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HealthWatch

Britannia

Contents

Stay safe on board

Dear Seafarer,

Ship safety – it is about you, the seafarer who lives and breathes safety. How do you rate your own and your colleagues' safety performance and culture? Do you feel empowered and feel able to stop work and call attention to an unsafe practice without fear of repercussion? The safety message has to be apparent at all times and everyone needs to be on constant lookout for new hazards and risks associated with day to day activities. It is your attitude and behaviour with respect to the procedures and processes on board the ship which provides the key indication as to whether an effective safety culture exists. Training is key and permits to work and risk assessments should be simple, easy to use and relevant to you - if not, do something about it.

In this issue we return to the subject of accident prevention, particularly the importance of ensuring that you wear the appropriate personal protective equipment (PPE) even when performing routine tasks. There are still too many accidents where PPE was not correctly fitted or used inappropriately. Of course, the general rule is that use of PPE is always a last resort, where risks cannot be avoided or reduced to a safe level by means of collective protection, or safe systems of work. Hand and finger injuries continue to be the most frequent type seen by the Club and the majority are caused by carelessness, lack of planning and not thinking about the potential risks involved when performing a particular task.

In the period 2013-2015, 45% of the injuries recorded by the Club and suffered by you, the seafarers, were fractures and breaks. In total, there were 158 individual cases where someone going about their daily routine tasks suffered injury, sometimes horrendous injury, in situations that could easily have been avoided. Unsurprisingly, a substantial number of these incidents occurred in the engine room, the cargo holds and on weather and tween decks. These are the type of incidents we routinely refer to as slips, trips and falls – however, there is nothing routine about the pain and suffering experienced by seafarers, just like you.

In this issue we also highlight the fact that junior crew are at a higher risk of having an accident because of their lack of experience and there is often not enough guidance from senior members of the crew. In a recent tragic case, a deck cadet fell from a tween deck where he had been positioned alone after receiving training and risk assessment for the task in hand. The Club also handled a claim where a rating suffered severe burns caused when lighting a barbeque using an epoxy thinner. Can you identify instances on board where safety procedures are ignored? Can you identify work practices where you feel a more junior member of the crew should be accompanied by a more senior member of the team, even if in general safety awareness is high?

Recently in the UK, the press recorded the bizarre case of a man who choked to death as he tried to eat a McDonald's cheeseburger in one mouthful. Unfortunately, his friends were unable to help him when this prank went disastrously wrong. While this is an extreme example, would you be able to help a colleague if food was digested the wrong way and your colleague began to choke? In this issue we explore a number of scenarios under the heading "what to do if someone..."

If you have any questions or comments about any of the articles in this issue, please do not hesitate to contact us using the email address on the back cover.

Dangerous situations

There are many situations on board a ship where accidents can happen, from slipping over on deck to not realising the dangers of entering enclosed spaces.

Enclosed Spaces –incidents in enclosed spaces have resulted in several casualties and severe injuries over the years. Accidents can occur when crew enter a confined space which is not properly gas-freed and ventilated and has pockets of toxic or flammable gases or the space has reduced oxygen.

Falls – seafarers on board ships are often required to work at heights while wearing safety harnesses and carrying tools. However, in spite of taking all the necessary precautions, several crew members have lost their lives or suffered permanent disabilities as a result of falling or slipping from heights. There have also been many cases where crew have fallen into cargo holds or have tripped over inside cargo holds.

Man Overboard – this situation is not uncommon and is obviously an extremely dangerous situation, both for the seafarer and for the rescuers. Although seafarers are trained to deal with such situations, bad weather and heavy seas, together with strong currents, can hamper the rescue operation. Where the water is extremely cold, the man overboard can suffer hypothermia or other serious health issues.

Electric Shocks – electric shocks have been the cause of several deaths on board ships. Unattended electrical connections, exposed wires and failure to take basic precautions while handling electrical equipment can result in accidents and fatalities.

Engine Room Accidents – everyone working on ships should be aware of the dangers in the engine room, for example, boiler explosions. These can be caused by fuel dripping inside the furnace of the boiler, with the boiler misfiring or overheating.

What to do in a dangerous situation

- If you are worried that a certain task could be putting your safety at risk, make sure you speak up before you start working on it. Other crew with more experience may be able to offer advice on how to carry out the task more safely.
- Make sure you take notice of safety signs around the ship and ensure that you have been properly trained and briefed when carrying out tasks. If you are concerned make sure you ask for supervision until you feel confident in carrying out the task alone.
- Some companies also issue red cards which crew members can carry around with them. If a crew member displays the card, which is recognised by the whole team, it means that everyone involved should 'stop work'. If you find yourself in a dangerous situation you can show the card to your colleagues to indicate that work should be stopped immediately.

The importance of communication

Junior crew members are at a higher risk of having an accident on board because of their lack of experience and often insufficient guidance and instructions from senior members of the crew. It is important for ship owners and managers to have policies in place to ensure that junior crew members are equipped with the knowledge to keep them safe while working on a ship.

One of the ways this can be done is through training and mentoring. This allows the passing on of experience and knowledge in an informal way and can cascade down from senior officers to junior officers and cadets. As well as helping with skills development, it can also help with morale and lead to a reduction in the number of accidents and incidents on board.

Mentoring programmes are a good way of passing on this information. The International Maritime Mentoring website (www.maritimementors.com) was set up in 2012 to match volunteer maritime mentors with seafarers. The site records details of an individual's years of experience, career aspirations, location and spoken languages, and then matches them with a suitable mentor. Senior crew members who are mentoring juniors are being trained in how to spot signs of depression and how to encourage their crew to talk about their issues.

Mentoring plays a good part in the communication between seafarers. Junior crew members can often feel too embarrassed to ask for help from other members of the team. But if there is regular communication between senior and junior crew members, it makes it easier for juniors to bring up any questions or issues.

Along with mentoring and training, supervision is just as important. It is necessary for more experienced crew to show the junior crew the ropes, and then monitor them while the tasks are being carried out. If they are not properly supervised it may be that tasks are not carried out correctly and this could put the junior crew at risk, as well as endangering other crew members.

Photo courtesy of MRS Training and Rescue: mrstrainingandrescue.com

Stay safe in enclosed spaces

Enclosed spaces can be among the most dangerous places on board. Examples are: Cargo spaces, ballast tanks, chain lockers and void spaces. An enclosed space can be considered as a space which has any of the following characteristics:

- Limited openings for entry and exit
- Inadequate ventilation
- Not designed for continuous worker occupancy

The cause of many incidents is all too familiar – one crew member enters an enclosed space without taking necessary precautions and then collapses from lack of oxygen or toxic fumes. A second person then enters the space to try to rescue them, again without taking any precautions, and they too collapse – in fact over half the crew who die in confined spaces are attempting to rescue other people.

The main cause of fatalities in enclosed spaces is the fact that the danger is invisible and therefore not readily apparent to the person first entering the space and subsequent would be rescuers. Factors which increase the severity of these incidents are lack of training, ignorance of the potential risks and failure to include all personnel when conducting risk assessments. In addition this lack of understanding of the dangers and their controls leads to incorrect Personal Protective Equipment (PPE) and to rescue equipment not being available or being in disrepair or incorrectly used.

Remember…

- **Before entering an enclosed space you should be satisfied that the space is safe to enter. Always consider the space you are entering and the ability for the atmosphere inside to support human life.**
- **The atmosphere within an enclosed space, such as a cargo hold, can change quickly and become lethal, dependent on conditions inside and the cargo involved.**
- **Never enter a confined space if safer alternatives for carrying out the work are available.**
- **If entry is unavoidable, a 'Safe System of Work' should be followed including the issue of a 'Permit-to-Work' to ensure that all controls are in place to eliminate (or reduce to a safe level) all of the dangers highlighted in the risk assessment.**
- **The use of a safe system of work should also ensure adequate supervision and communication is established. Never ignore warning signs**
- **If you are not part of the team designated to work in a confined space DO NOT ENTER – even to attempt to rescue an unconscious colleague.**
- **Regular drills should include the checking and use of PPE; communication equipment and procedures; rescue equipment and procedures; and instruction in first aid and resuscitation.**
- **EEBDs (emergency escape breathing devices) provide a short term air supply for crew to escape a hazardous atmosphere and should NEVER be worn to enter, re-enter or work in a hazardous atmosphere.**

Case study

Confined space entry led to three deaths

Three people died on board a cargoship after entering a closed cargo space containing sawn timber that reduced the oxygen to around 5%.

The incident happened in Goole Docks, UK in May 2014 and at the time of the accident, shore stevedores were discharging the timber loaded on top of the forward hatch cover.

Two crewmen entered the forward main hold access compartment then the chief officer, who was looking for them, found the compartment hatch cover open and climbed down inside after shouting down to them.

The alarm was raised and two stevedores and one other crew member went in to lift the three crew members out. One donned a breathing apparatus set – which did not have a face mask fitted – another wore an emergency escape breathing device and the other had no breathing apparatus whatsoever.

Despite their best efforts, none of the three crew who were recovered from the compartment survived, and the rescuing crewman and stevedores suffered severe breathing problems when they returned to deck.

Case study

Cargo vapours resulted in casualties

A deck rating together with the chief officer, who attempted to rescue him, were both overcome by vapours during an incident on a chemical tanker during a ship to ship transfer of a cargo of Crude Sulphate Turpentine (CST) at the Vopak Terminal Teesside. While there were no fatalities, the case raises important issues.

A pre-arrival conference was not held and the crew were not advised to take any particular precautions, despite the Safety Management System explicitly stating the need to use breathing apparatus where there was a risk of cargo vapour inhalation.

The ship's cargo Procedures and Arrangements Manual specified that fixed washing systems should be the normal method of tank cleaning but only seven out of 65 were working so it had become normal practice to use portable washers passed through open Butterworth hatches. As the tank atmosphere became agitated, dense vapours were driven through the hatch and inhaled by the deck rating and chief officer.

Nieuwland / Shutterstock.com

Working aloft or overside

You could be seriously injured or even die if you fall from a height whether overboard or into the dock.

If you have limited experience, you should not work aloft or overside, unless supervised by a more experienced crewmember.

Make sure that all safety equipment is properly worn or rigged (including lifejackets/harnesses etc.) and if you are working overside, the crewmember keeping watch should hold a lifebuoy and line, which can be thrown immediately if needed.

Ensure all equipment and tools are examined before starting work and tools should be kept on a tool belt not in your pocket.

As with enclosed spaces, it is important to make sure you have the correct permit-to-work, have performed a risk assessment and that you consider any potential hazards, such as bad weather, equipment that if operated could cause harm to workers, risks to personnel below and safe access to the worksite aloft

You should also inform crewmates of your plans to carry out such work, both verbally and putting warning signs in place.

Choking – what to look for

If you think someone is choking, ask them: 'Are you choking?' to check they're not suffering from something else. Can they speak, cry, cough or breathe?

If they can, they should be able to clear their throat on their own by coughing, so encourage them to cough.

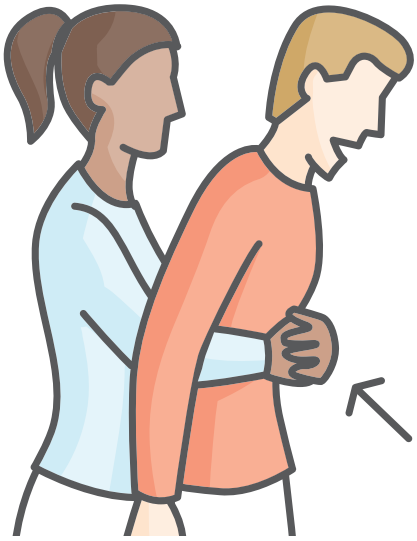
If they can't cough or make any noise, it's serious.

We are grateful to St John Ambulance for allowing us to use their advice on choking. St John Ambulance is the UK's leading first aid charity. You may find it helpful to watch simple practical videos to lean what to do in a range of first aid scenarios: www.sja.org.uk/sja/first-aid-advice.aspx

Choking – what you need to do

Help clear their throat with these three steps.

Step 2 of 4



Step 3 of 4

Step 1 of 4: Cough it out

Encourage them to cough. If this doesn't clear the obstruction, support their upper body with one hand and help them lean forward

Step 2 of 4: Slap it out

- If coughing doesn't work, help the casualty bend forward.
- Use the heel of your hand to give up to five sharp back blows between their shoulder blades.
- Check their mouth to see if there's anything in there and, if there is, get them to pick it out.

Step 3 of 4: Squeeze it out

- If back blows don't work, give up to five abdominal thrusts.
- Stand behind them.
- Link your hands between their tummy button and the bottom of their chest, with your lower hand clenched in a fist.
- Pull sharply inwards and upwards.

If they're still choking, repeat steps 2 and 3 – back blows and abdominal thrusts – up to three times or until you've dislodged what's in there and they can breathe again.

Step 4 of 4: Call for help

If they're still choking after you've repeated these steps three times, seek further medical assistance.

Once you've called, continue steps 2 and 3 – back blows and abdominal thrusts – until what's in there has cleared, help arrives or they become unconscious.

If they lose consciousness at any stage, open their airway and check their breathing.

If they're not breathing, start chest compressions and rescue breaths (CPR - cardiopulmonary resuscitation) to try to release whatever's stuck in there. Follow the instructions for treating someone who's unconscious and not breathing.

What to do if **someone...**

Has collapsed:
- First make sure it is safe to enter the space.
- If it is safe then assess their breathing and if they are not breathing normally or not breathing at all start CPR and get the automatic external defibrillator (AED) if there is one.
- If there is no AED, carry on with CPR, which would be a combination of chest compressions at about 120 per minute and mouth-to-mouth or mouth-to-mask or mouth-to-bag.

Is bleeding severely:
- Always protect yourself - if there is the opportunity, put on personal protective equipment, such as gloves and face mask.
- Use compression on the wound site with material. Hold it over the wound and compress the wound (if it is a wound that can possibly be sutured, do that later).
- Put an appropriate dressing on the wound and then wrap it with an elastic wrap.
- Elevate the bleeding body part and if bleeding continues you can apply pressure on the artery supplying blood to the area to slow the bleeding and allow it to clot.

Is electrocuted:
- Make sure it is safe to enter the space and make sure the source of electricity is disabled.
- With electrocution there can be an external burn but electricity also travels through the body and can cause deep tissue damage, so for a high voltage burn you need to look at the entry site and also the exit site and assume there is internal damage between the two.
- Also, beware of cardiac arrest in the patient, and follow steps for that as in the 'Has collapsed' section.

Has burns:

Thermal burns (from heat)
- First, cool the area that is burnt by putting a burns sheet or burns dressing over the area. Failing that, apply clean material like a sheet and pour water or medical saline over the wound and allow it to evaporate.
- Apply an appropriate dressing along with triple antibiotic ointment.
- NEVER apply a commercial ice pack as this will freeze tissue.
- Getting early medical advice is recommended, especially in cases of burns to the hands, face and genitals.

Chemical burns
- The first thing to do is irrigate the area to try to dilute and remove the irritation, then loosely apply a bandage/gauze.

Has a back/spinal/neck injury:
- Do not attempt to move them, particularly if they have numbness, tingling or immobility of an extremity.
- Apply immobilisation such as a cervical collar and backboard and do not twist, flex or extend the body. Try to keep the head low and back in a neutral position to protect them from further injury.
- If there is no alternative, transport them as gently as possible, place them in a berth and protect them from rolling until they can get to medical care.

This is immediate first aid. It is recommended that you contact appropriate medical consultants after any of these incidents for further care and advice.
You may also need to plan medical evacuation, ship diversion or shore-side medical care and the advice is to plan early.

Keep **yourself** protected

There are still too many crew injury claims attributable to crew not using PPE correctly. In such cases, the individuals ignore the content of tool box meeting and risk assessments, apparently due to complacency, old habits or perhaps because of weather conditions at the time. Safety meetings, training drills and tool box talks should be used to remind the crew about the correct use of PPE and should include practical demonstrations.

Head Protection

Safety helmets can protect against falling objects and guard against blows and chemical splashes. Make sure you use the chin-strap to avoid it slipping off your head. Hair nets and safety caps should be worn to stop hair getting tangled when working with machinery.

Hearing Protection

This should be worn if you are going to be exposed to high levels of noise in areas such as machinery spaces. Make sure ear muffs are placed properly on your ears and, if using ear plugs instead of or as well as ear muffs, ensure that they are clean as they can become dirty or infected after repeated use.

Eye Protection

Wearing the wrong type of eye protection, such as glasses with no sides, contributes to a large number of accidents. Goggles should provide full eyeball protection and if you are carrying out welding work, a welding shield should be worn as plastic goggles will not provide adequate protection.

Hand Protection

Leather gloves are generally better for handling rough or sharp objects. Specialist heat-resistant gloves should be worn for handling hot objects and rubber. Synthetic or PVC gloves are used for handling acids, alkalis, various oils, solvents and chemicals.

Foot Protection

Most foot injuries result from not wearing suitable footwear. These injuries are commonly caused by impact, penetration through the sole, slipping, heat and crushing. Not wearing socks can also cause the inner part of the shoes to get sweaty and feet can slip out. Ensure your footwear is suitable for the job.

Respiratory Protective Equipment

This is essential when working in conditions where there is irritating, dangerous or poisonous dust, fumes or gases – especially in areas such as enclosed spaces. A full risk assessment should be carried out to make sure that suitable respiratory PPE is selected.

Body Protection

High visibility clothing should be worn when it is important to be seen, such as during cargo operations. Safety harnesses should also be worn by those at risk of falling from a height whether above or below deck. Overalls should not have loose flaps or hanging strings.

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