

Department for  
**Transport**

# Fishing 2008 Safety Digest



# MAIB

MARINE ACCIDENT INVESTIGATION BRANCH





The Marine Accident Investigation Branch is an independent part of the Department for Transport, (DfT) and is completely separate from the Maritime and Coastguard Agency (MCA). The Chief Inspector of Marine Accidents is responsible to the Secretary of State for Transport. The offices of the Branch are located at Carlton House, Carlton Place, Southampton, SO15 2DZ.

This *Safety Digest* draws the attention of the marine community to some of the lessons arising from investigations into recent accidents.

This information is published to inform the fishing industry and the public of the general circumstances of marine accidents and to draw out the lessons to be learned. The sole purpose of the *Safety Digest* is to prevent similar accidents happening again. The content must necessarily be regarded as tentative and subject to alteration if additional evidence becomes available. The articles do not assign fault or blame nor do they determine liability. The lessons often extend beyond the events of the incidents themselves to ensure the maximum value can be achieved.

Extracts can be published without specific permission providing the source is duly acknowledged.

The *Safety Digest* is only available from the Department for Transport, and can be obtained by applying to the MAIB. Other publications are available from the MAIB.

# MAIB

## MARINE ACCIDENT INVESTIGATION BRANCH

**If you wish to report an accident please call our  
24 hour reporting line: 023 8023 2527**

The telephone number for general use is  
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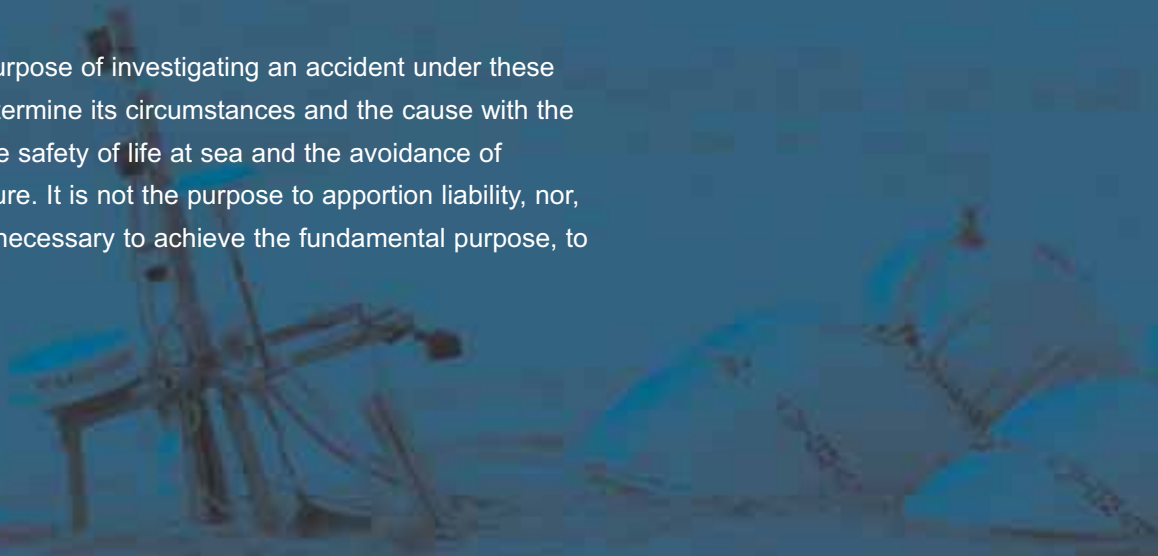
MARINE ACCIDENT INVESTIGATION BRANCH

The role of the MAIB is to contribute to safety at sea by determining the causes and circumstances of accidents, and working with others to reduce the likelihood of such causes and circumstances recurring in the future.

Extract from:

## The Merchant Shipping (Accident Reporting and Investigation) Regulations 2005

The fundamental purpose of investigating an accident under these regulations is to determine its circumstances and the cause with the aim of improving the safety of life at sea and the avoidance of accidents in the future. It is not the purpose to apportion liability, nor, except so far as is necessary to achieve the fundamental purpose, to apportion blame.





# Contents

Chief Inspector's Foreword	4
1 Smoking Kills!	6
2 Assumptions (Based on Scanty Information) Lead to Collision	8
3 Fire at Sea – Be Prepared, Be Trained – It could Be You Next	10
4 “Invited Back On Board”	12
5 Crush Stop!	14
6 Better to be Safe Than Sorry	16
7 A Rude Awakening	18
8 Poor Beam Trawler Practice Costs Three Lives	20
9 Too Much Up Top!	22
10 In Drink and in the Drink	24
11 Not Dressed for the Job	25
12 Shrimp Boiler Lights up the Engine Room	26
13 Spot the Difference	28
14 Trim for Safety, Not for Catching Fish	30
15 Two Sides of the Same Coin	32
Fishing Vessel Accident Statistics	34
Major Accident Locations Chart	36
MAIB Published Reports	37
Glossary	38
MAIB Report Request Form	39



# Chief Inspector's F

*Fishing is, by a large margin, the*

Everyone knows that fishing is a dangerous industry – statistically it is the most dangerous industry in the UK. And the dangers lurk across most areas of fishing.

After a year of below average numbers for fishing vessel accidents, injuries and fatalities (316 accidents, 57 injuries and 10 deaths in 2007) there were three major accidents involving large “Anglo-Spanish” fishing vessels in the first few weeks of 2008.

Regardless of the size or type of vessel you work in, it is only by constant vigilance that you can keep yourself and your fellow crewmen safe.

The cases in this *Safety Digest* cover a wide range of accidents. I would ask fishermen to read all of the cases, and to think about whether something similar could happen to you or your boat.

By thinking about the hazards, you can avoid them.

Safe fishing.

*Stephen Meyer*

# Foreword

*the most dangerous profession in the UK.*



# Smoking Kills!

## Narrative

After a short trip fishing for scallops, an under 10m fishing vessel returned to port around midday and moored outboard of another fishing vessel in port. The skipper and crewman spent some time sorting out the boat before going to a local pub.

In the early evening, the skipper left the crewman at the pub and went home to prepare for his evening job, working at a night club. During the evening, the crewman continued drinking, and at 0200 went to the club where the skipper was working. Both men were given a lift from the club at about 0430; the skipper went home, and the crewman returned to the fishing vessel as his usual shore accommodation was unavailable.

The crewman managed to climb down the quayside ladder and cross the boat alongside to his own fishing vessel where, using a spare key hidden on the boat, he entered the wheelhouse. He did not turn on any lights, leaving the vessel's main batteries isolated, but picked up the wheelhouse ashtray and descended into the small accommodation space in the dark. There, he partially undressed and sat on one of the bunks to smoke a cigarette.

As he smoked, the crewman either fell asleep or became unconscious, and his cigarette started a smouldering fire which burnt a small amount of the bunk's foam mattress and woodwork (see photograph). The crewman died

without regaining consciousness as the fire consumed the oxygen in the space and gave off toxic fumes.

The owner boarded the fishing vessel later that morning, and smelt smoke as he opened the wheelhouse door. Taking the wheelhouse fire extinguisher, he first checked the engine room for fire before returning to the wheelhouse and entering the accommodation space. He found the crewman in the smoke-filled accommodation space. There were no flames, the fire having burnt itself out during the night.





## The Lessons

**1** Neither the owner nor the skipper permitted smoking in the accommodation space, for good reason. However, perhaps due to the influence of alcohol, the crewman forgot this policy and paid the ultimate price.

**2** A smoke alarm might well have prevented this tragic accident. A simple domestic fire alarm costs very little and merely requires a new battery periodically. Fitting a smoke alarm is easy, and it may well save you or your crew's life. It is intended that a smoke alarm will be required on all decked vessels covered by the revised Small Fishing Vessel Code to be issued in the future.

**3** Where possible, use non-combustible materials on board your vessel, or materials which are resistant to ignition. They will reduce the chances of a fire starting, or, if one does start, will help prevent it spreading quickly.

# Assumptions (Based on Scanty

## Narrative

On a dark night, with good visibility, an 11 metre GRP fishing vessel was trawling when its skipper saw another vessel's lights, two white and both sidelights, fine on the port bow a few miles away. The skipper assumed this to be a power driven vessel, greater than 50 metres in length, and decided that, although a risk of collision existed, he would stand-on as there were obstructions/wrecks on the sea bed on his starboard side.

On the other vessel, the watchkeeper observed the fishing vessel, visually, at about the same time, fine to port showing trawling lights and a red sidelight. However, the vessel was, in fact, a 26 metre tug towing a 50 metre long, 18 metre wide barge on which the navigation lights had recently failed.

Both vessels had radar; although neither had ARPA facilities, no plots were made.

With a strong wind (force 6) on its starboard bow the tug, which was making some 4 knots into a strong tide, had its barge displaced on its port quarter; the length of tow was just less than 200 metres.

As the vessels drew closer, the skipper of the fishing vessel, which was making about 3 knots, lost sight of the other vessel's green sidelight and assumed that it had altered course to starboard to avoid

collision. Meanwhile, on the tug, the bearing of the fishing vessel was observed to be opening to port and an assumption was made that no risk of collision existed.

The skipper of the fishing vessel next sighted the other vessel as it came abeam on the port side. When he saw its working deck illuminated with a floodlight, he realised, for the first time, that it was a tug and that it could be towing something!

The skipper altered course by 10 degrees to starboard before altering back to port, as he did not wish to pull his trawl gear too far off track. Shortly after this the skipper noticed the vessel's speed reducing and instinctively put the engine astern. The vessel was then pushed across, first to port and then to starboard, just before the vessel started to list heavily to port to an angle of 30 degrees. The skipper reports that the port gunwale was under the water and that water reached the level of the fish hatch.

At no time did the skipper see the barge with which his vessel had undoubtedly collided. The fishing vessel, probably now trapped under the port "bow" of the barge, began to make sternway and then came free of the barge and returned to the upright. Electrical power was

initially lost as the batteries had shifted. However, the skipper reacted very well to the situation; he checked the compartments for water ingress, using a torch strategically positioned for such emergency situations, and then rigged an emergency supply connector and restored some electrical power.

The vessel remained seaworthy, despite damage to its starboard bow (see photograph). The skipper called the coastguard by mobile phone, as power was not initially restored to the VHF; he calmly reported his position, that he had just been in collision with something he had not seen, and that he could see a tug steaming away from the scene. The coastguard then called out the local lifeboat to escort the fishing vessel, under its own power, back to its home port.

The coastguard then called the tug, who responded immediately and stated that they had assumed the fishing vessel had passed safely, albeit closely, down the side of the tow. Another vessel in the area, monitoring this conversation, volunteered to stand-by the fishing vessel until the lifeboat arrived. The tug was then allowed to resume its voyage.



# Information) Lead to Collision



*Photographs showing bow damage*

## The Lessons

- 1** The assessment of risk of collision on both vessels was poor as both made assumptions based on scanty information. The International Regulations for Preventing Collisions at Sea, Rule 7, identifies the correct way to assess risk of collision. If both vessels had complied with this Rule the accident could have been avoided.
- 2** The lookouts kept by both vessels failed to enable a full appraisal of the situation and of the risk of collision, (Rule 5). It is important to ensure that as much information as possible is gathered from the lookout, in this case had both vessels scrutinised each other with binoculars, they might have realised that their initial assumptions were not reliable and that an earlier alteration of course was required by both vessels.
- 3** The tug could and should have warned local shipping via a "Securité" VHF broadcast when the navigation lights on the tow failed. Vessels should consider the use of such broadcasts if they have information which could be of significance to other vessels in their immediate vicinity.
- 4** The tug could have elected to show the lights and shapes for a vessel "restricted in her ability to manoeuvre" as the size of the barge and adverse weather conditions did restrict the tug's ability to deviate readily from its course [Rule 3 (g) refers]. The display of these lights would have facilitated a more thorough assessment of the situation by the fishing vessel by alerting it to the fact that this was not a normal power driven vessel as the skipper assumed.
- 5** The skipper of the fishing vessel reacted well to a potentially dangerous situation. The fact that he knew the location of his emergency torch and then quickly restored electrical power to his vessel, shows the value of being prepared and becoming very familiar with what to do in an emergency on your vessel.
- 6** The master of the vessel which volunteered to stand-by the damaged fishing vessel demonstrated the best traditions of good seamanship.



# Fire at Sea – Be Prepared, Be Trained – It Could Be You Next





## Narrative

Two fishing vessels from the same port caught fire while at sea within a few weeks of one another. One vessel burnt out and sank; the other's wheelhouse and mess room were destroyed.

Fortunately, in both accidents, the crews were able to abandon ship into a liferaft and were later rescued unharmed. The survivors of both accidents all remarked on the extremely fast spread of the fires and that they only had time to save themselves by abandoning ship. That there were no fatalities from either accident, can be partially attributed to the fact that both of the skippers had attended sea survival and fire-fighting training courses, and were able to react very well in the short time available to them when disaster struck.

On one vessel, the skipper had the presence of mind to grab a portable VHF set from the burning

wheelhouse before abandoning ship. He was then able to make a "Mayday" call from the liferaft, which had been quickly and efficiently released from the wheelhouse top by the crew, who were familiar with the procedures required.

On the other vessel, the spread of the fire was even quicker, and the skipper did well to broadcast a "Mayday" call from the wheelhouse before assisting the crew (who were all asleep when he called them from the cabin) in launching the liferaft.

One fire probably started in the galley/cooker area; the other might have been caused by an electric cabling fault. In both cases, however, the speed of fire spread and the damage incurred means that the exact causes will probably never be known.

## The Lessons

**1** Ensure that everyone on board has attended the requisite statutory training courses in fire-fighting, sea survival and first-aid. These accidents, and the fact that no lives were lost, demonstrate the importance of fishermen attending these courses.

**2** Ensure that everyone on board is very familiar with the emergency equipment carried: both location and use. Both these skippers had ensured that their crews knew where the safety gear was and how to use it.

**3** The galley stove provides an obvious source of ignition. Ensure that this is only for heating up food and drink – and not the boat!

**4** The insulation of electrical wiring should be checked at regular intervals. It is almost impossible to visually inspect wiring on board any vessel, and the only way to ensure it is in good condition is to have it tested by a professional. It *is* worth the cost!

# “Invited Back on Board”

## Narrative

In the early hours of the morning while on watch in the wheelhouse, the skipper of a 20m wooden fishing trawler smelled smoke coming up through the engine room control panel. The engine room smoke alarm activated, but the boat was towing hard against the tide and the skipper thought it likely to be caused by heat and exhaust from the turbocharger. A few minutes later, the smell grew stronger and the skipper called the mate from the shelter deck to investigate. The mate went below and, shortly after, the skipper decided to follow him.

The mate went into the engine room and saw an orange glow near the deck, in the area of the main batteries. He and the skipper set off two fire extinguishers, but were beaten back by thick smoke. They closed down the engine room

ventilation openings on the upper deck and tried to operate the emergency fuel shut off valves. One worked, but the other was very stiff and did not shut correctly. The skipper tried the main engine stop button, but this did not work either, so he reduced engine speed and engaged the hydraulics to try and stall the engine. The engine kept running and was finally stalled by fouling the propeller with a rope thrown over the stern. With the engine stopped, the mate operated the CO<sub>2</sub> drench system.

Smoke now filled the wheelhouse, having risen through unsealed conduits and wiring looms between the engine room and wheelhouse control panel. The skipper had to stand outside and use the radio through an open window to send a “Mayday” signal. The mate switched over to the

emergency power supply, but could not isolate the main batteries. The crew put on lifejackets and immersion suits, and then launched the liferaft. Before climbing down to the liferaft, the skipper and mate attempted to rig a towing bridle forward, but were prevented by dense smoke escaping from the shelter deck through a missing hatch cover.

The crew abandoned the burning fishing vessel safely, using the liferaft to transfer to a nearby fishing vessel which had responded to the “Mayday”. Despite their ordeal, the crew were all safe and well. Soon afterwards, an offshore supply vessel arrived on scene and began to fight the fire with a powerful foam monitor.

As daylight approached, the smoke appeared to have died down, and the master of the supply



vessel suggested to the skipper that he return to his boat to see if the fire was out and to check for damage. Only a few hours had passed since the fire started, and the coastguard advised that no-one should go back on board because the fire could re-ignite or the boat capsize as a result of the water used to fight the fire. The supply vessel was keen to assist, and offered to tow the fishing boat back to port. Soon after, it launched the Fast Rescue Craft (FRC) to collect the skipper and mate from the other fishing vessel. The deckhands were then transferred and the other fishing boat was released by the coastguard.

The master of the supply vessel repeated his suggestion of the skipper going back on board the fishing vessel. Weather conditions were good and the

smoke had almost gone. The skipper agreed, and he and the mate went across in the FRC, still wearing their immersion suits and carrying a torch and portable VHF radio. With the FRC standing by, they began to look over the boat.

Smoke from the wheelhouse had dispersed, and down below, the galley appeared undamaged. The mate entered the cabin and saw where fire had damaged the starboard side. He went forward to the engine room door and cracked it open. Thick smoke and noxious gases escaped and the skipper pulled him clear. They waited on the upper deck for a few minutes and then returned to the engine room. The smoke had cleared, and the mate was able to enter the engine room. He heard a crackle and then saw a glow of fire in the far corner.

The skipper and mate evacuated to the upper deck and managed to rig a tow as the fire escalated. The fishing gear was cut away and the crew returned to the supply vessel in the FRC.

Over the next few hours, the supply vessel fought the fire and towed the fishing vessel clear of sub-sea pipelines in the area, until satisfied that the fire was finally extinguished. Soon afterwards, the tow was passed to another fishing vessel and the supply vessel returned to standby duties.

For a while all seemed well, with the boat having a small list and sitting only slightly lower in the water than usual. However, in the early hours of the following morning she broke her tow and sank.

## The Lessons

- 1** Electrical systems and insulation material should be checked carefully to minimise the risk of fire.
- 2** Emergency engine and fuel system shut down methods should be tested regularly and repaired if they do not operate correctly.
- 3** Engine rooms should be checked to ensure that they can be fully closed down in a fire situation to prevent smoke spreading and to give CO<sub>2</sub> drench systems the maximum chance of success.
- 4** Do not put yourself back into danger by returning to the scene of a fire too soon. Re-opening a compartment causes air to enter, which may then allow a fire to re-ignite. Engine room fires may require many hours to cool before re-entry can safely be made. Compartment re-entry should be made by properly trained firefighters with the correct fire fighting equipment and breathing apparatus.

# Crush Stop!

## Narrative

A 30m beam trawler left her berth after being given all the necessary clearances from the harbour authorities. Fifteen minutes later, in poor visibility, she ran “head on” into an oil tanker jetty, at almost full speed.

There were no injuries to the crew, and the damage to both vessel and jetty was relatively minor. Fortunately there was no oil tanker alongside the jetty at the time, otherwise the outcome could have been much worse.

After her impact with the jetty, the trawler headed seawards, passing very close to other inward bound vessels, before the port authorities were able to establish contact and persuade the skipper to return to port.

Once back in the port, the vessel’s skipper was breathalysed for alcohol and was found to be over the legally prescribed limit. The skipper was arrested and imprisoned, then released on bail pending the results of a blood sample analysis to confirm alcohol levels. Following the results of the blood tests, the skipper was prosecuted and found guilty under section 78 of the Railways and Transport Safety Act – *Navigating a vessel under the influence of drink*.

At the time of the accident, the port authorities’ VTS staff were distracted from their primary function (monitoring and controlling marine traffic) by a routine telephone call and administrative duties, and failed to notice the

trawler deviating from her expected route until it was too late. As a result, no intervention took place that might have averted the accident, although any such intervention might have been ineffectual. Following the collision, the VTS centre did not inform other traffic that a “rogue” vessel was at large, and the port’s routine carried on as normal.

The resulting investigation concluded that the accident was caused by impaired judgment of the trawler skipper, probably brought about by alcohol consumption. Although the harbour authorities’ VTS centre played no part in causing the accident, they could have taken action to intervene in an attempt to prevent it.



Figure 2: Internal view of bow damage



Figure 3: Damage to the jetty





Figure 1  
View of bow damage

## The Lessons

**1** Don't drink and drive! The dangers are no fewer in a boat than they are in a car. Alcohol dulls the senses, interferes with judgment and slows reactions. This in turn endangers the lives of all those in the vicinity.

**2** The skipper was alone in the wheelhouse. Regardless of the alcohol issue, a second person in the wheelhouse, to act as lookout, is sensible when navigating close to shore. We are all human, if the man at the wheel loses control due to ill health, or any other reason, then the vessel is inevitably going to end up on the beach, or even worse.

**3** The vessel was travelling at an unsafe speed in relation to the circumstances and prevailing conditions. When travelling in confined waters close to the shore, a reduced speed gives time to weigh up the situation, make a balanced judgment and react appropriately and, in the worst event, an accident at slow speed will do far less damage than one at high speed.

**4** Harbour authorities play a major role in safe navigation within their jurisdiction. On this occasion, the VTS team were distracted from their main purpose and, although an attempt to intervene might have proved futile, it would have at least alerted other harbour users that a serious situation was developing. Alerting other vessels to the presence of a "rogue vessel" could prevent other potentially dangerous situations occurring.

# Better to be Safe than Sorry

## Narrative

### *First incident:*

On a Tuesday morning, a 28m, wooden-hulled, 60-year old beamer sailed from her home port to her fishing grounds. The weather was good but was forecast to become south-westerly force 6 to 8 for the weekend. By the Saturday, the wind had increased to near gale force.

While gutting the fish, under the whaleback, the deckhand/engineer noticed small globules of oil in the crab tank, which were coming out of one of two deck wash hoses. He went to the engine room and tried a number of valves in the deck

wash/bilge systems, but the amount of oil being discharged out of the systems increased further. Soon afterwards, the bilge alarm alerted the crew to an increased water level in the engine room. The crew could not discharge the water from the space and, deciding it was better to be safe than sorry the skipper called the coastguard to tell them of the situation.

The coastguard sent a rescue helicopter, carrying a portable pump, to the vessel, and this was used to discharge the water from the engine room. By that time, the fishing vessel had hauled her nets and was making her way back to

her home port, where she arrived safely the following morning.

The next day, a shore engineer found that the overboard discharge non-return valve for the engine room bilge pump was closed, and the crossover valve to the deck wash line was cracked open. The flooding was therefore attributed to the engineer not having opened the overboard discharge valve to the engine room bilge pump.

### *Second incident:*

The following Tuesday, the fishing vessel sailed again towards her fishing grounds, this time with





a different crew on board. The weather was good and the winds were light.

Two days later, the electric submersible pump in the forward net store failed. Using the emergency pump, which was driven by the auxiliary engine, the deckhand/engineer tried to pump out the store. However, the auxiliary engine failed because of an oil leak, which could not be repaired at sea.

Unhappy that the net store could not be pumped out, the skipper elected to haul in the nets and set a course to return to the home port. At about midnight on Friday, the engine room bilge alarm sounded because the bilge pump could not discharge the water that had accumulated in the space. Once again, feeling it was better to

be safe than sorry, the skipper called the coastguard to inform them of the situation.

The local lifeboat was launched, carrying a portable pump, and it rendezvoused with the fishing vessel. They made for the nearest port, where the fire brigade pumped out the flooded spaces. The engineer found that two wires had become detached from the electric submersible pump, so he reattached them and the pump worked satisfactorily. Later that morning, the fishing vessel returned safely to her home port, under the watch of the coastguard.

The following actions were taken to prevent another serious incident:

- To improve the hull's watertight integrity, areas of the hull were recaulked.

- Crew members who were designated as engineers received improved training.
- The auxiliary engine and the engine bilge pump were renewed.
- Large sections of bilge pipe system were renewed, and improved routing was introduced.
- The overboard discharge valves for the emergency and bilge pumps were raised from beneath water level to lead over the top of the deck.
- A diesel-driven, portable salvage pump was placed on board.
- A working sea trial was carried out in moderate sea conditions to test the new improvements; all were found to be satisfactory.

## The Lessons

**1** It is not good practice to rely on bilge alarms and/or operate bilge pumps continuously while at sea, no matter how reliable you think they are. It is important that crew members regularly check compartments for any ingress of water. The Marine Guidance Note 165(F) provides very useful advice on the risk of flooding to fishing vessels, and is well worth a read.

**2** Skippers and owners should ensure that crew members are familiar with sea water side valves and bilge systems on board their fishing vessels. A displayed bilge system diagram is a good reminder when identifying the layout of pipe lines, pumps and valves.

**3** The skippers were concerned about the free surface effect of bilge water on the stability of the vessel, and that major spaces could not be pumped out. Both skippers wisely called the coastguard early, before the situations had gone beyond the point where the vessel's survival could have been in doubt. Such decisions save lives.

# A Rude Awakening

## Narrative

A 23m fishing boat was engaged in pair trawling with another vessel of a similar size. The boats were owned by brothers, and were fishing their normal fishing grounds in the North Sea. As is common practice, one of the skippers was always on watch while fishing, and on this occasion the tow had started at about 0200 with the skipper of the starboard boat on watch. The watch on the port boat was being taken by the engineer. He was new to the boat and this was his first towing watch on board. It was a calm night, with a low southerly swell, and the visibility had started to reduce at about midnight. By 0500 visibility was about 0.5 mile. Both vessels were fitted with two radars: one was kept on the 0.25 mile range to keep position on the other vessel; the other was kept on the 3 or 6 mile range for look ahead. No fog signals were being sounded.

At about 0509, a vessel was noted at about 5 miles on the starboard side. The skipper of the starboard boat confirmed with the port boat's watchkeeper that he also held it on radar; both began to plot the approach on radar. It soon became apparent that the approaching vessel would pass close ahead of the starboard boat, but was on a collision course with the port boat.

The approaching vessel was a supply boat on its regular run to a number of oil rigs. The OOW and a lookout should have been on the bridge, as required by the master. However, the OOW was alone. VDR records show that the two

fishing boats appeared on the radar screen at about 9 miles. They were not plotted with the ARPA, and it does not appear that the OOW noticed them at all. Although the visibility was reduced, no fog signals were being sounded and the sound reception equipment on the Monkey Island was not in use.

About 30 seconds before the collision, the starboard boat's skipper tried to call the supply vessel. But he received no reply. The watchkeeper of the port boat attempted to alter to starboard, but only managed to alter through 15–20 degrees before the collision occurred. Moments before, the OOW on the standby vessel had looked up and seen the fishing boat appear in front of him at about 50 metres. He reacted by turning the main thrusters athwartships, the quickest way to stop the vessel.

The impact rolled the port boat onto her port side, throwing the remaining crew out of their bunks. A split had been made in the hull, allowing water into the fish hold, and the bulkhead between the fish hold and engine room had been ruptured, allowing water to flow freely between the two spaces.

Pumps were started, and although they were coping with the water in the engine room, it was clear that the fish hold was filling fast.

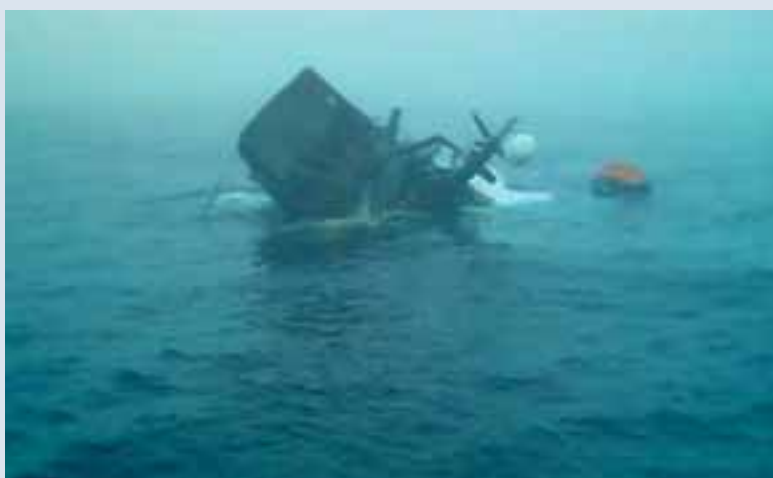
The liferafts were launched and the crew put on their immersion suits; they didn't all don their lifejackets.

On board the supply ship, the master arrived on the bridge fewer than 30 seconds after the impact. Noting that the fishing boat was alongside, and that the towing wire was leading under his vessel, he de-clutched the thrusters so that they did not become entangled in the wire. As the tension eased in the wire, it cleared from under his vessel, and he decided to move his vessel clear and standby to offer assistance. Meanwhile, other members of the crew were preparing the FRC and checking their own ship for damage. Apart from some denting and scrapes to the ship's side, damage was limited to a hole above the waterline in the forepeak tank.

As the fishing boat began to sink, the crew got into the liferaft and were subsequently rescued by the other pair trawler without having to enter the water.







## The Lessons

**1** The OOW on the supply vessel was on watch alone.

It was dark and visibility was reduced by fog; both factors requiring the presence of an additional lookout on the bridge.

Had the lookout been on the bridge, it is likely that the fishing boats would have been seen in sufficient time for effective collision avoidance action to have been taken.

**2** In fog or other conditions of reduced visibility, vessels involved in a close quarters situation have an obligation, under Rule 19, to keep clear of each other.

**3** Neither vessel was sounding fog signals. Had the sound reception equipment on the supply vessel been operational, and the fishing vessels been sounding fog signals, the supply vessel might have been alerted to the presence of the fishing vessels early enough to take action to avoid a collision.

**4** The immersion suits in use had integral buoyancy and would certainly have assisted in keeping the crew members afloat if they had been required to enter the water. However, an immersion suit will not turn an unconscious person onto their back, so it is essential that a lifejacket is also worn.

# Poor Beam Trawler Practice Costs Three Lives

## Narrative

On a late winter's afternoon, in calm sea conditions, a beam trawler caught her port trawl gear on a fastener. During the ensuing attempts to free the gear the vessel listed rapidly and capsized. There was only one survivor from the four crewmen on board.

After the trawler became fast, the starboard trawl gear was hauled to the surface, the derrick was raised and the net and beam brought clear of the water. The port gear, with its derrick in the normal horizontal towing position, was hauled until the warp was tight, causing the vessel to list to port. The three crewmen, who were on deck, moved to the starboard side of the vessel as water came through the freeing ports and then over the port bulwark.

The skipper, who was in the wheelhouse, shouted to the crewmen through an open window, saying that he was unable to do anything more. He did not operate the emergency winch release system which was fitted to his, and similar, beam trawlers. The starboard derrick, with the trawl gear suspended from it, probably then swung inboard and the trawler rapidly capsized to port. The crew

found themselves in the water. None of them was wearing a lifejacket.

The youngest member of the crew swam to the upturned hull and managed to climb on to it. He saw the other two deck crew float past, face up, but was unable to pull them on board the hull, and they floated away. It soon got dark, and the survivor saw a number of ships pass by, but he was unable to signal to them. Neither the vessel's liferaft nor her EPIRB came to the surface.

The following morning, a passing ship saw the upturned hull and the survivor, and raised the alarm. An intensive search and rescue operation began immediately, coordinated by the Coastguard. The survivor was rescued by a Coastguard helicopter, and a search by military and civilian vessels located and recovered the bodies of the two crewmen. The skipper's body was also located a short distance away by other search units. However, it sank before it could be recovered, and he has not been seen since.

The upturned trawler began to drift, and she sank 2 days later.



*Image courtesy of MCA*



## The Lessons

**1** The trawler met all the applicable stability conditions. However, in the situation where her port derrick was horizontal, its gear anchored to the seabed, and her starboard derrick raised to a large angle, she was extremely vulnerable, and capable of capsizing with less than 5 tons of winch force on the port side. Hauling the gear on one side, and lifting the derrick before trying to free the snagged gear on the other, is contrary to good beam trawler practice. Leaving the derrick on the opposite side horizontal will help balance the forces, and would have been a safer way of maintaining stability in this case.

**2** The investigation found that the skipper and crew had worked long hours before and during the voyage. Long hours and hard physical work are common in the industry, making a fishing vessel a dangerous work place. Fatigue can affect us all – even the experienced, and its effects can be difficult to recognise. It can be dangerously long before you actually fall asleep, and can adversely affect: concentration; memory; response times; and the attitude to safety and risk taking. Improving the quality of rest, and taking regular rest periods will reduce fatigue levels and could prevent that ultimate mistake being made.

**3** The emergency winch release system was misunderstood and not trusted. However, it was an effective system to lower the derricks and beams under control. Had it been used in time, it might have prevented the capsize. Ensure that all your vessel's safety systems are maintained, tested and understood by those on board – you never know when they might be needed.

**4** When deciding on the best location for liferafts and EPIRBs, the possibility that they may become trapped in rigging, or on other fitments if the vessel rapidly capsizes should be considered.



# Too Much Up Top!

## Narrative

A 10m GRP trawler was 3 hours into a tow when she slowed down. It was felt that a trawl door had possibly fallen on its back, but when attempts to rectify this showed no increase in the vessel's speed, it left the crew with little option other than to haul the gear.

As the trawl wires were hove in, it became apparent that there was an abnormal weight in, or on, the gear. Because of the strain on the winch, it took some time to ease the doors up to the gallows but, eventually, they were retrieved, secured alongside and unfastened from the trawl warps. The sweeps were transferred from the warp ends onto the net drum, and as the net built up on the drum the hydraulic relief valve started to lift, radically reducing the speed of hauling. In an attempt to take the strain off the net drum the dog rope, which led to the cod end, was taken up over the Gilson

gantry and onto the winch drum ends. The crew were still unable to establish the cause of the weight in the net although it was not unusual for boulders to become caught in the cod end in this particular region.

By systematically hauling on the dog rope and winding slack netting onto the drum, recovery of the net continued. Until then, the boat had been idling at dead slow ahead before the wind. To further take strain off the gear, the skipper put the vessel into neutral. The vessel then started to fall off the wind and, as this happened, the weight of the net suspended from the high gantry affected the vessel's transverse stability, resulting in a dramatic list. This was apparent only when starboard deck edge immersion occurred and water was building up on deck.

Recognising their perilous situation, the crew launched their

lifteraft as the boat rolled over, giving no time to transmit a distress or don lifejackets. As the vessel lay capsized, the two crewmen untied the liferaft painter before getting into the raft; they were unaware that there was a knife inside the raft specifically for cutting the painter. Fortunately, the vessel's EPIRB floated free as the vessel sank, and its transmissions alerted SAR services to a possible emergency.

Once in the raft, the two men dried it out and checked the equipment. Although no potential rescuers were in the area, the skipper let off one of their three red pinpoint flares to see if they worked. An hour later, the crew were rescued by a passing container ship whose watchkeeper spotted their second pinpoint flare.

The survivors were transferred to an RNLI lifeboat and returned to shore, uninjured.





*Photograph showing the vessel's point of suspension for the dog rope and cod end*

## The Lessons

**1** Small trawlers seldom have the ability, or stability, to handle excessive weights. In these situations serious consideration should be given to jettisoning the gear and obtaining help from a larger, more able vessel to retrieve it later.

**2** The danger of lifting/hauling from high points cannot be ignored on any vessel. Weights suspended from heights seriously compromise stability, as do fish in hoppers above deck level. Operators should take all necessary steps to reduce top weight as much as possible and keep the vessel in a stable condition.

**3** When trawling on hard or stony ground operators should give consideration to fitting their nets with stone traps and flip up ropes. These provide both safety and economic benefits by reducing the chances of boulders finding their way into the cod end. Information on these can be obtained from the SFIA (Sea Fish Industry Authority).

**4** The crew had not undertaken the mandatory Sea Survival course. Had they done so, they would not have jeopardised their survival by trying to untie the painter while in the water. Instead, they would have known that a knife was available on board the raft for this specific

purpose. This same course also trains participants on the appropriate use of location aids such as pinpoint flares; these are held in the hand and can only be seen within the visible horizon. Using them when no potential rescuer is to hand is a waste of valuable resources.

**5** Vessels of this size are not required by regulation to carry either liferafts or EPIRBs. Undoubtedly these items saved this crew's lives; all owners, regardless of their vessel's size, should give serious consideration to carrying such equipment, which in many cases is provided free of charge under Government funded initiatives.

# In Drink and in the Drink

## Narrative

Does this scenario sound familiar to you?

You've been fishing for a week and not had much sleep because the weather has been foul. In the early morning, your boat enters port to land the catch. During the day alongside, you help discharge the fish hold, load ice and fuel and carry out repairs on the fishing gear. The skipper decides to stay in harbour for the night and, once cleaned up, and having had something to eat, you go ashore to the pub with the crew.

After having a good amount to drink in the pub to celebrate the good earnings from the catch, it is closing time and you leave to return to the boat. On the way back, you decide to call into the local takeaway, while the others go on ahead. You buy your takeaway meal and continue on back towards the boat. When you arrive, you try

to board, by reaching out for a stay to steady yourself and stepping from the quay onto the top of the gunwale before jumping on to the deck. You have done this many times before, and had no difficulties. However, on this occasion, as you try to step from the quay to the top of the gunwale, you miss your footing and say to yourself, "*Oops, missed!*" This is the last thought you will ever have, because your head hits the gunwale and your body continues to fall between the boat and the quay, into the water.

Sometime later on board the boat, someone asks where you are and, after searching, the crew realise that you are missing. The skipper then notifies the coastguard that you are missing and a search is started. Later that morning, after the dock has been searched by divers, without result, the boat is moved away from the quay and your body

floats to the surface. It is in the early stages of rigor mortis and beginning to bloat. Not a pretty sight. With some difficulty, your body is heaved onto the quay so that it can be taken to the local mortuary.

Not only has the incident involved coastguard search units, the ambulance service, paramedics and divers, but also the police, the MAIB, MCA, HSE and the coroner (procurator fiscal in Scotland). The coroner has to order a postmortem examination on your body to establish the cause of death, and sometime later he holds an inquest in the local court. More tragically, someone has the terrible task of telling your wife and four kids that you have had a fatal accident, and has to explain how it happened.

## The Lessons

**1** You may think that it is rare for someone to fall between a vessel and the quay while boarding a fishing vessel, and perhaps even more so for a fisherman to lose his life in the process. During the last 10 years, 13 fishermen have lost their lives when returning from the pub; the circumstances in which all these fatalities occurred reflect closely the scenario given above. Alcohol and fatigue can be a fatal combination.

**2** The Marine Guidance Note MGN 268 (M+F) reminds vessel owners and others of the need to ensure that safe means of access are provided to fishing vessels and other small vessels. It also identifies some of the hazards that may be encountered and advises on protective measures that can be taken to minimise the risk.

So if you are responsible for providing a safe means of access, it is important that you carry out a risk assessment to identify the hazards and then try to remove them, or at least minimise them.

# Not Dressed for the Job

## Narrative

An injured fisherman was being airlifted in gale force conditions by a SAR helicopter when it became necessary for the helicopter crew to guillotine the winch wire because the casualty was being dragged violently towards the boat's rail. This resulted in the fisherman striking the rail hard and going overboard, in darkness, without a

lifejacket. Fortunately the man was wearing a flotation suit and, because he was conscious, he was able to float face-up with the aid of the suit.

The SAR helicopter had no secondary winch on board and was therefore unable to retrieve the casualty from the sea. It was, however, able to lower a flotation

aid on the end of a spare highline to the casualty and pinpoint his position for the fishing vessel. The fishing vessel skipper skilfully manoeuvred the boat alongside the casualty to enable his colleagues to recover him on board.

The fishing vessel's crew administered first-aid treatment to the casualty while they steamed ashore at full speed. Once in the lee of the land, the casualty was transferred to an all-weather lifeboat and then onwards to hospital by waiting ambulance.



*Photograph of vessel's lifting area and height of rails*

## The Lessons

**1** Helicopter rescue is fraught with danger. This case clearly illustrates the importance of wearing both a lifejacket and a flotation suit (or immersion suit) during helicopter transfers. Although a flotation suit will provide protection from the cold, and will keep the wearer afloat, there is no guarantee that it will also float the wearer face-up. A lifejacket will turn the person onto their back and ensure the nose and mouth are above the water – even if they are unconscious.

**2** The skipper manoeuvred his vessel skilfully alongside the casualty and gave him a slight lee as he was dragged from the sea by two of his crewmates hanging out over the bulwarks. The crew were wearing neither flotation suits nor lifejackets, simply because they did not expect the airlift to go wrong. The skipper could quite easily have ended up with more men to rescue and, without being suitably dressed they would have had little chance of survival. Always be prepared for the

unexpected, and do all that is possible to minimise risks; a pre-emptive risk assessment and crew discussion on MOB recovery, before it is ever needed, will help prepare the crew for the day it happens.

**3** This vessel carried mandatory type approved lifejackets which, although ideal for abandonment, are impossible to wear on a regular basis and would have been extremely cumbersome during this rescue. Daily wear self-inflating lifejackets are already in use on many fishing vessels as an addition to the abandonment type. These have been proven as suitable for regular wear and are ideal for deck crew during most operations. Fishing vessel operators should give serious thought to obtaining and promoting daily wear lifejackets, thus maximising the protection afforded to their crewmen when the unexpected happens.



# Shrimp Boiler Lights up the Engine Room

## Narrative

The skipper and 2 crew of a 9.9 metre beam trawler had just completed an uneventful passage to nearby shrimp fishing grounds. The weather was pleasant, and after shooting away the gear the crew relaxed in the wheelhouse, looking forward to the day's fishing. Meanwhile, the skipper lit the diesel-fuelled shrimp boiler, located on the main deck, just forward of the wheelhouse. The purpose of doing this was to bring the water up to temperature ready for the first haul.

It was a very basic boiler: an electrically driven blower supplied air through a flexible, plastic corrugated hose, and a small pump delivered the diesel fuel (Figure 1).

Both the blower and fuel pump were located in the engine room and were switched on from the wheelhouse by two identical switches fitted within a common electrical box.

The boiler was so basic that operating instructions were considered unnecessary.

Once the water had boiled, the skipper thought that he had switched off the fuel pump, leaving the air blower running to allow any unburned fuel to burn off, and to purge the boiler furnace.

The boat continued its towing course as normal – but normality was about to end!

Five minutes later, the skipper noticed a flickering light on deck, in

the vicinity of the boiler. He raised the alarm, grabbed a fire extinguisher from the wheelhouse and made his way forward to attack the fire with one of the crew carrying the deck wash hose. The fire was quickly extinguished, but it had melted the boiler's plastic corrugated air supply pipe (Figure 2).

Aware that the air supply pipe led from the engine room, the skipper opened the engine room hatch located in the wheelhouse. Once in the engine room, he assessed that the seat of the fire was in the vicinity of the blower, so he discharged the remains of his extinguisher in that direction. The smoke by that time was black and

## The Lessons

On investigation, it was found that the small bore ventilation air pipes to the engine room were completely blocked by rust flakes. This meant that the air supply for the engine had to come either through the engine room hatch – which was shut tight – or back through the boiler air blower pipe work.

In attempting to shut down the boiler, it is probable that the skipper inadvertently switched off the air blower. This caused the engine to draw air through the blower system, and the boiler flame to be drawn into, and ignite, the plastic section of pipe work. The flames from the burning plastic would have been drawn into the engine room, through the blower. Electrical cable insulation then caught fire, dropped onto foam and plastic materials left on the floor plates, and caused these to ignite also.

The following lessons can be drawn from this accident:

- 1 Do not neglect maintenance of less obvious systems such as engine room ventilation. Out of sight should not mean out of mind!
- 2 Engine remote shut-down systems need to be maintained and tested on a regular basis.
- 3 Fully investigate systems that are not operating correctly – in this case the engine had been running “rough” for some time and this would have been due to air supply starvation.
- 4 Although the boiler was of a basic design, it caused a potentially serious fire because it was most likely not shut down correctly; a risk assessment should have identified the need for safe operating instructions and clearly identified operating switches.

very thick and acrid, forcing him to retreat.

Back in the wheelhouse, the skipper closed the engine room hatch and instructed the crew to haul in the fishing gear and don their lifejackets. Unfortunately, only two of the three lifejackets could be found because one was hidden under the large amount of surplus equipment on board. Soon after calling the coastguard, the skipper attempted to stop the engine using the remote fuel pump stop in the wheelhouse. But this was unsuccessful because the fuel pump linkage had broken. The engine continued to run, at idling speed.

A short time later, the local RNLI lifeboat arrived on scene and the crew transferred from the vessel. The trawler was towed back to port and was met by the emergency services. The Fire and

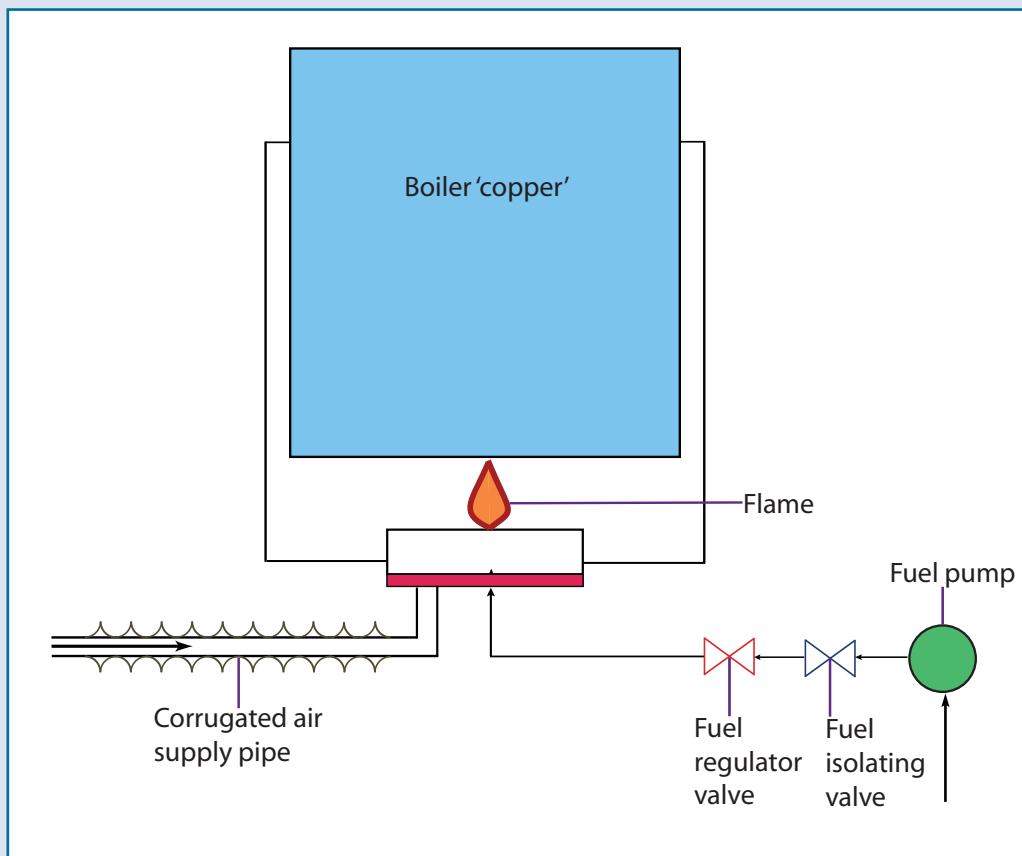


Figure 1

Rescue Service extinguished a small carbonaceous fire in the engine room. Meanwhile, the skipper was

transferred to hospital for treatment following smoke inhalation. He was released a short time later.

Figure 2: Shrimp boiler after the fire, with melted air supply pipe



**5** Where there is a risk of incorrect start up or shut-down sequences, consider fitting interlocks to prevent maloperation.

**6** Remove unnecessary gear: it can cause blockage to pumping systems, become a fire hazard, prevent access to safety equipment, and can impede escape in the event of an emergency.

# Spot the Difference



## Narrative

Do you notice any differences between the two photographs? – Concentrate on the ramp at the centre of the vessel's stern and imagine lines of pots being shot out through this opening. This is a common way of laying a line of pots and involves them being carefully stowed on deck, with the associated ropes, in such a manner that they are free to pass through the stern opening, without assistance from the crew, once the process has commenced.

You will, by now, have realised that the two photographs are in fact the same, but please read on, as two similar accidents occurred within days of one another, in different parts of the country. However, although they had the

same cause, the accidents had tragically different outcomes.

The two boats were both laying fishing pots in strong winds. In both accidents a crew member's foot became caught in the pot ropes as they paid out, and they were pulled over the stern of their vessel. Tragically, one of the men lost his life; happily the other was rescued and, after being airlifted to hospital, made a full recovery.

The man who lost his life was a young fisherman with a few years experience; the man who was rescued had been fishing for over 50 years. Neither of the men was wearing a lifejacket.

The operation on both boats had been risk assessed to ensure that the crew remained well clear of the rope as it paid out, and both

men were trained and experienced in this type of fishing. However, in each case, the fishermen became trapped in the rope and were quickly dragged over the side and into the sea.





## The Lessons

**1** When risk assessing any operation at sea, consider the question “What if a person does something they shouldn’t?” If you cannot ensure their safety at all times, which on the deck of a fishing vessel is unlikely, then you must consider the last resort – the provision of suitable Personal Protective Equipment: in this case a lifejacket and suitable clothing, to make the operation as safe as reasonably practicable.

**2** The wearing of a lifejacket when working on deck should be considered an essential safety control measure. It is noteworthy that, after 50 years as a fisherman, the survivor's first priority was to purchase a suitable lifejacket before he returned to sea. He now intends to wear this at all appropriate times in the future. He learnt his lesson the hard way – you now have the opportunity to learn yours from his lucky escape and from the tragic death of a young fisherman.

# Trim for Safety, Not for

## Narrative

A 20m trawler was returning to port after 6 days of poor fishing, during which time she had used all the fuel in her forward tanks and most of her fresh water from the tank in her forepeak. Due to the poor fishing experienced over the 6 days, there was little weight in the forward fish room to counteract the effect of a stern trim which had developed as fuel and water were consumed. Additionally, in normal operating conditions, the vessel had very little freeboard aft, and had been granted a 20% aft freeboard reduction due to her age. The induced stern trim and very low freeboard meant that the vessel's aft deck was almost constantly awash as she rolled in the force 6 seas with the wind on her starboard bow.

The skipper became aware of a starboard list developing, so went to investigate. The cause of the list was traced to an obsolete fuel tank in the vessel's transom, which was gradually filling with seawater (it was a requirement of the vessel's stability criteria that the aft fuel tanks remained void at all times). The skipper was not unduly alarmed as he knew the water was contained within the tank. Furthermore, he had encountered water in the tank several months previously due to a crack in the deck; on that occasion the vessel made shore safely, whereupon the water was drained from the tank, pumped overboard and the deck repaired.

As the list increased, the skipper attempted to drain the

water from the tank into the steering flat and pump it overboard. Unfortunately, the main bilge pump failed to function, possibly due to it drawing air through a perforated suction pipe, or debris in the valve chest. An emergency electrical submersible pump was rigged to pump the water, but unfortunately this burned out soon after being started, leaving the skipper with no option but to stop draining water from the tank and call the coastguard for assistance.

The vessel continued steaming ashore, awaiting the arrival of a salvage pump from the SAR services, trimming even further by the stern and listing more to starboard until the aft deck became totally submerged to the extent that the bulwark rail was dipping in the

## The Lessons

**1** The skipper preferred to use fuel from the forward tanks before the aft tanks and thus keep the vessel trimmed by the stern to improve towing capability. This was contrary to the vessel's stability criteria, which required the aft tanks to be used first to maintain adequate freeboard aft. On the day in question, this was further aggravated by poor fishing and lack of weight in the fish room to compensate for the stern trim. Once the aft void started to fill with water, the vessel's stability was totally compromised, leading to further stern trim and list.

It is essential that operators give due credence to stability criteria at all times and trim their vessels to maintain optimum vessel safety (not optimum fish catching potential). The SFIA offers a 1-day Intermediate Fishing Vessel Stability Awareness Course, which is currently offered free of charge by Group Training

Associations throughout the UK. All fishermen should take advantage of this highly recommended course, which gives sound practical advice and "hands on" interaction on stability matters.

**2** Having successfully overcome a similar incident previously, the skipper might not have appreciated the danger his vessel was in. However, the conditions were not exactly the same: the trim was different, due to fuel consumption and loading in the fish room; the void tank might not have been completely full of water; the weather conditions were different, causing the vessel to roll continuously with water over her decks. So many variables at sea mean that situations are seldom exactly the same – it is essential to be alert for subtle changes that can make a big difference.

# or Catching Fish

sea. Unfortunately, the vessel's engine room vents, positioned on the starboard side of an aft facing bulkhead, were open.

By the time the skipper realised this additional danger, it was too

late to put a man onto the exposed deck to close the vent flaps. As the vessel trimmed further by the stern, and listed to starboard, seawater found its way into these vents and drained down below decks.

The wind decreased and the sea state improved as the vessel got closer to shore. Consequently the vessel stopped rolling and remained listed on her starboard side, and this alerted the skipper to the angle of loll developing. Aware of the worsening situation, the skipper ensured all his crew were in lifejackets and instructed them to prepare a liferaft. He stopped the vessel, which immediately settled on her side, allowing the crew to step into the liferaft, taking with them their EPIRB and portable VHF radio. Within minutes of abandoning, the crew were winched to safety by a SAR helicopter, which had been summoned earlier by the coastguards. Soon afterwards, the vessel sank by the stern.



**3** In view of the previous flooding incident, where the vessel made shore safely, the skipper was not initially concerned about locating the source of ingress. By the time it became apparent that a serious situation had developed, it was too late to put crew on the deck to search for a cause and possibly prevent further ingress. Even the most insignificant damage should be investigated as soon as possible to prevent situations developing into emergencies.

**4** The open vent flaps allowed water to find its way below decks and subsequently sink the vessel. Seafarers should be acutely aware of the dangers of downflooding through openings, at all times, and take all due precautions where there is a possibility of this happening. Had the vents been closed early on during this emergency, it would have prevented further ingress, and allowed the crew a good margin of safety until the SAR salvage pump arrived.

**5** The crew abandoned safely with the presence of mind to wear lifejackets and to take their EPIRB and portable VHF radio into the liferaft. Although on this occasion they were rescued swiftly, things could have been very different if it had been dark or out of immediate reach of SAR services. By using available survival equipment, this crew greatly enhanced their chances of a safe rescue.



# Two Sides of the Same Coin

**For a collision to occur, both vessels must have applied the COLREGS incorrectly. In this incident, the story is viewed from both sides.**

## Heads

### Narrative

A fishing vessel returned to port to land a catch and to allow the skipper to attend a doctor's appointment. The usual mate had not sailed with the boat on its last trip, but was to take over as skipper on the next voyage.

Having landed the catch, collected new fish boxes and loaded more ice and fuel, the fishing vessel left the port at about 2300. It was the new skipper's

intention to take the watch until they reached the fishing grounds. However, one of the crewmen insisted that it was his turn to take the watch, so the skipper turned in. The time was about 0200.

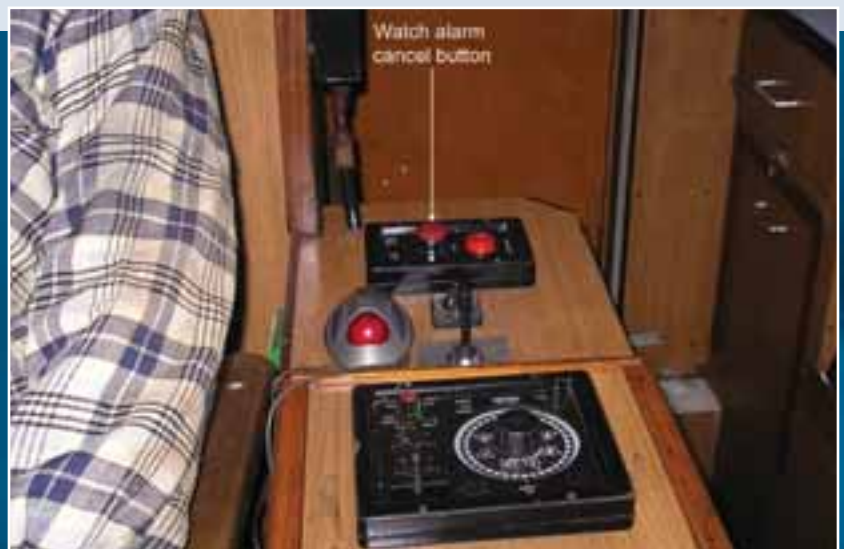
The crewman had received 5 hours sleep the previous morning, and had not slept for the 24 hours before that. He was very tired, and sitting in the wheelhouse chair he soon fell asleep. The watch alarm was on and working, but it could be reset without the crewman having to leave the chair (Figure 1). The crewman described the watch alarm as a snooze alarm, and used it as such to rouse himself

sufficiently to check the course before returning to his slumbers.

At about 0425, the crew of the fishing vessel were woken by the impact of their vessel with a much larger vessel. They all hurried to the bridge and then, under the skipper's direction, checked the vessel for damage. The only visible damage was a dent to the starboard bow and some damage to the cladding in the cabin.

There were no injuries or pollution, and after contacting the other vessel, and confirming names and ports of registry, they returned to port.

*Figure 1: Vessel's watch alarm cancel button next to the crewman on watch*



## The Lessons

**1** The watchkeeper was very tired, and used the watch alarm in the same way as he would use a clock snooze alarm. The positioning of the reset button so close to his chair meant that he did not have to move from his chair to cancel the alarm.

**2** The skipper was not tired, having only just joined the boat. It would have been prudent for him to have remained on watch, and to allow his severely fatigued crew member to sleep.

## Tails

### Narrative

A 57,000gt tanker was approaching the coast at slow speed with the intention of anchoring at 0600. At 0352 the OOW noted a small contact on his radar at 6 miles and about 30° on his port bow. He acquired the target with the ARPA, and the initial tracking information showed the target to have a CPA of 1 mile to port. Checking through the binoculars, the OOW could see the lights of a small power driven

vessel showing a green sidelight, making him the stand-on vessel in this situation.

It was about this time that the relieving OOW arrived on the bridge and the watch handover commenced. This included information concerning the small vessel, including the initial ARPA data giving a CPA of 1 mile to port. Once the handover was completed, and the off-going OOW had left the

bridge, the new OOW checked the radar again and noted that the small contact was now at 2 miles and had a much reduced CPA. The time was 0415. Concerned that the give way vessel was still standing on, the OOW started to try and attract the other vessel's attention using the Aldis lamp. When this had no effect, he sounded five short blasts on the ship's whistle, and shortly afterwards started to alter course to starboard.

The whistle signal woke the master, who arrived on the bridge to find the fishing vessel alongside his starboard side but moving clear, and his own ship swinging to starboard. Ordering port helm to stop the swing, contact was made with the small vessel via the VHF radio. It was established that there were no injuries or pollution, and the vessel continued to her anchorage.



Figure 2: The damage to the tanker's side

## The Lessons

**1** The small vessel was first noticed just before watch handover, and the initial ARPA data noted. The OOW then concentrated on handing over the watch, and the collision risk was not determined again for approximately 20 minutes. By this time the approaching vessel was at 2 miles, allowing little time to assess the situation and to take avoiding action. The handover of the watch took precedence over the collision situation, and the approach of the other vessel was not monitored.

**2** The initial CPA data is displayed after 1 minute of tracking. The most accurate data is not available until the target has been tracked for a full 3 minutes.

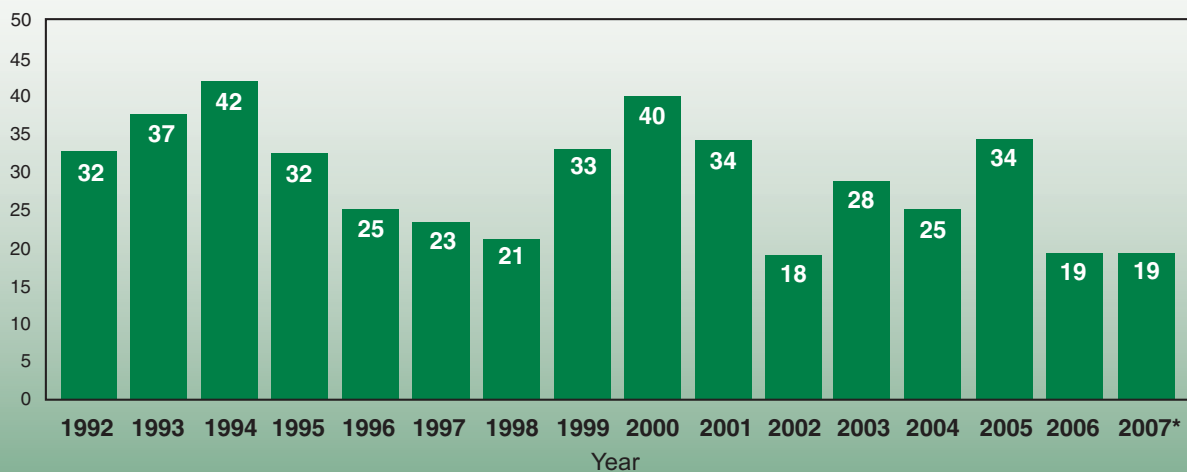
In this case, the OOW made his assessment of the situation based on the initial information, i.e. on scanty radar information. Had the handover included continually checking the latest ARPA data of the approaching vessel, more time would have been available to properly assess the situation and take effective action.

**3** In this case, a lookout was on the bridge, but took no part in the action. A lookout is no use if he is not briefed and used as an important part of the bridge team. In this case, he could have played an important role in monitoring this closing contact while the OOWs were handing over. OOWs *must* use their bridge teams effectively if they are to remain safe.

**4** When a large stand-on vessel is approached by a substantially smaller give-way vessel there is a point at which a decision must be made that an alteration of course is required. Often, an alteration is needed at a greater distance than the smaller vessel considers necessary. The OOW is left with a choice of standing on – assuming that the smaller give-way vessel is going to alter course – or taking avoiding action, which may not, in fact, be necessary due to the small vessel's imminent alteration. Following the rules and taking “early and substantial action to keep well clear” removes this dilemma.

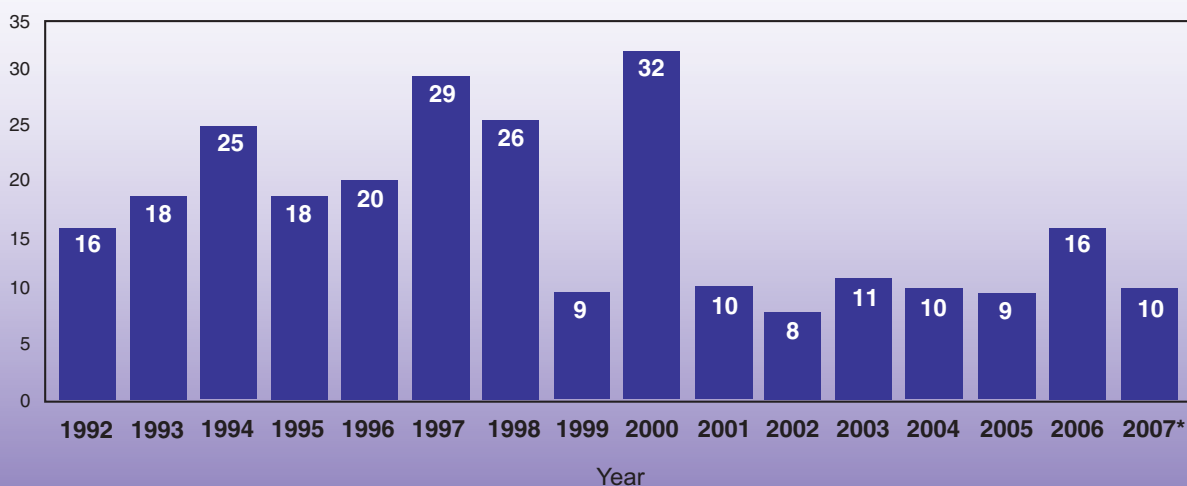
# Fishing vessel accident statis

Fishing Vessel Losses 1992–2007



\* Figures for 2007 are provisional at time of publication. (April 2008)

Deaths 1992–2007



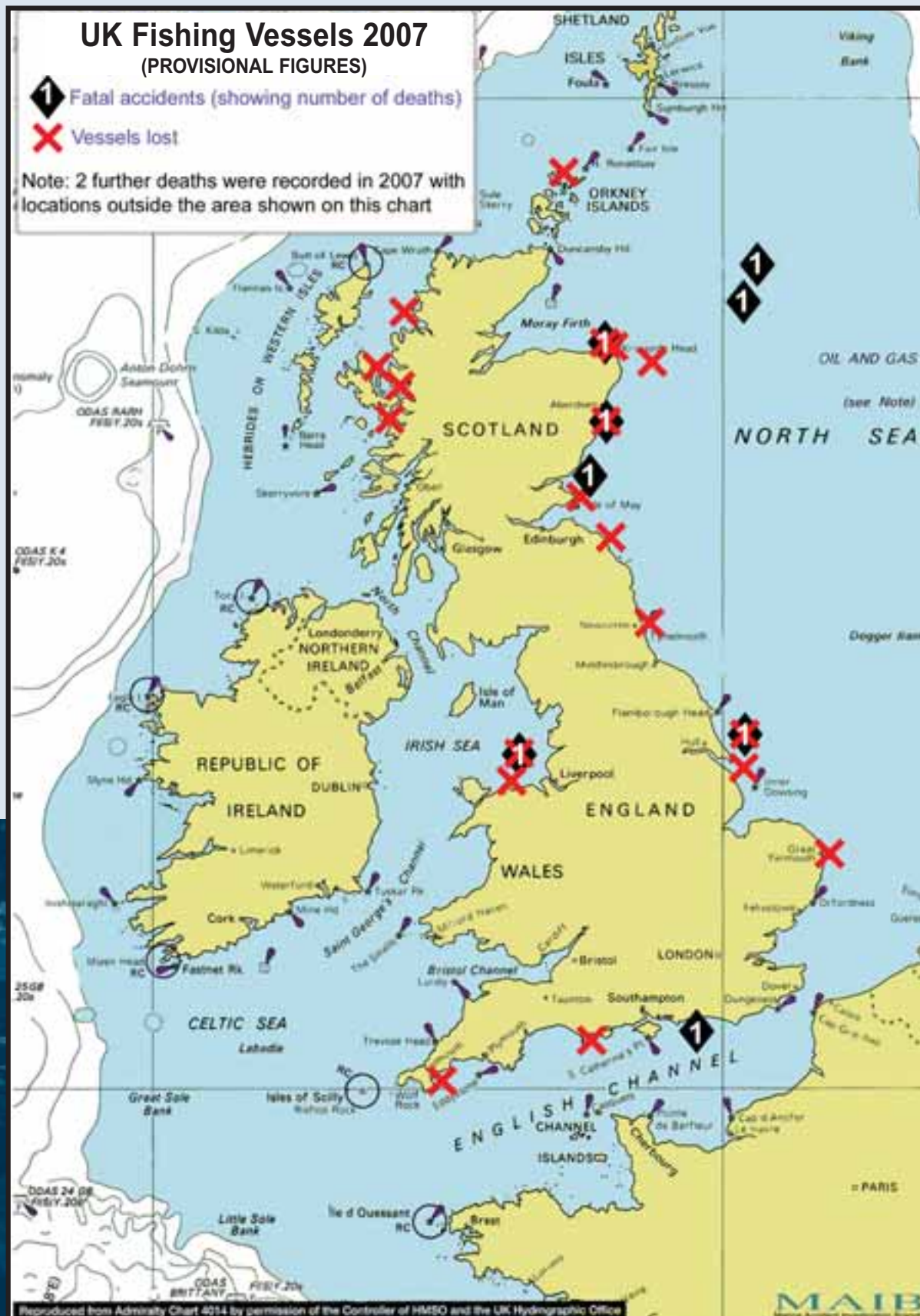


## Fishing Vessel Accident Statistics 1997–2007

YEAR	LOSS OF LIFE					PERSONAL ACCIDENTS	VESSELS LOST
	Lost with vessel	Fell overboard	Involved Machinery	Onboard Accidents	Total		
1997	16	7	0	6	29	106	23
1998	18	5	0	3	26	89	21
1999	3	4	0	2	9	72	33
2000	21	6	2	3	32	73	40
2001	1	6	0	3	10	77	34
2002	4	4	0	0	8	47	18
2003	4	5	1	1	11	59	28
2004	7	3	0	0	10	60	25
2005	1	6	0	2	9	53	34
2006	10	4	1	1	16	53	19
2007*	3	5	0	2	10	57	19
TOTAL	88	55	4	23	170	746	294

\* Figures for 2007 are provisional at time of publication. (April 2008)

# Major accident locations



# MAIB published reports

## Fishing vessel accident reports published since 1999

**Alma C** – report on the death of Michael John Beedie, a fisherman from the fishing vessel *Alma C*, on Turbot Bank about 55 miles west-by-south of Thyboron in Denmark on 25 January 2001.

**Amber** – loss of a fishing vessel in the Firth of Forth on 6 January 2003.

**Amber Rose** – foundering of a fishing vessel with the loss of one life off the Isle of Man on 15 October 1998.

**Angela** – capsized and foundering of a fishing vessel in the North Sea on 6 February 2000.

**Annandale** – flooding and foundering of a fishing vessel 16 miles north-north-east of the Shetland Islands on 23 March 2000.

**Arosa** – grounding and total loss of UK fishing vessel on Doonguddle rock off the west coast of Ireland with the loss of 12 crew members on 3 October 2000.

**Astra II** – loss of two crewmen attempting to board the vessel while berthed at Carbot pier, Loch Harport, Isle of Skye on 2 April 2000.

**Atlantic Princess** – man overboard incident from vessel in the English Channel on 23 November 2000.

**Aqua-boy** – Report of the investigation of the grounding of *Aqua-boy*, Sound of Mull on 11 November 2006.

**Auriga** – loss of fishing vessel off Portavogie, Northern Ireland on 30 June 2005.

**Aurelia** – flooding and loss of fishing vessel *Aurelia*, 78 miles west of St Kilda on 13 August 2001.

**Be Ready** – fire on board the fishing vessel while fishing 30 miles north-west of the Orkney Islands on 22 January 2000.

**Betty James** – grounding and subsequent loss of a fishing vessel off Isle of Rhum on 10 July 2000.

**Beverley Ann II/Cypress Pass** – collision between vessels on 9 March 1999.

**Blue Hooker** – loss of a fishing vessel with two lives off Blackchurch Rock, North Devon on 12 November 1998.

**Blue Sinata** – foundering of fishing vessel in Weymouth Bay on 8 September 2005 with loss of one life.

**Bounty** – loss of fishing vessel off Portavogie, Northern Ireland on 30 June 2005.

**Bro Axel/fv Noordhinder** – near miss between *Bro Axel* and *fv Noordhinder* and the subsequent grounding of *Bro Axel* at Milford Haven 5 December 2002.

**Brothers** – investigation of the grounding of vessel with the loss of two lives off Eilean Trodday on 1 June 2006.

**Catrina** – capsized of a UK registered fishing vessel south of Newhaven on 13 October 1998.

**Celtic King/De Bounty** – collision between UK registered feeder container ship *Celtic King* and Belgian registered *fv De Bounty* to the south of The Smalls traffic separation scheme off the south-west coast of Wales on 19 March 2000.

**Charisma** – capsized of the fishing vessel *Charisma* (OB588) with the loss of one crew member in Carlingford Lough on 30 January 2002.

**Chelaris J** – capsized and sinking of the fishing vessel *Chelaris J* (GU323) and loss of all crew members Banc de la Schôle (near Alderney) 1 October 2003.

**Chelaris J** – le chavirement et le naufrage du bateau de pêche *Chelaris J* (GU323) avec la perte de tous les membres de l'équipage, Banc de la Schôle (près d'Alderney), 1er octobre 2003.

**Christine Nielsen** – flooding and foundering of a fishing vessel 120 miles north-east of the River Tyne on 18 March 2001.

**Constancy** – sinking of a fishing vessel on 30 July 1998 with the loss of one life.

**Constant Faith** – loss of a fishing vessel about 100 miles north-north-east of Peterhead on 30 June 2001.

**Crimond II** – loss of a fishing vessel 30 miles north-east of Scarborough on 24 April 2001.

**Danielle** – investigation of the major injuries sustained by a deckhand on board *fv Danielle* BM478 17 miles south-south-east of Falmouth on 6 June 2006.

**De Kaper** – fire on board a trawler off Hanstholm, Denmark on 12 February 1999.

**Donna M** – capsized of a fishing vessel off the Orkney Islands with the loss of two lives on 31 August 1999.

**Dunan Star** – fatal accident on board a fishing vessel 1.5 miles south-west of the Isle of Arran on 10 August 2000.

**Elegance** – investigation into 2 engine room fires, subsequent flooding and foundering of the fishing vessel *Elegance* 30 miles north-west of Shetland on 30 January 2004 and 8.5 miles west of Shapinsay on 5 March 2004.

**Elhanan T** – flooding and foundering of the fishing vessel *Elhanan T* on 14 August 2003.

*mv Elm/mfv Suzanne* – near miss incident on 11 February 1999.

**Emerald Dawn** (one of trilogy) – capsized and foundering of fishing vessel off Kilkeel with the loss of one life on 10 November 2004.

**Emerald Star** – investigation of *Emerald Star* making contact with Chevron Texaco Number 6 berth at Milford Haven on the evening of 18 January 2006.

**European Tideway and Vrouw Grietje** – collision between vessels in the North Sea on 16 October 2000.

Fishing Vessel Safety Study 1/2002 – report on the analysis of fishing vessel accident data 1992 to 2000.

**Flamingo** – capsized of a fishing vessel east of Harwich on 7 July 2002.

**Fleur de Lys** – explosion on board vessel which then foundered 18 miles south-east of Portland Bill on 16 April 2000.

**Fraoch Ban** – capsized of a fishing vessel off the coast of the Shetland Islands on 15 August 1999.

**Geeske** – death of one person while fishing off Beachy Head on 9 December 1998.

**Gemma Fidelis** – fatal accident on board *Gemma Fidelis* 9 miles east of the River Tees on 23 October 2001.

**Girl Alice** – loss of skipper from vessel 1.5 miles south-east of Burmough on 19 November 2000.

**Gradeley** – man overboard fatality off the west coast of the Island of Mull on 28 October 1999.

**Greenhill** – grounding and subsequent foundering of *fv Greenhill* off Ardglass, Northern Ireland 19 January 2006.

**Gudermes and Saint Jacques II** – collision between vessels in the Dover Strait on 23 April 2001.

**Harbour Lights** – loss of a fishing vessel off Polperro, Cornwall on 8 January 2000 with the loss of one life.

**Harvest Hope** – capsized and foundering of the *fv Harvest Hope* 40 miles north-east of Peterhead on 28 August 2005.

**Harvester/Strilmoy** – collision between *fv Harvester* and *mv Strilmoy* in the North Sea on 4 November 2005.

**Horizonte Claro** – grounding of a fishing vessel on Soyea Island, Loch Inver, on 21 October 2000.

**Jann Denise II** (one of trilogy) – foundering of fishing vessel 5 miles SSE of the River Tyne 17 November 2004 with the loss of her two crew.

**Jasper III** – foundering of vessel 90 miles north-east of Fraserburgh on 10 September 1999.



**Kathryn Jane** (one of trilogy) – foundering of fishing vessel 4.6nm west of Skye on or about 28 July 2004 with the loss of the skipper and one possible crew member.

**Kingfisher II** – investigation of the fire on board the fishing vessel *Kingfisher II* whilst on passage to recover creels, 5 miles east of North Uist on 26 April 2004.

**Kirsteen Anne** – loss of a fishing vessel in the Firth of Lorn on 31 December 2002 with the loss of her two crew.

**Lomur** – grounding of a fishing vessel in the approaches to Scalloway, Shetland Islands on 14 June 2001.

**Luc** and **Toisa Puffin** – collision between two vessels 8.5 miles due east of the river Tyne on 13 June 1999.

**Lysfoss** – grounding of a fishing vessel in the Sound of Mull, Scotland on 7 May 2001

**Marbella/Bravo Delta** offshore platform – collision between UK registered fishing vessel and offshore platform in the Rough Gas Field about 25 miles south-east of Flamborough Head on 8 May 2002.

**Mariama K** – carbon monoxide poisoning on board a fishing vessel in Douarnenez, France on 10 June 2000 – one fatality.

**Mathilda** and *fv Lady Hamilton of Helford* – near miss incident between *Mathilda* and *fv Lady Hamilton of Helford*, 7 miles east-south-east of Lizard Point, Cornwall on 28 June 2001.

**Meridian** – Report on the investigation of the loss of the fishing vessel *Meridian KY 147* with the loss of four crew 160 nm due east of Aberdeen on 26 October 2006.

**Noordster** – investigation of the capsizing of the fishing vessel *Noordster Z122* with the loss of three crew 11.5nm south of Beachy Head on 13 December 2005.

**Ocean Star** – failure of a warp block on board a UK registered fishing vessel north of the Shetland Islands resulting in one fatality on 26 November 2001.

**Opportune** – man overboard fatality from a fishing vessel 35 miles east of Wick on 23 February 2000.

**Osprey** – fatal accident to a man overboard from a fishing vessel in Lochinver Harbour on 20 April 2002.

**Our Nicholas** – grounding and loss of the crabber *Our Nicholas* near the entrance to Stornoway Harbour on 24 July 2001.

*fv Our Sarah Jayne/Thelisis* – collision between vessels in the Thames Estuary on 20 June 2001.

**Pamela S** – capsizing and foundering of *fv Pamela S IH308* in Carmarthen Bay on 17 June 2006 with the loss of one life.

**Pescalanza** – sinking of a fishing vessel with the loss of six lives on 2 November 1998.

**Philomena** – fatal accident on board vessel in the Moray Firth on 6 March 2001.

**Primrose** – grounding of vessel on the Island of Rhum on 15 June 2001.

**Purbeck II** – injury of crew member on board on 7 June 1999.

**Purdy** – man overboard fatality from angling boat at Shipwash Bank off Harwich, on 17 July 1999.

**Rachel Harvey** – grounding and loss of fishing vessel off Peninnis Head on 1 October 1999.

**Radiant** – capsizing and foundering of a fishing vessel about 45 miles north-west of the Isle of Lewis with the loss of one life on 10 April 2002.

**Radiant Star III** – foundering of a fishing vessel 60 miles northeast of Fraserburgh on 6 August 1999.

**Random Harvest** – flooding of a fishing vessel south-west of Brighton on 3 July 1999.

**Rebecca Kay** – loss of a fishing vessel off Bideford Bar Buoy on 20 April 2001.

**Reno** and **Ocean Rose** – collision between *Reno* and *Ocean Rose* off Whitby, North Sea 6 March 2004.

**Resplendent** – grounding of a fishing vessel in Bluemull Sound Shetland Islands on 13 June 2001.

**Ross Alcedo** – fire on board vessel while underway about 32 miles north-west of the Isles of Scilly on 16 January 2000.

**Sally Jane** – capsizing alongside in Shoreham Harbour on 27 July 1998.

*mv Sand Heron* and *fv Celtit* – collision between vessels NE Traffic Lane, Dover TSS on 30 July 2001.

**Sharona** – flooding and foundering of a fishing vessel 80 miles north-east of Peterhead on 3 August 1999.

**Sian Elizabeth** – investigation of the injury to a member of the crew on board the fishing vessel *Sian Elizabeth* 3 miles north of Kings Lynn on 14 September 2006.

**Silvery Sea/Merkur** – collision between *Merkur/Silvery Sea* which then foundered about 35 miles west of Esbjerg, Denmark with the loss of five lives on 14 June 1998.

**Solstice II** – investigation of a fatal accident to a crew member, 25 miles south-west of Rockall on 13 May 2000.

**Solway Harvester** – summary report on the investigation of the capsizing and sinking of *fv Solway Harvester* 11 miles east of the Isle of Man on 11 January 2000 with the loss of 7 lives.

**Solway Harvester** – capsizing and sinking of fishing vessel, 11 miles east of the Isle of Man on 11 January 2000 with the loss of seven lives.

**Sundance** – capsizing and foundering of a fishing vessel off Galkicker Point, East Solent with the loss of one life on 10 September 2001.

**Suzanne** – see *Elm*.

**Tullaghmurphy Lass** – sinking of a fishing vessel with the loss of three lives in the Irish Sea on 14 February 2002.

**Union Arbo/Philomena** – collision between Bahamian cargo ship *Union Arbo* and UK *fv Philomena* about 10 miles south of Newlyn, Cornwall on 2 September 1999.

**Van Dijk** – loss overboard of a fisherman from fishing vessel while fishing 30 miles south-west of Guernsey on 16 April 2001.

**Vertrauen** – investigation of the loss of *Vertrauen* about 75 miles north-east of Peterhead on 19 July 2001.

**Wakil II** – investigation of an accident to the skipper of a fishing vessel 3.5 miles south-west of St Bees Head on 10 April 2000.

## GLOSSARY of abbreviations

<b>ARPA</b>	Automatic Radar Plotting Aid
<b>COLREGS</b>	International Regulations for the Prevention of Collisions at Sea
<b>CPA</b>	Closest Point of Approach
<b>EPIRB</b>	Emergency Position Indicating Radio Beacon
<b>FRC</b>	Fast Rescue Craft
<b>GRP</b>	Glass reinforced plastic
<b>HSE</b>	Health and Safety Executive
<b>"Mayday"</b>	The International Distress Signal (spoken)
<b>MCA</b>	Maritime and Coastguard Agency

<b>MOB</b>	Man Overboard
<b>Monkey Island</b>	Deck above the navigation bridge typically used to house the standard compass and radar equipment
<b>OOW</b>	Officer of the Watch
<b>RNLI</b>	Royal National Lifeboat Institution
<b>SAR</b>	Search and Rescue
<b>SFIA</b>	Sea Fish Industry Authority
<b>VDR</b>	Voyage Data Recorder
<b>VHF</b>	Very High Frequency
<b>VTs</b>	Vessel Traffic Services



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# MAIB

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