

Isle of Man Ship Registry Technical Advisory Notice



Mobile Devices and Other Distractions in The Workplace

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Introduction

On 15 May 2019, a third officer on board a ro-ro freight ferry, was fatally injured after being struck by a semi-trailer that was being pushed down the vessel's stern ramp. The driver of the tractor unit pushing the trailer stopped immediately, but the third officer was trapped between the trailer's rear wheels and was declared life extinct by attending paramedics.

The third officer was standing on the stern ramp and was talking on his mobile telephone when he was struck. He was facing down the ramp and was unaware of the trailer approaching from behind. The tractor unit's driver was not expecting any pedestrians to be on the stern ramp and could not see the third officer due to the trailer blocking his view ahead.

The Isle of Man Ship Registry and the United Kingdom Marine Accident Investigation Branch (MAIB) conducted a joint investigation into the fatality where an investigation report was subsequently published by the MAIB¹. The report concluded *inter alia*;

- that by conversing on his mobile phone while standing on the stern ramp, the third officer significantly increased his risk of being struck by a moving vehicle because he lost awareness of what was occurring around him;
- the potential for mobile phones to cause distraction in onboard workspaces has yet to be fully recognised and addressed by the marine industry.

This Notice aims to raise awareness among seafarers, masters and technical managers concerning mobile devices and other distractions in the workplace and how such distractions can affect safety. This Notice also suggests possible strategies to reduce the risk to seafarers posed by distractions affecting work-based activities, especially safety-critical activities, that demand attention and situational awareness.

¹ <http://www.gov.uk/maib-reports/accident-on-the-stern-ramp-of-the-ro-ro-freight-ferry-seatruck-progress-with-loss-of-1-life>



1. What is the issue?



People have a limited attention capacity. Should a person's attention shift from the task in hand, ie being distracted, this can at best impair workplace performance or worse lead to serious consequences such as damage or injury. Injuries onboard can affect ship morale and a seafarer's employment. Distractions in the workplace can come in many forms, chief among these is the growing use of personal mobile devices.

Mobile devices, or portable electronic devices (eg phones, tablets, e-readers, music players etc) now play an essential role in how we travel, socialize, entertain and communicate. We live in an age where people expect one another to be connected and be contactable at every minute of the day. This also applies to seafarers on ship who spend considerable amounts of time at sea away from home, where it may be even more important to keep in touch with news, popular culture, family and friends.

As personal consumer technology advances it is becoming ever easier and more convenient for people to entertain themselves and keep in contact. However, on board a ship the use of mobile devices should be reasonable and limited to appropriate times and places. Due to their addictive nature, mobile device usage can very quickly become excessive leading to easy distraction and decreased concentration levels. This in turn can lead to a reduction in productivity and workplace safety.

Ashore, statistics concerning fatalities and injury involving mobile devices, especially concerning private motor vehicles are numerous. Mobile phones are the biggest cause of distraction in the form of texting, talking, and gaming. In any work or personal environment these distractions can affect a person's situational awareness, recognition of hazards, and concentration.

As part of a seafarer's watch on board ship it is routine to manage several tasks, ie. communicating with crew/shore/other ships, monitoring instruments and activities, handling scheduled procedures etc. It is not only mobile devices that can distract. Interruptions and engaging in other tasks that don't support the primary task can also have serious consequences. For safety-critical operations distractions must be managed, or even engineered, to ensure safe operations.

2. Other Cases of Distraction in Shipping

The following are other examples of marine casualty cases where distraction was identified as a causal factor;

1. When approaching a narrow strait, a general cargo vessel ran aground after the vessel was set to the south of its planned track. This was not observed because the officer of the watch did not monitor the vessel's progress for about 2 hours; instead, he sat in the bridge chair and watched videos. It is also possible that the officer of the watch fell asleep periodically. Seven days later and after a partial removal of cargo, the vessel was refloated. The grounding caused significant hull damage but there was no pollution or injury.

<https://assets.publishing.service.gov.uk/media/5d93631a40f0b65e5ec0dd35/2019-12-Priscilla.pdf>



2. A sludge barge being towed alongside a tugboat, collided with the anchored amphibious passenger vehicle DUKW 34. As a result of the collision, DUKW 34 sank in about 55 feet of water. Two passengers were fatally injured, and 26 passengers suffered minor injuries. No one on the tugboat was injured. Damage to DUKW 34 totalled \$130,470. Damage to the barge was minimal; no repairs were made. The probable cause of this accident was the failure of the mate of the tugboat to maintain a proper lookout due to (1) his decision to operate the vessel from the lower wheelhouse, which was contrary to expectations and to prudent seamanship, and (2) distraction and inattentiveness as a result of his repeated personal use of his cell phone and company laptop computer while he was solely responsible for navigating the vessel.

<https://www.nts.gov/investigations/AccidentReports/Pages/MAR1102.aspx>

3. Recognising Distraction in the Workplace

A workplace can never fully eliminate distractions. The propensity to become distracted is part of human nature. When people are distracted, they are not paying attention and fail to see hazards which can lead to damage or injury. Below are three common distractions that can take a person's mind off the task in hand.

3.1 Mobile devices

Mobile devices such as phones, tablets, e-readers, music players etc are popular among seafarers due to their portability and multi-function capability. Such devices, especially mobile phones, can easily fit into a pocket and serve as both a necessary tool or potential distraction.

A study showed Americans check their phones 96 times a day – once every 10 minutes². If devices are in a seafarer's possession there is always a temptation to have a quick check or react to every 'beep' or vibration. A quick check can descend into a longer look, respond to a message, 'surf' random subjects and focus totally on the device in hand. Has this ever happened to you? If the answer is yes, then a policy, procedure or control measure may be useful to ensure seafarers are not tempted to use their mobile devices when they should be focused on what they're doing.



Picture credit: www.sites.psu.edu



Picture credit: www.sfmic.com

3.1.1 Mobile Device Safety on deck

In addition to the distraction mobile devices can present, mobile devices that run on lithium-ion batteries can produce sparks and fires while charging. In rare cases, mobile phones can even overheat and explode. In some circumstances mobile phones can be considered a fire hazard, especially in areas that contain flammable materials. Recalled mobile phones, which are known to overheat, explode or pose a fire hazard of any kind, should be banned.

² <https://www.prnewswire.com/news-releases/americans-check-their-phones-96-times-a-day-300962643.html>

Many oil tankers, chemical tankers and gas carriers already have procedures in place addressing the use of mobile phones in cargo areas on board.

3.2 Interruptions

In a shipboard working environment, there are operations which are safety critical that demand attention and concentration. Interruptions can disrupt concentration and lead to mistakes, mistakes could lead to serious consequences.



Consider a oil tanker's cargo control room during cargo 'topping off', the end of bunker operations or the bridge team in heavy traffic, poor visibility or when manoeuvring within a busy port in confined waters. These circumstances demand monitoring, control, coordination and communication with high attention and situational awareness. If there are people in the vicinity not involved, socialising and laughing, even trying to engage with the team, the interruptions can break the concentration flow of those involved in the operation.

Consider also the use of portable radios with persistent radio traffic not relevant to your task or intermittent loud noise from machines and equipment. These too can affect concentration and focus.

For decades, the aviation industry has recognised the need for "sterile cockpit" procedures that restrict activities and conversations to the task at hand where many routine tasks have a high disaster potential. The concept strictly limits non-essential communication and activities during times of critical importance.

3.3 Divided attention

Mental distractions can affect a seafarer's concentration and miss potential risks that lead to damage or injury. Below are examples of mental distractions that can divide a seafarer's attention from the task in hand.

3.3.1 Multiple jobs



A seafarer tasked to perform more than one job at a time may not be able to give their full attention and concentration to all the tasks all of the time. This is particularly important for hazardous tasks. Where possible don't assign more than one thing to do at a time and follow a step approach.

Similarly, a seafarer who isn't paying attention to where their footsteps are taking them might trip/fall over an obstacle or find themselves in a hazardous situation.

Picture credit: www.rlb.ca

3.3.2 Time management

A major distraction is the need to get the job done quickly. When people become fixated on completing a task on time, they focus less on safety.



3.3.3 Complacency

Complacency, i.e. a self-satisfaction especially when accompanied by unawareness of actual dangers or deficiencies, is a mindset that leads to distraction and inattention to the job at hand. When seafarers perform the same work, same tasks and same schedule repeatedly, they are confident they know their job. The work can become routine and mundane to the point where seafarers do the work 'automatically'.

Unfortunately, daydreaming in the workplace or becoming over-confident can cause seafarers to overlook existing or new hazards which can lead to damage or injury.

3.3.4 Personal problems

People often bring their personal problems and concerns to the workplace. There may be financial worries, problems with family/friends, health worries or thinking about upcoming leave. Even when a distraction originates outside the workplace, it can still affect a seafarer's focus and attention while working.

Should a seafarer face personal problems, especially being remote from home, there is further temptation and tendency to use a mobile phone. Technical managers and masters are encouraged to provide a system and environment on board where seafarers can discuss problems and concerns in an appropriate manner.



Distractions in the workplace that pose the greatest risks should therefore be minimized, or even eliminated, with the right strategy.

4. Strategies to Help Control Distractions in The Workplace

There is a time and a place where the use of mobile devices is acceptable and conversely, there are times and places where their use is not acceptable. It is the responsibility of management to ensure seafarers are aware of the dangers or risks they face in the workplace (ISM Code 1.2.2.2).

Ship operations vary depending on the size of ship, type of ship and number of seafarers employed on board. Therefore, to manage potential distractions in the workplace **technical managers and Masters are encouraged to design their own policies, procedures and controls, suitable for their own ship and circumstances.** To achieve this technical managers and Masters should consider;

- Company Policy;
 - A clear and fair policy addressing distraction by mobile devices;
 - No differentiation between work and personal use.
 - No differentiation between officers, ratings, visitors, office staff etc.



- Company Procedures (ISM);
 - Work Breaks (with cover if necessary) – ‘smoko’ & ‘coffee time’ is also ‘mobile device time’;
 - Incorporate ship rules concerning mobile devices into the seafarer’s familiarisation to ship;
 - Banning the use of (or possession of) mobile devices in specified locations or when performing certain tasks, such as;
 - lookout / watchkeeping duties.
 - monitoring and control duties.
 - operation of machinery or moving vehicles.
 - operation of power tools.
 - operations that require permits to work.
 - maintenance activities associated with energized equipment.
 - fire watch duties.
 - monitoring the safety of people.
- Remind seafarers of the importance of self-discipline and refrain from using mobile devices in unauthorised places and when engaged in safety critical tasks;
- Incorporate the use of mobile device into the Master’s/Chief Engineer’s Standing Orders (ISM);
- Work environment (ISM and MLC);
 - Signs in key locations.
 - Seafarer’s look out for one another, eg. seafarers remind each other about the use of mobile devices if they see infractions.
 - No disturbing fellow seafarers during safety critical activities – the “sterile workplace”.
 - Plan tasks with care, preferably single tasks at time. If workloads become excessive undermining safety critical operation then assign extra people to assist.
- Heads of departments and ship safety officers are encouraged to keep an eye out for any potential sources of distraction in the workplace during their inspections and discuss on board.



Mobile devices are powerful tools. When used appropriately they add value to people’s lives, but when used inappropriately they can create workplace hazards that may not otherwise exist.

Please note - The Isle of Man Ship Registry cannot give legal advice. Where this document provides guidance on the law it should not be regarded as definitive. The way the law applies to any particular case can vary according to circumstances - for example, from ship to ship. You should consider seeking independent legal advice if you are unsure of your own legal position.



Distractions in the workplace. Where should your attention be?

Phones / Social Media / Music / Multiple radios / Books / Unwanted noise / Other people / Other jobs

or

Dangers / Hazards / Lookout / Cargo & stores / Vehicles / Supervising / Machinery / Monitoring & Control



Be responsible - use your mobile devices with consideration to safety.