

Module 7 Appendices

MAIB Case Studies

The MAIB Safety Digest has one overriding aim: to draw out the lessons from marine accidents so that others can learn from them. While the narrative sets the scene, the lessons often build on the circumstances of the actual incident and introduce wider issues where other seafarers can benefit. Lying at the heart of the campaign to improve safety at sea is the need for all of us who go down to the sea in ships, subconsciously to think about safety whenever we embark. If by reading the "Lessons" a thought is triggered, a debate started or a procedure changed that ultimately enhances safety awareness, then my aim has been achieved.

This issue introduces the "naming of ships" concept. Contrary to expectation this intention has been warmly welcomed. In one or two instances, however, ship names in this edition have been omitted from some of the older reports where guarantees were given that there would be no publicity. In future any accident investigated by the MAIB where useful lessons can be learned, may result in the basic circumstances being published in the Safety Digest. Those involved will be informed of the intention to do so. The one exception to naming a vessel is when the report evolves from a "near miss" incident. In these circumstances the anonymity of the vessel concerned will be guaranteed to encourage others to render such reports. Much can, and should, be learned from these incidents.

The MAIB receives, on average, between six and eight incident reports each day. They cover the entire range of problems encountered. Ships are damaged and, occasionally, lost; people are injured and sometimes, very sadly, killed. MAIB inspectors work extremely hard to identify both the initiating and underlying causes. We also try to identify trends so that remedial measures can be put in place, but our overriding conclusion is that well over 90% of marine accidents are caused by human failure. Conventional wisdom would have us believe that those responsible for accidents are invariably those who initiate the causal action. Accident analysis will nearly always reveal that they would not have happened had certain preventative measures been in place, often long before the event.

The accidents featuring in this edition of the Safety Digest draw attention to a cross section of recent incidents and invite readers to absorb both the obvious lessons and reflect what might have been done to prevent them. While our published accident reports normally attract the attention of officials, companies, lawyers, those most intimately involved and, sometimes, the media, the Safety Digest is directed primarily at the man or woman at sea. If he or she can learn something from just one of these reports, an accident might be prevented or a life saved. We encourage seafarers from every part of the maritime spectrum to read it. We also hope they will contact the Branch and ask us to send them a copy. It is distributed free of charge.

In my introduction to each section I have focused on one or two issues that cause me particular concern at present.

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COASTER COLLIDES WITH FISHING VESSEL

Narrative

On 28 July 1997 the 3,700 GT Antigua and Barbuda-registered feeder containership *RHEIN MASTER* was on passage from Dublin to Southampton. It was a dark, clear night and she was about 25 miles north of the Land's End Traffic Separation Scheme at 2300. She was on a course of 181⁰ and making good a speed of 14 knots.

At the same time the 22.75m Newlyn-based beam trawler *ANNELIESE* was fishing on the grounds some 20 miles to the north of the Land's End Traffic Separation Scheme. She was showing navigation lights for a vessel engaged in fishing, and deck working lights.

Onboard the containership, the second officer took over the bridge watch from the chief officer at 2300. His primary aid to navigation for position fixing was GPS. One of his two radars was in use. During the watch handover he was made aware of a number of vessels in sight and, to assist him in keeping an effective watch on the bridge, a lookout was posted.

At about 2330, ANNELIESE was making good a speed of 3.5 knots and steering due east with two other fishing vessels nearby. The skipper, on watch in the wheelhouse, observed the navigation lights of an approaching merchant ship nearly two points forward of his port beam at a range of about six miles. He continued to monitor her progress and realised she would pass very close unless she altered course. He assumed she would alter course to starboard and pass round his stern. He therefore maintained course and speed.

Meanwhile onboard *RHEIN MASTER*, the second officer prepared to plot a position taken from the GPS. He was satisfied with the traffic situation but had apparently failed to see any fishing vessel on his starboard bow either visually or on radar.

As the range closed, *ANNELIESE's* skipper became concerned by the oncoming merchant ship which gave no sign of altering course or speed. When the two vessels were very close he realised a collision was unavoidable unless he took action to prevent it. He put the engine astern but was too late and the stem struck the starboard bow of the merchant ship.

RHEIN MASTER's second officer was, in the meantime, totally oblivious that anything untoward had occurred until, to his surprise, he saw the lights of a fishing vessel suddenly emerge from behind the second bay of containers forward of the accommodation and pass close down the starboard side. He assumed the lights of the other vessel had just been switched on.

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Apart from damaging her bow and buckling some rails, the fishing vessel remained relatively intact. The skipper did, however, suffer severe bruising from being thrown to the deck by the shock of the collision.

RHEIN MASTER made radio contact with the fishing vessel, ANNELIESE, and established that assistance was not required.

ANNELIESE was escorted to harbour by another fishing vessel, and the containership continued her passage to Southampton.

The Lessons

 Why did these two vessels collide at night in good visibility? There were two fundamental reasons: RHEIN MASTER's officer of the watch failed to keep a good lookout and ANNELIESE's skipper failed to take effective action in accordance with Rule 17 of the International Regulations for Preventing Collisions at Sea:

"When, from any cause, the vessel required to keep her course and speed finds herself so close that collision cannot be avoided by the action of the give-way vessel alone, she shall take such action as will best aid to avoid collision."

- 2. The failure of both the containership's officer of the watch and lookout to see the fishing vessel is inexplicable. Keeping a good lookout at sea is the bridge watchkeeper's most important function. It must be done conscientiously with a sensible division between monitoring radar displays, keeping a good visual lookout and undertaking other essential tasks such as fixing the ship's position. In good visibility, radar echoes should be correlated with the visual picture. Lookouts must not be distracted from their prime task and should use binoculars. Those entrusted with keeping a lookout should vary their position on the bridge to ensure they cover any part of the horizon obscured by masts or containers. Eyes must be night-adapted (and on a very dark night, watchkeepers should develop the technique of looking two or three degrees above the horizon to help them pick out dim or distant lights).
- 3. Effective radar watchkeeping is crucial. Officers should know the characteristics and limits of their sets and have an instinctive feel for achieving the optimum performance in the prevailing conditions. Range scales should be varied with, under normal circumstances, at least one display on long range. When another vessel is sighted or detected, the watchkeeper has one overriding priority: to determine whether risk of collision exists. ARPA should do this automatically but the conscientious watchkeeper will mentally rehearse the time-honoured paragraph in the "Rules" which states, with crystal clarity, that "such risk shall be deemed to exist if the compass bearing of an approaching vessel does not appreciably change".
- 4. ARPA, in the right hands, is an outstandingly successful tool for preventing collision at sea but the use of radar must never detract from traditional

skills. The human eye is still the most effective watchkeeping aid, and the modern officer must never assume that 20th-century technology will make up for any shortcomings on his part. Eyeballing is, with constant practice, an effective and reliable skill. Shipmasters of old could accurately judge distances by eye, inclinate on other vessels and mentally calculate closest points of approach. There is ample evidence to indicate that these traditional skills are not as widely practised as they once were but, when properly used, they still make a major contribution to safety and should not be neglected. They were based on 100% concentration, an ability to both look and SEE things, and an instinctive use of the compass to assess bearing movement.

5. Watchkeepers in the right of way, or stand-on, ship should never assume the give way ship is keeping an effective lookout or that she will act in the way required by the Rules. She should of course do both, but the onus of responsibility for establishing whether risk of collision exists is a shared duty and is just as important in the stand-on vessel. If risk of collision cannot be avoided by the avoiding action of the give-way vessel alone then the stand-on vessel must take appropriate action in sufficient time to be effective. Failure to do so, as in this case, may well lead to collision.

Note

As Thucydides is alleged to have said "Collision at sea can spoil your entire day".

OIL TANKER DRAGS ANCHOR AND GROUNDS

Narrative

The 16,000 GT tanker SANTA ANNA proceeded to Torbay anchorage in ballast to await orders. She embarked a pilot who selected a suitable anchorage clear of two other large vessels already at anchor. The position was agreed by the master and the vessel let go the port anchor with seven shackles in a water depth of 10 metres without incident. The wind was from the south-west, Force 3, the holding ground was good and the nearest land was one mile to the north.

The vessel remained at anchor over the next four days, during which time the wind remained from the south-west and did not increase above Force 5. An officer and a seaman maintained a continuous anchor watch throughout.

On the fourth day, 1 January 1998, the master received a weather forecast indicating the wind would increase to Force 6 to 7 and perhaps gale Force 8 from the south-west during the next day. He warned his bridge watchkeeping officers to be especially vigilant and instructed them to call him and the engineer officers if they suspected the vessel was dragging. The engines were available for use within ten minutes and this was thought adequate.

As had been forecast, the wind increased steadily on the fifth day and by midday was south-west Force 7. The master was aware of the situation and during his frequent visits to the bridge he repeated his orders to the watchkeeping officers that they should remain vigilant. The wind strength continued to increase beyond that forecast and by about 1500 had reached Force 9.

At 1540 the watchkeeper became aware the vessel was moving but was unsure whether she was just swinging or had started to drag. He plotted her position and confirmed the latter. Following instructions, he notified the master and the duty engineer immediately. Bridge and engine room teams were mobilised and the chief officer and bosun went forward to stand by the windlass. When the master arrived on the bridge he found the vessel had moved 1.2 cables from her original position. The main engines were available under bridge control within ten minutes, at 1555, but by this time the vessel was dragging at about two knots towards the shore. The master immediately put the engines ahead and ordered the chief officer to start heaving the anchor.

During the next 15 minutes it was only possible to shorten in by two shackles of cable despite using full power on the engines to help. Meanwhile the drift towards the shore continued. Just before she grounded the master attempted to regain control of the vessel by going full astern in the hope that the stern would come up into the wind. This manoeuvre was unsuccessful and the propeller was stopped just before she took the ground off Thatcher Rock at 1600.

At 2100 the large fishing vessel *MARBELLA* managed, with the help of local boats, to connect a line and hold *SANTA ANNA*'s bow clear of the shore. The Coastguard tug *FAR MINARA* arrived on scene at 2115. A tow line was made fast and *SANTA ANNA* was pulled clear and into safe water at 2228.

There was no pollution and there were no injuries. SANTA ANNA did, however, suffer extensive bottom damage.

The Lessons

- 1. This incident demonstrates, yet again, the power of the wind and sea.
- 2. Even the most sheltered anchorage has its limitations in strong winds and this incident demonstrates the effect of south-westerly Force 9 winds on a ship at anchor in Torbay which "affords good anchorage, sheltered from W winds".
- 3. When the weather deteriorated beyond that forecast, the master should have appreciated that additional measures were necessary to ensure the safety of his ship; he was obviously aware from his precautions that his ship could drag in the strong winds. Those mariners who have experienced dragging an anchor will need no reminding that the rate of drift downwind can be frighteningly fast. In this incident it was assessed as two knots. The master would have been well advised to have had both engines running ready for immediate use and perhaps propelling at slow speed at the height of the storm. He should have considered paying out more cable, letting go the second anchor or leaving the anchorage to ride out the storm at sea.

ENGINE ROOM FIRE IN GENERAL CARGO VESSEL

Narrative

The 1970 Russian-built, 2,740 GT general cargo vessel *MARIA* had been lying alongside at Shoreham for several days discharging her cargo using shore cranes.

MARIA was fitted with a "dead front", open back switchboard which was caged to prevent unauthorised access. Early one morning, when only one generator was on load, the engine room lights started to flicker, and smoke was detected in the vicinity of the main switchboard. The generator breaker was "tripped" and the diesel generator shut down.

The electrician went into the engine room to locate the source and realised that there was a fire in the back of the switchboard. He attempted to unlock the switchboard cage to find the seat, but thick smoke forced him to retreat to the accommodation. The second engineer, wearing a SCBA set and lifeline, entered the engine room and, using a CO₂ extinguisher, put the fire out. Finding no further evidence of fire or heat build-up, he returned to the main deck and reported the fire was out.

Although the emergency lights were on, the vessel's radio sets were temporarily unserviceable. Those onboard decided the only means of calling the emergency services was for the chief officer to walk to the nearby pilot station to raise the alarm

Meanwhile smoke clearance procedures were initiated using all available doors, skylights and deck openings. Within ten minutes, the smoke had cleared sufficiently to enable a normal entry into the engine room to be made.

Shortly afterwards the emergency services arrived and confirmed the fire was out. The electrician was sent to hospital for a check-up.

This switchboard was in three sections, each being connected by manually operated bus-bar connectors consisting of a knife type switch encased in a metal box and operated from the rear of the switchboard. The fire had started in one such connection switch and spread to another. Looseness in the bus-bar connecting mechanism allowed movement between adjacent faces of connecting bus-bars. This in turn led to arcing and the ignition of dust and oil particles in the immediate vicinity, which provided sufficient fuel for smouldering combustion to continue for some time.

The Lessons

 Switchboard equipment should be inspected regularly according to manufacturers' recommendations or maintenance procedures. Connections should be systematically checked for good connecting surfaces and tightness.

- 2. Switchgear should be cleaned at regular intervals and any build-up of oil saturated dust removed. All contact surfaces must be kept clean and dry.
- 3. Fire teams should consist of at least two people, one to fight the fire, the other to provide safety back up in the event of difficulties.
- 4. Instructions and name tags on the principal items of machinery and associated drawings need to be in a language clearly understood by all crew members.
- 5. Duty watchkeepers in port should make themselves familiar with the procedures for calling the emergency services, including the location of the nearest shore communication point.

CREW MEMBER LOST OVERBOARD FROM A SMALL COASTER

Narrative

A small general cargo vessel, *BURHOU I* of 674 GT, was on passage from Cherbourg to St Helier, Jersey, with a full cargo of marina pontoons stowed in the hold and on top of the hatch covers. Five crew members including the master were onboard. It was daylight; the wind was west-south-westerly Force 5 and moderate, confused sea was running.

Each pontoon was 12 metres long, 2.5m wide and 0.75m deep. Those stowed as deck cargo were stacked up to four high, with the three top layers secured together with nylon binding. The whole deck stowage was secured with a combination of ratchet straps and chains. At the forward and after ends of each batch, ratchet straps had been led diagonally across the ship from the corners of the top three layers and made fast to securing points, either on the deck or on the hatch covers. Only the two extreme forward and after ends of the bottom layer had been secured.

Once past Cap de la Hague, the master chose not to take the direct route to St Helier, but made for the Big Russel channel between the islands of Sark and Herm. Had he taken the direct route to Jersey, the seas would have been on the beam. By taking the indirect route, the seas were on the starboard bow, making the movement of the ship more comfortable.

Shortly after leaving the channel, the ship encountered confused seas. On the bridge, the master and mate noticed that the bottom layer of pontoons of the after and amidships batches had moved to port by about 300mm. The mate and the two seamen went on deck to tighten the ratchet straps. As no seas or spray were being shipped, waterproof clothing and lifejackets were not worn.

One seaman climbed onto the hatch on the starboard side to tighten the straps of the forward end of the after batch of pontoons. He was standing in the small space created by the pontoons that had shifted and was observed by the mate, who was walking forward. The mate then crossed to the port side, where the second seaman was already working. At about this time the ship began to roll more heavily causing the pontoons to shift again.

Moments later, the master heard a shout and, looking out of one of the aft facing windows of the wheelhouse, saw a seaman in the sea astern of the ship waving his arms above his head. The master moved the engine control to full astern, went to the bridge wing and shouted to the remaining two on deck that there was

a man overboard. The master returned to the wheelhouse to call Guernsey Radio on the VHF set. He then put the engine to full ahead and the wheel hard-a-port.

The mate and the seaman went to the stern to keep the master informed of the man overboard's position as the ship turned to port. Then, with the man on the port bow, the seaman took a lifebuoy and went to the fo'csle to throw it to him as the ship approached. When the man was about 200m ahead of the ship, a wave passed over his head. He was not seen again.

An intensive air and sea search was mounted without success.

The height of the hatch top is 1.5m from the deck and the coamings are 1.5m from the bulwarks. Had the seaman fallen off the hatch, he would have landed on the deck inside the bulwarks. It is possible that, as the pontoons shifted to starboard, the space in which he was standing became smaller. Faced with the prospect of falling to the deck and probably being badly injured he may have decided to jump over the side instead. No-one saw him fall overboard.

The Lessons

- 1. The loss of this seaman's life stemmed from a failure to secure cargo securely before proceeding to sea. The bottom layers of the after and midships batches of pontoons should have been bound together with the upper three layers, to form an integral unit.
- 2. No matter how benign the sea conditions may seem, every precaution should be taken to ensure people are properly dressed before working on deck on a potentially hazardous task, such as securing a shifting cargo. The wearing of lifejackets is always a sensible precaution. Had the seaman been wearing one on this occasion his chances of survival would have been significantly greater. Once seamen become used to wearing lifejackets they need no further directive, it becomes second nature.
- 3. Those in charge on deck should assess the risks and foresee hazards not immediately apparent to subordinates. Standing in a small space created by a cargo that has just shifted is an obvious risk; the loose pontoons could have moved back with the next roll, and probably did. The seaman found himself in a vulnerable position as the ship could, and did, lurch more than usual. He was standing relatively high above the deck and close to the ship's side allowing him no safe means of escape.
- 4. Man overboard at sea, especially in rough conditions is a master's nightmare. Two other considerations should apply; maintain the casualty in sight at all times and recover him with the utmost speed. Several sources predict that the survival time in 138°C (the sea temperature at the time of the accident) for a person wearing working clothes is just over an hour. So much for the theory. In MAIB's experience, based on the analysis of several accidents, survival time is measured in minutes. The shock of hitting cold water must never be underestimated, while the energy

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expended in keeping the head above water exhausts even the fittest individual very quickly. The wearing of working clothes and shoes, and without any form of buoyancy aid, only aggravates the situation. It is therefore imperative that anyone who falls overboard, for whatever reason, must be rescued from the water with the utmost speed.

- 5. As soon as it is known that someone has fallen overboard a lifebuoy should be released, ideally one with a smoke marker. If the action is very quick, the casualty may be able to swim to it. Failing that, it provides an additional datum on which to focus, should man become lost from sight.
- 6. Keeping an eye on the man is imperative. One person should be given the task of maintaining a watch on him at all times. Once the eye has been taken off the casualty it can become extremely difficult to relocate him. It helps if this can be done from an elevated position such as a bridge wing. By watching the direction of the lookout's gaze, the master will have a good idea where to steer until such time as he sights the casualty himself.
- 7. In a vessel with minimum manning, pre-planning the reaction to such an event is crucial. While someone is manoeuvring the ship and a second is maintaining a watch, the others must prepare to recover the person from the sea. This is the most difficult part of all. The casualty will be very heavy, will almost certainly be exhausted and unlikely to be able to help himself. He may be unconscious or even dead. No two ships will have the same procedure for man overboard recovery; the important thing is to have one. The difficulties are often underestimated.

LOSS OF LIFE CLOSE INSHORE

Narrative

ANTRIM FISHERIES IV, an open top fishing boat, had been launched down the slipway at Portrush, Northern Ireland, in choppy conditions and was approximately 25 metres offshore when a series of large waves struck on the beam and rolled her over. All three crew were thrown into the sea. Two regained their feet on a sandbank almost immediately and started to wade ashore while the other, who was somewhat older, surfaced by the upturned boat but could only manage to cling onto it. One man turned back to assist him while the third continued to wade ashore.

When only metres from the shore, this third man was swept off his feet in a fierce undertow and dragged into deeper water. He surfaced briefly but was swept out to sea and drowned.

The other two managed to hang onto the boat until, with the aid of a piece of wood and a lifebuoy, they managed to get ashore.

The boat was recovered the same day with slight bottom and frame damage, but with the lower half of the rudder post broken. Despite an extensive search by a Police Diving Unit, the body of the other young man was not recovered until some time later.

The Lessons

- 1. No matter how close inshore fishing boats work, or the number of times that launching has been carried out, accidents can and do happen. In this case, the victim was wearing the proper wet weather gear but *not* a lifejacket.
- 2. The effect of tide changes and rough weather often results in unusually strong local currents and confused sea states. These currents are not always visible and frequently flow close to the bottom. Large waves at the surface and strong currents on the bottom make for a very dangerous combination, particularly close to any rock formation.
- 3. Working close to the shore can introduce a false sense of security. Being able to swim is an advantage but even the strongest will find swimming in choppy seas when fully dressed extremely difficult and very, very tiring. The arguments for not wearing lifejackets in the fishing industry are well known but are quite meaningless when trying to explain to the next-of-kin that a life could have been saved had one been worn. The wearing of a lifejacket greatly increases the chances of survival.

DISCHARGED EPIRB AND VHF BATTERIES CAUSE PROBLEMS

Narrative

The 20-metre wooden fishing vessel *ALLIANCE*, with a crew of four, had been working only sporadically over several days during February due to poor weather conditions. Before the incident the vessel was in Amlwch, Anglesey, taking shelter from the bad weather.

Conditions eventually improved and the vessel left port at 0530 hours for passage to her home port to land her fish. At 1000 hours the high level bilge alarm sounded. An inspection of the engine room confirmed the presence of a significant quantity of floodwater.

Over the next few hours both powered and hand bilge pumps were used with various degrees of success in controlling the ingress.

By early afternoon the skipper recognised he needed assistance. Efforts to broadcast a MAYDAY were unsuccessful due to lack of battery power for both main and portable VHF sets. Judging it as the only remaining method of summoning assistance, the skipper activated the EPIRB and placed it in the sea alongside the vessel at 1500 hours. At about this time the engine driven bilge pump ceased to function and the main engine stopped; the drive belt to the alternator had slipped off earlier.

The first signals from the EPIRB were detected at 1529 hours but confined to 121.5MHz; a reliable position for the EPIRB was not obtained until 1708 hours. SAR operations were initiated and a MRCC accepted responsibility for co-ordinating operations at 1745.

The skipper and crew of *ALLIANCE* transferred to an RNLI lifeboat at 2010 hours and the vessel finally sank at 0423 hours the following morning. There was no loss of life.

The Lessons

1. The start of SAR operations was delayed because the EPIRB failed to transmit on 406MHz. This was due to its battery having insufficient power to operate on this frequency, which requires a higher output than does 121.5MHz. In turn, the lack of battery power was due to the EPIRB being two years overdue for service and battery replacement. EPIRBs must be serviced at recommended intervals to ensure their correct functioning.

2. The vessel's electrical system was effectively disabled very early in the incident. It is vital that all components of electrical systems, generators and batteries are maintained in good condition so that electrical power is available both for normal and emergency conditions.

3. ALLIANCE carried a portable VHF set, as part of her LSA, together with a suitable battery charger. The VHF's battery was allowed to discharge, rendering this important item useless at the time it was needed most. It is clearly vital for VHF sets to be maintained ready for immediate use: otherwise they have no value.

YACHT OWNER LOSES LIFE AFTER FAILING TO WEAR SAFETY HARNESS

Narrative

The 8.5-metre bilge keel sailing cruiser *ZOE-ANNE* was to be delivered from Chichester Harbour to Dartmouth for a refit. The owner's sailing experience was limited, so a professional yachtmaster was used to carry out the delivery, accompanied by the owner.

The yacht was checked before departure in the late afternoon in November and judged to be seaworthy for the proposed passage. The necessary safety equipment was onboard. The weather forecast was for south-westerly winds 5 to 6 increasing to 8 to 9 the following afternoon. A passage plan was completed and although the yachtmaster realised bad weather was forecast he was confident there were a number of safe havens available en-route should they be needed.

The passage from Chichester Harbour and through the Solent was uneventful in a south-westerly wind force 4 to 5, but when they reached the western end of the Solent near Hurst Point at 2230 hours, the weather forecast warned of imminent gales, so they decided to turn back. Rather than make for shelter in Lymington, Yarmouth or Southampton, all of which were close by, the owner preferred to return to the yacht's home port of Chichester. The return trip passed without incident although the yachtmaster suggested to the owner he should don a lifejacket and harness on several occasions. The advice was ignored.

ZOE-ANNE approached Chichester Bar between 0430 hours and 0500 hours the following morning. It was very shortly after high water and the south-going ebb had just started.

The wind had increased noticeably and the crew, particularly the owner, were tired. The windspeed was recorded at Solent Coastguard at 0500 hours as south-westerly 38 knots with gusts to 47 knots. Neither man showed signs of seasickness. Once again the yachtmaster advised the owner to put on a harness. He went below but emerged several minutes later not wearing any safety equipment.

Two to three boat lengths north of Chichester Bar beacon, the boat was struck on the port quarter by a large wave estimated to be 6m high. The yacht was knocked down to almost 908, and the owner thrown overboard. The yachtmaster threw a dan-buoy towards him and tried, unsuccessfully, to start the engine. The owner could not be recovered. A MAYDAY call was made at 0514 hours and the emergency services were alerted. The yacht ran aground on a groyne at Eastoke Point at the entrance to Chichester Harbour and the yachtmaster was able to scramble ashore. The owner's body was found an hour later. He could not be revived.

When the yacht was examined later, five lifejackets and harnesses were found stowed on board.

The Lessons

 The most significant feature of this incident was the lack of clarity as to who was in charge. Only one person can be the skipper. He must take full responsibility for the safety of vessel and crew and must have authority over all those onboard, regardless of status.

- 2. The owner committed a serious error of judgment in choosing not to wear a lifejacket or safety harness. The owner's inexperience and an incomplete awareness of the hazards were probably contributory factors. When sailing in a gale on a November night in a small yacht, safety equipment and the need to secure oneself to the vessel are essential requirements.
- 3. Conditions at the entrance to Chichester Harbour or indeed any other shallow harbour approach can be extremely hazardous in gale conditions.
- 4. Seeking a safe haven in a Solent port or even remaining at sea until conditions had improved would have been a more sensible and safer option.