, Regulation 23, 1.4 – "Equipment and arrangements installed on or after 1 July 2012, which are a replacement of equipment and arrangements provided on ships before 1 July 2012, shall, in so far as is reasonable and practicable, comply with the requirements of this regulation".

MV xxx cannot meet the 5 metres height objective of the new SOLAS regulation between drafts of 11.35 metres and 12.45 metres (i.e. heavily loaded). Even if the vessel achieves a platform height of 5 metres, the hazardous condition will depend on the size of the pilot boat (which can range from a small launch to a very large harbor tug).

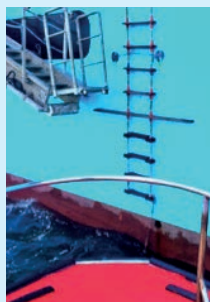
Our crews on this series of vessels are aware of the challenges at heavy load (deep draft) and are requested to work with the pilots to ensure safe boarding.

Hope the above satisfactorily addresses the raised concern.

CHIRP Comment

The Maritime Advisory Board, whilst noting some of the similarities with the first report in terms of draft and access via accommodation ladder, focused their attention on the stated "poor conditions" for boarding. It was observed that the standard green to green passing was changed to red to red, although it was agreed that this could be perfectly acceptable depending upon the onward movements of the inbound and outbound vessels. The Board specifically commented that in any pilot boarding, notwithstanding any advice or request from the pilot, the pilot boat or the local Vessel Traffic Service, the Master of vessel holds the sole responsibility for the safe navigation of his/her vessel and this should include consideration of an abort, (which should form a part of the passage planning process). Similarly, a pilot should not feel pressured to board and should abort a boarding when conditions are considered too hazardous.

Typical boarding arrangement for this type of vessel



OUTLINE: The final report in this section outlines how the latest SOLAS pilot arrangements as per IMO Assembly Resolution 1045(27) – see the comment under the first report - were not incorporated into a new build.

What the reporter told us

Due to her recent construction (2015) one might think safety features would be carefully addressed, but a raised belt along her side makes the usually hazardous pilot transfer operation even more dangerous. As far as I know "IMPA Required Arrangements for Pilot" demand at least 6 metres of unobstructed ship side at the pilot access point, yet on this ship there is a gap in the belt no longer than 1.5 metres. In cases of swell and/or bad weather the belt can significantly affect the pilot boat performance and increase the risk. This is a design issue.

CHIRP Comment

CHIRP made several attempts to contact the third party ship manager, who declined to respond. The Maritime Advisory Board agreed that the boarding arrangements were non-compliant to the latest SOLAS amendments. They noted that the 6 metres clearance was designed to give a pilot boat sufficient scope to come alongside and drop back. In this case the pilot boat could easily ride up under the "belt" in inclement weather conditions, and since there is no flexibility for movement of the pilot ladder, this creates a very hazardous condition.



A new build passenger vessel with non-compliant SOLAS boarding arrangements

REPORT ENDS

A safe means of access – at ALL times.

OUTLINE: An account of a homemade spreader being used to support an accommodation ladder.

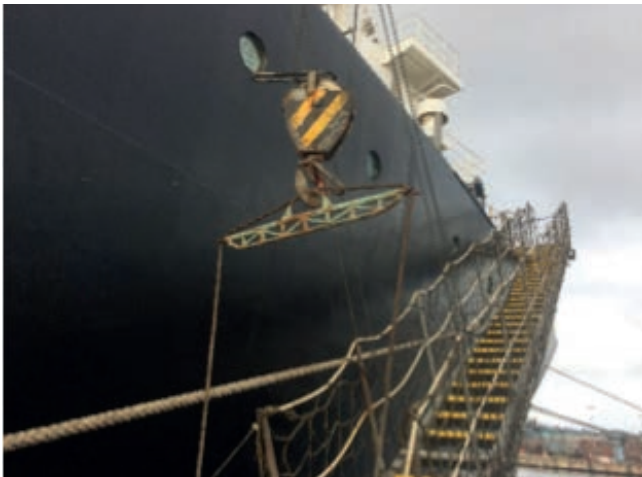
What the reporter told us

Please find attached photo of a lifting spreader that I suspect was made onboard. I was due to sail the MV xxx this morning from port xxx.

The gangway was suspended by a davit with a spreader that appeared to be a made using an onboard appliance. The shackle attaching the wire to the gangway was not in a straight line during the lift, so I requested the gangway be landed and the load taken off the wire before embarking.

I reported to AMSA for follow up but thought you may be interested.

REPORT ENDS



What the Third Party told us

The Operators received the following from the vessel:

“Prior to boarding the pilot at xxx as per our SHQEM procedure we have to test all navigational equipment including main engine prior to departure. Whilst the vessel was berthed at the wharf, the gangway had to be pulled away from ships side to about 3 metres from the wharf fender, so the crew had to suspend the gangway from the port side provisions crane in order not to drag and swing the gangway instantly to the ships side, which would have happened using the normal lifting arrangement, which is not an approved type. We had not detached the ships provision spreader after ME testing, leaving the pilot to notice it prior to embarkation.

Root Cause – Ships provision crane was using a ‘jury rigged’ lifting spreader in conjunction with the normal accommodation ladder winch arrangement.

Probable effect of the deficiency is to the crew, ship and environment if not rectified, delay to vessel if the pilot refused to board, or AMSA detention due to non-approved pilot boarding arrangement.

The ship’s purpose in using the crew-made spreader is only for support in emergency cases when we require to lift the gangway instantly without damaging the ships side. However, due to the incident at xxx, we have promised AMSA not to use the spreader anymore since, in their opinion, it is not an approved type”.

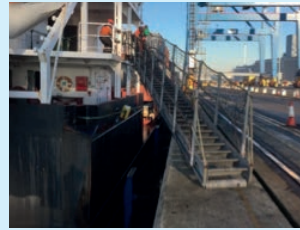
As part of the counter-measures, we have similarly cautioned the ship’s crew against using the crew-made spreader which is not type-approved and told them to always ensure the safety of personnel boarding the ship using the ship’s gangway.

CHIRP Comment

The Maritime Advisory Board, whilst understanding the need to test engines prior to departure, and following the rationale of protecting an accommodation ladder from damage, commented that only certified equipment should be used at all times and then discussed the more generic problem of the use of accommodation ladders at berths. It was noted that “swinging out” an accommodation ladder is not an infrequent event and is often seen at container berths where large fenders protect the face of the berth creating a large gap between the ship and jetty hard standing. This adaptation could place undue stress upon the upper platform swivel, since it is now doing something that it was not designed to do. Brow ladders or clip on ladders as shown below provide a safer alternative to swinging and have the flexibility of placement at a point convenient to vessel and jetty. The design is certainly safer than the other

CHIRP Comment – continued

example shown below!! It is incumbent upon a vessel to provide a safe means of access whilst alongside.



Two photos showing a brow or clip-on ladder that can be safely swung out to provide safe access.



Safe means of access?

REPORT ENDS

When not to overtake ...

OUTLINE: An overtaking situation where a VLCC approaching the Malacca Straits Deep Water Route had to slow down to allow another vessel to overtake prior to entering the Deep Water Route.

What the reporter told us

Our vessel was approaching the One Fathom Bank "goalposts" from the northwest at our planned safe speed. Being a laden VLCC we were following the Deep Water Route and were a little surprised to observe the container vessel xxx, draft 12metres approaching from astern and travelling considerably faster. Our pilot contacted him to confirm his intention to overtake, which he proceeded to do down our port side. Our vessel's engine had to be stopped for some time to allow him to get past and clear prior to our transit of the restricted area at the "goalposts". This was far from ideal on the final approach to a notoriously hazardous area. The lessons learned from the reporter were for ships “to keep clear of the deep-water route if not obliged to use it”.

What the Third Party told us

We share the common interest in safe navigation and your mail and report is received with thanks. We have taken the time to do an investigation and unfortunately found that the VLCC did have a valid point. We have in our SMS procedures a chapter pertaining to transit of the Malacca Strait and the need for safe speed.

- 1) We have re-emphasized the need to consider safe speed as well as “not to impose any risk on others, especially deep draught vessels”. Regardless of TSS rules, Colregs rule 13 is also to be complied with.
- 2) We have issued a knowledge-sharing circular to our managed vessels emphasizing what is already stated in our procedures.

We regret the situation and hope that by addressing and re-emphasizing this on an individual vessel level as well as to the fleet as a whole, we will avoid similar situations in the future.

CHIRP Comment

In addition to the remedial actions taken by the Third Party in this case, the Maritime Advisory Board mentioned the following:

- Upon occasion, laden VLCC's may have to stage a carefully-timed transit due to draft and tidal restrictions – in such cases the timing of approach to the Deep-Water Route may be critical.
- The 2017 edition of the "Passage Planning Guide – Straits of Malacca and Singapore (SOMS)" has recently been published by the Witherby Publishing Group.
- **Safe passage – The Straits of Malacca and Singapore** (BIMCO and the SOMS Co-operative mechanism 2014) may be consulted for general advice – see <https://www.chirpmaritime.org/publications>

----- REPORT ENDS

Wake wash – almost thrown overboard

OUTLINE: An inward bound yacht was almost swamped at a narrow harbour entrance by the wake from another vessel.

What the reporter told us

My 31 feet long yacht was proceeding under engine into the small boat channel at xx harbour entrance. There was approximately 2.5 knots of ebb tide against us as we neared the entrance. Our speed over the ground at the time was 3.5 knots. There were no boats coming out of the harbour through the small boat channel, but there was a small yacht (approximately 26 feet long) ahead of us. We had been sailing close to this vessel for some time and it was observed to be single-handed. At the time of the incident, the other yacht was approximately 25 metres ahead of us. There was no commercial traffic in the entrance either inbound or outbound.

As we entered the small boat channel, a pilot launch approached us on our port quarter, i.e. between us and the western shore, at high speed. The launch had her bows up in a semi-planing attitude and I estimate her speed at 15–18 knots. The launch proceeded to overtake us about one third of the way into the channel, without slowing down. Her wake, when it hit us, knocked us over to starboard by at least 50 degrees. My yacht recovered but rolled to port and then starboard three of four times before regaining equilibrium.

At the time I first heard and then saw the pilot launch, my crew was on the starboard side deck adjacent to the main hatch, returning to the cockpit. I shouted a warning a second or two before the wake hit us. **He reported afterwards that he only just stopped himself being thrown overboard.** At the time, both my crew and I were wearing life jackets but were not hooked on, it being a calm day. I was at the helm.

After the pilot launch passed us, it was seen to slow down to displacement speed and turn to port into the xx marina vicinity. Unfortunately, we were unable to see the launch's number, which is displayed on the hull at the bow.

I believe that the pilot vessel in this instance was exceeding the harbour speed limit of 10 knots. I also suggest that, in choosing to overtake us on our port side, the pilot vessel could have caused another serious incident if an outbound vessel had appeared from the xx area and entered the channel. Had the wake which hit us also hit the small yacht ahead of us, there could have been even more dire consequences.

What the Third Party told us

CHIRP contacted the local Harbour Master who advised that the incident was indeed acted upon. The pilot boat speed was deemed to be excessive so operators were informed and remedial action agreed. The harbour has

speed controls, with the speed referred to being speed through the water. The Harbour Master also mentioned that the harbour does have wash regulations in addition to speed controls. It was deemed that these were also breached on this occasion and remedial action was agreed with the operators.

CHIRP queried the approach of the yacht under a strong ebb. The Harbour Master did not offer advice but stated that the harbour is open 24/7 and the timing of approach is up to individual skippers.

CHIRP Comment

The Maritime Advisory Board, having discussed the report, commented upon the danger from the wash of high-speed craft, observance of good seamanlike practices, and the need for compliance with harbour bye laws at all times. Both **CHIRP** and the MAIB have historical wake wash near misses and incidents that may be referenced on their respective web sites.

----- REPORT ENDS

Non-compliance with basic safety precautions

OUTLINE: A report of observations noted on a river ferry highlighting an amazing lack of awareness of self-preservation and professionalism.

What the reporter told us

I was waiting on the pontoon jetty at point A to board 'xxx' as a passenger for the trip to Point B. The vessel is operated by 'yyy' and is stated to have a carrying capacity of 250 passengers. Immediately before stepping onto the pontoon at Point A, a crew member donned an inflatable life jacket but did not buckle it. He was wearing flip flops. I think, but I am not sure, that the person wearing flip flops may have been the skipper.

The vessel subsequently berthed again at Point A, then at Point C and Point B. At these last two jetties, a different crew member donned a life jacket but did not buckle it.

Non-compliance with these basic requirements gave the impression of a lack of a safety culture and a lack of supervision by the management to ensure compliance.

I would be happy for you to pass these general observations to the company and to the PLA with the suggestion that they check for themselves the standard of compliance.

What the Third Party told us

The Company in question declined to respond, however the Port of London Authority replied as follows: "We take items like this very seriously and I will be speaking to the operator about this issue. I will also bring the matter to the attention of the pier owner who has a duty under the license to protect, promote and improve on services. Not wearing appropriate footwear or a lifejacket are against any operator's license for working from the pier.

We have made extensive efforts to improve the safety culture of older operators and this is reflected in our Code of Practice which all passenger boat operators have signed up to.

PLA: Code of Practice for Passenger Vessel Operations 2016 – see <https://www.chirpmaritime.org/publications>

I hope that you are able to share the above and perhaps direct operators from other areas to this guidance - you will see that it is endorsed by all relevant marine bodies".

CHIRP Comment

CHIRP was disappointed not to receive a response from the operators, but the Maritime Advisory Board are pleased to support the advice given in the Port of London Authority Passenger Vessel Operations Code of Practice for the Tidal Thames and would note that much of the content is applicable both nationally and internationally with respect to safe operations.

----- REPORT ENDS

Simply unsafe practices

OUTLINE: CHIRP has received several reports which demonstrate individuals continuing to take alarming risks and failing to consider “what if” something unexpected was to happen? We highlight two of these reports below.

What the reporter told us (1)

Sailor observed painting the anchor. The anchor was lowered part way out of the hawse pipe and a rope ladder lowered down to it, there was possibly a bosun's chair, although this was unclear from the viewing angle. The sailor climbed down the rope ladder and began to work. He was wearing no hardhat, no lifejacket and no harness. There were no man ropes trailing in the water, and no lifebuoy in case he fell in. The people involved should have followed the guidance given in the Code of Safe Working Practices for Merchant Seafarers – fully assess the risks, initiate a permit to work system, and carry out a tool box talk.

What the Third Party told us (1)

Thank you for your letter concerning this incident. We have once more reviewed our existing procedures with all crew involved, and emphasized that no deviation from our policies and procedures will be tolerated as safety is our top priority.

What the reporter told us (2)

Whilst waiting for a pilot to disembark from MV 'xxx', I noted a crew member on another ship alongside using a rope ladder without wearing a life jacket.

What the Third Party told us (2)

Attempts to contact the Third Party were not successful but **CHIRP** is aware that local Port Sate Control officials followed the matter up with the Third Party.

CHIRP Comment

Having discussed both reports the Maritime Advisory Board commented that they appeared to demonstrate a complete lack of awareness of self-preservation. The Board encourages seafarers to question whether they should be on a ship with this standard of safety culture. Seafarers need not do a full risk assessment for each job, but it is prudent to consider 'what if' something was to happen? What are the consequences? There may be a lack of SMS compliance, there may be a lack of adherence to the Code of Safe Working Practices for Merchant Seafarers 2015, and there may be a lack of effective supervision, but in the final analysis it is your life, and you have a family and loved ones back home waiting for you. **Is it really worth the risk?**

----- REPORT ENDS

Trapped in an overturned dinghy

OUTLINE: An account of a capsized, the use of a lifejacket, and the reporter's reaction to cold. Recollection of drills and training undertaken 30 years ago saved the reporter's life.

What the reporter told us

The lifejacket was an afterthought. The visitor motored his way up the river and I'd waved him over towards a vacant mooring nearby. Sat in my cockpit sipping coffee in the morning sunlight, I'd watched him, solo, make two failed attempts to hook the pickup. There was no wind, a slack tide, but even stopped alongside he seemed unable to manage. He was clearly very tired. I called that I'd row across and help pass a line, and pulled my dinghy up alongside. My old lifejacket lay on the cockpit seat so, rather than step on it – and remembering the promise to my wife – I slipped it on and fastened the clips.

The dinghy, a tippy plywood pram I'd borrowed, had lifting strops attached to the floor and my outboard clamped on the transom. That was awkward to start and stop, so I disentangled the oars and rowed across the few yards.

The visiting boat was stationary alongside an orange mooring buoy. Calling to her skipper to arrange a line, I started to row around the bow. There was a loud engine-roar and I looked up to see her bows surging towards me. She struck hard amidships, the dinghy reared up, and I was pitched headlong into the water.

As I went down, fragments of old training kicked in. Thinking 'Cold Shock Reflex' I clamped a hand firmly over mouth and nostrils, while tugging on the 10-year-old lifejacket's pull cord.

A reassuring loud hiss, and I bobbed up quickly, but beneath the now-inverted dinghy. "Assess!" spoke a voice in my head from decades' past, and I looked around inside my upturned 'lid'. I was afloat and I could see, and had perhaps 6 inches of breathing space. "That won't last long," I thought. "It'll escape if there's any wake or waves. But I'm OK, for now."

I grasped the dinghy's gunwale, pushed up hard, and ducked my head down to clear the wooden edge.

Nothing happened!

There was resistance. I couldn't lift the dinghy side and couldn't push my head down to clear the gunwale. Consternation. I'd done the sea-survival training – Air Force and RORC/MCA. That should have been easy. Stop. Re-assess. There was less airspace now. I could feel that one or two of the rope lifting strops had wound themselves around my right leg. I could see them now, still secured to the floor, trapping me.

"OK. Reach down and unwind them." I could feel at least two loops. But I couldn't stretch my fingers far enough down to peel them over my heel. Panting now, the airspace reduced by half, I was very aware of the weight of the outboard sticking up into the air. "If the air bubble goes and the dinghy sinks, I go down with it."

I ducked my head under again, wriggling and struggling, with the rope around my ankle holding me under the dinghy. Another attempt to lift the upturned side. No success. The ropes just pulled tighter. The first surge of fear. "Is this how it ends?" I thought.

A third desperate attempt to reach my heel, each hand in turn, left me gasping for breath. There wasn't much airspace left now. Pushing back at the panic, heart pumping, I wriggled and writhed the other way.

My foot came free. I bobbed my head down, pushed, and then came up into clear space between the cruiser's hull and the dinghy. Panting for air, I stared up, to see a face staring back at me. "Throw me a line!" I yelled. "Quick!" He did – a coiled-up one!

Somehow I held the dinghy's painter in my hand and passed the cord up to the fellow. "Here! Hang onto that" I called, and paddled my way along the side, looking for something to grab onto. Down by the stern, there was a boarding ladder, and I clung to that. Suddenly aware the engine was still running and of the proximity of the prop, I found myself screaming at him "Neutral! Neutral!" while drawing my legs up tight.

I couldn't get a foot onto the ladder, but my new-found friend pointed to a fabric satchel dangling there. I pulled the handle and a little rope ladder tumbled down. I was able to hook a foot into this, and stood up on the rung, shoulders clear. Relieved, but now really feeling the cold seeping through, I stepped my weight up onto the next rung.

"Bang!" went the plastic securing clips. "Splash!" went I, back down into the river.

"This boat's out to get me," I thought as I dog-paddled clear. "I really do need some help now." At that, a couple of dinghies manned by friends from other boats arrived. The cold now seriously limiting me, I could only cling hook-fingered onto the transom of one, but it was just a couple of minutes to the club pontoon and the safety ladder. And nearly an hour standing under a hot shower until the shaking stopped ...

Reflections

1. Dinghy means lifejacket, every time. It's no good in the locker.
2. You do your engine daily inspection every trip? So, do a daily inspection on your lifejacket, too. 'Bottle – straps – clips – damage'.
3. Things happen fast. A small investment in survival training pays off. Even an occasional session of 'What If ...?'
4. Train your hands. Close your eyes, don your lifejacket, find the pull cord. Where's the sprayhood?
5. Cold Shock Reflex kills. Learn how to combat it.
6. Don't panic. * Keep thinking. Never, ever, ever give up. *
7. Examine critically all parts of your safety gear. Is it really up to the job? Don't assume – check.

*Cultural references – Douglas Adams and Schulz

CHIRP Comment

The Maritime Advisory Board mentioned that this was an excellent report and noted the importance of training and risk awareness, which saved the reporter's life even though the drills the reporter undertook were 30 years ago.

We draw your attention to the "Respect the Water Campaign". If you fall into the water do you know what to do? 'Try taking the online the challenge' at Respect the Water – and in addition, reference is made to the knowledge and advice section of the RYA web site.

"Respect the Water" and RYA Knowledge/Advice – see <https://www.chirpmaritime.org/publications>

----- REPORT ENDS

Water ingress – look after your seals!

OUTLINE: An account of the failure of a small vessel's propeller shaft seal. It is not a 'fit and forget' piece of equipment.

What the reporter told us

The yacht had sheltered in xxx harbour the previous evening – prior to resuming passage towards yyy. Owner started the engine and opened the floor hatch for visual inspection, but discovered about 1 metre of seawater in the engine space – rising above prop-shaft, gearbox, and accessories.

The engine-driven bilge pump failed to start (submerged electrics?). An initial swift inspection of hoses and clips revealed no failures. The owner started to rig a small, spare electrical bilge pump. I singled up mooring lines ready to slip and run aground alongside a nearby pier. VHF radio calls to the harbour Master went unanswered, but a VHF call to the nearby MRCC requesting local assistance resulted in the swift arrival of an RNLI inshore rescue boat with 3 crew, who were exercising nearby and heard my call to MRCC. They swiftly produced a salvage pump which reduced the inflow sufficiently, then arranged a tow to a nearby boat-lift, which promptly lifted the boat out onto the hard.

Inspection by an engineer, confirmed by the insurers' surveyor, revealed failure of the propeller shaft seal. The 'rotor' segment had become unsecured from the prop shaft and moved sufficiently to break the effective surface seal against water ingress.

That 'rotor' is secured by two pairs of grub screws, crucially dependent on proper torque for security. Queries to several senior yard engineers and an online search indicated this is a not-infrequent problem. Several working boats – including one licensed for passengers - were known to have suffered similar failures.

The lessons to be learnt

1. Boats' watertight integrity depends crucially on the proper fitting and maintenance of small grub screws. There is no effective means of inspection of proper fitting and function, other than disassembly and refitting with new parts.
2. Such shaft seals may be provided with bespoke locking collars (as provided by manufacturer xxx on their larger commercial shaft seals), or by fitting a pair of stainless steel jubilee clips onto the prop shaft, preventing movement of the 'rotor'.
3. Flexible rubber bellows form part of the 'stator' structure and ought to be inspected for wear and/or replaced at intervals. Failures have been reported, with resultant down flooding. Few, if any, boat owners inspect these seals and fewer have a means of effecting temporary 'get-you-home' strapping.
4. The units (thousands in service) are marketed as 'maintenance-free'. Only engineers who sail/live aboard confess to routine inspection. Other owners don't. The manufacturer's website recommends both inspection AND replacement at intervals.

CHIRP Comment

This type of seal is a precision bit of engineering and as such needs to be installed carefully and maintained. They are not 'fit and forget' pieces of equipment but will work well if the manufacturer's instructions are followed. All boats that have an inboard engine coupled to a propeller by a propeller shaft will have a shaft seal of some sort and most will drip a little. The cheaper rubber hose types have a lip seal that relies on water for lubrication. If they dry out because they have not been 'burped' (letting trapped air out) they will fail pretty quickly!

A useful piece of advice for the small craft audience is to look after any through-hull fitting which might allow water to pass in and out of the hull – the list includes seacocks, breathers, some ventilation openings and stern glands. Safe practice includes knowing where they are, how they work and what maintenance they require. ALL require some degree of user maintenance if they are to work as expected.

----- REPORT ENDS

Correspondence Received Radar Reflector position – correction

Dear **CHIRP**,

In the Video Broadcast bulletin No. 1 you make the point that a yacht can be lost in the sea clutter and show an octahedral radar reflector at the top of a mast. Please note the reflector in the picture is incorrectly mounted and will not produce a strong return signal. Perhaps you could correct this in your next bulletin.



In response: **CHIRP** worked with the reporter to find definitive guidance to support the claim.



In 2007, the UK's MAIB commissioned a report: "Performance Investigation of Marine Radar Reflectors on the Market". They found that, in the upright position, the Radar Cross Section (RCS) performance peaks are very large for a small reflector, the drawback with this reflector mounted in this fashion is the very large nulls between the peaks and performance gets worse as the elevation angle is increased. In the 'catch rain' position, the RCS has lower peaks but is more balanced with azimuth angle variation and is more consistent over the elevation range. This opinion is supported by the Transport Canada publication "Radar Reflectors on Small Vessels" which states the axis of the reflector should be tilted 45 degrees to obtain optimal reflection, and recommends that the preferred orientation of mounting should be clearly marked on the reflector.

CHIRP Comment: In addition to fitting a radar reflector, fitting a "transmit and receive" AIS system is a prudent course of action; especially if transiting busy shipping areas. In any event, small boaters should keep a very good lookout and not simply rely on equipment to ensure they will be seen – which, in all probability, they may not be in the sea clutter. Remember the Mk I eyeball is still the best collision avoidance device!!!

Tiller full of surprises

Dear **CHIRP**,

I read with interest the report in Maritime FEEDBACK 45 where the reporter applied heat to a blocked pipe in order to help release a blockage. The sudden release of the clogged material due to the residual pressure caused the blocked material to hit the bulkhead. This reminded me of an incident when I needed to release a tiller bar that was corroded to the rudder arm on a narrowboat. Unbeknown to anyone, the wooden handle at the other end of the tiller bar had somehow, over many years, allowed water to seep into the hollow tiller bar. Using a blow torch I applied heat to the seized joint and this unintentionally caused the residual water to heat up, expand into steam and eventually caused the handle to blow out of the end of the tube, immediately followed by hot water and steam causing burns to the hands and arm of my assistant.

Reporter's Lessons learned: Whilst I have never encountered or heard of anything like this before, my message is always allow for the unexpected! We now always drill a hole in the bottom of the tube first to see if water is in the tube before heating, plus it ensures the pressure can't increase.

Winch Brakes – Will they hold?

Report: A ship's officer was not aware of the difference between rendering point and designed brake holding capacity.

Reporter's Recommendation: All relevant personnel must be briefed with regards to rendering point and brake holding capacity and the significance of these terms in safe mooring operations. All ship's officers should have sound knowledge of mooring winch brake testing procedures and requirements.



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



Trinity House

The Corporation of Trinity House



Lloyd's Register
Foundation

Lloyd's Register Foundation



Britannia Steam Ship Insurance Association Ltd



IFAN

International Foundation for Aids to Navigation (IFAN)



Cammell Laird



The TK Foundation