

Departmental investigation
into the fatality aboard the
containership
MATILDA BAY
in the Great Australian Bight
on
17 August 1996



Report No 97



**Transport and
Regional Development**

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Navigation Act 1912
Navigation (Marine Casualty) Regulations
investigation into the fatality
aboard the containership
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Inspector of Marine Accidents
Marine Incident Investigation Unit
Department of Transport and Regional Development
P O Box 594
CANBERRA ACT 2601

Phone: 06 274 7324
Fax: 06 274 6699
Email: MIIU@dot.gov.au

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Sources of Information

The Master, officers and crew of *Matilda Bay*

P&O Swire Containers Ltd.

The Office of the Coroner, Perth, W.A.

Summary

On the morning of 17 August 1996, the 25,093 gross tonne Hong Kong flag container ship Matilda Bay was crossing the Great Australian Bight, on passage from Melbourne to Fremantle in Western Australia. At 0800, the ship was in the position 37°22'S, 131°50'E, approximately 240 nautical miles WSW of Kangaroo Island.

At about 0800, the Second Engineer reported to the bridge that sunlight could be seen coming into the forecabin through the small “booby” hatch on the forecabin head. The Chief Officer, after leaving the bridge, made his way forward along the main deck to investigate, taking the Bosun and two Able Seamen (ABs) with him. He had not advised the Third Mate, now on watch on the bridge, nor anybody else, that he was going to the forecabin. He had no radio with him.

The four men went onto the forecabin where they found the lid of the booby hatch had been torn off. Attempts to replace it proved fruitless, as it was distorted, so the Chief Officer sent the Bosun to get materials with which to improvise a hatch cover. Shortly after this, a green sea swept the forecabin, carrying one AB right over the top of the windlass and the other AB against the front of it. The Chief Officer was swept underneath the windlass.

The AB who had been swept over the windlass, stunned, called out to the other two who did not reply. He, thinking they had been washed overboard, made his way off the forecabin and told the Bosun what had happened. The Bosun sent the duty AB to the bridge to inform the Officer of the Watch of a man overboard situation.

The Officer of the Watch commenced a Williamson turn and sounded the “man overboard” alarm. Shortly before 0900, while the vessel had

started searching for the men believed overboard, the other AB, recovering on the forecastle, found the Chief Officer under the windlass. Making his way aft he told the Bosun that the Chief Officer was still on the forecastle. The Chief Officer was stretchered aft to the ship's hospital. He had suffered severe head and chest injuries and a broken leg. It was found later that the two ABs had not sustained serious injury.

At 0945, the MRCC in Canberra was contacted asking for medical advice and for the nearest port for a medevac of all three. Those tending the Chief Officer were unable to stem the profuse bleeding from his head injuries. In spite of prolonged CPR and the administering of oxygen, all vital signs had disappeared by 1330 and it was concluded that he had died at some time before that. The ship resumed its course to Fremantle where it arrived on the evening of 19 August.

The incident was investigated by the Marine Incident Investigation Unit on behalf of the Hong Kong Marine Department.

Narrative

Matilda Bay

Matilda Bay is a Hong Kong flag, 7-cell, fixed guide, containership of 25,093 gross registered tonnes having a capacity for 1410 TEU¹ containers including 562 refrigerated units. It has a length of 214.84 m, a beam of 30 m and a moulded depth of 16.7 m. The main engine is a 9 cylinder Mitsui B&W two-stroke single-acting diesel engine of 25,156 kW driving a single screw and giving the vessel a maximum speed of 23 knots. The vessel is classed with Lloyd's Register of Shipping as 100A1.

The ship was built in 1970 in Kobe, Japan, by Mitsubishi Heavy Industries Ltd. It is owned by P&O Swire Containers Ltd. and is operated by the China Navigation Company Ltd. Both of these companies are based in Hong Kong.

As a container vessel, *Matilda Bay* is employed mainly in voyages between various Australian and New Zealand ports, Singapore, Colombo, the Red Sea, and a number of Mediterranean ports . It has a crew of 29 consisting of the Master, three deck officers, seven engineer officers, an electrical officer, a Bosun, six seamen, three fitters, three motormen, two cooks and two stewards. At the time of the incident, the ship was also carrying three deck cadets and two engineering cadets.

The Master was a New Zealand national and the Chief Officer was Malaysian, while the remainder of the officers, with one exception, were British. The crew were mostly from the Philippines.

The Incident

On the morning of 17 August 1996, Matilda Bay was crossing the Great Australian Bight, on passage from Melbourne, where it had departed at 1700 on 15 August, to Fremantle in Western Australia.

At 0720 the Master had arrived on the bridge to discuss routine matters, concerning the running of the ship, with the Chief Officer and to assess the weather conditions. During the night a front had passed through and there had been strong winds and heavy seas necessitating a reduction in engine speed from about 81 to 78 rpm to reduce the pitching. The barometer had risen, from 1005.2 hectapascals the previous evening, to 1010.9 hectapascals and the Master considered that, as the weather was beginning to moderate, the conditions did not warrant restricting access to the weather decks.

At about 0750, the Electrician set out to check the refrigerated containers. He made his way from the machinery control room, via the main switchboard space, to the port underdeck passageway, from where he could access the holds. As he entered the underdeck passageway he noticed some water against the door sill and a small trickle which was flowing from forward to aft, along the passageway, with the trim of the ship. He called the Second Engineer from the machinery control room. The Second Engineer followed the trickle of water forward, past the open watertight door in the collision bulkhead, up to the forecabin space.



As he arrived in the forecastle, he saw a bright shaft of light coming through the small “booby” hatch on the forecastle head and water on the deck of the Bosun’s store. Assuming the hatch had been left open and without examining it closely, he returned to the machinery control room and telephoned the bridge to advise the Chief Officer of the situation.

Weather

At 0800, the ship was at the position 37°22’S, 131°50’E, approximately 240 nautical miles WSW of Kangaroo Island. The wind was from the south west, force 7, producing a very rough sea and there was also a long heavy swell running from the west south west. The vessel however, on a course of 280° (true) and making a speed of approximately 17.5 knots, was riding the conditions well, although occasionally shipping spray over the forepart. The crew were in their changing-room having jobs allocated to them by the Bosun and shortly afterwards they started working around the ship, several chipping and painting in the vicinity of the port gangway on the main deck. Another commenced sounding all of the ballast tanks around the ship.

The report to the bridge

The Third Officer was on watch, having arrived on the bridge at about 0755 to relieve the Chief Officer who had stood the 0400-0800 watch. The Chief Officer and the Master were still on the bridge when, between 0800 and 0805, the Second Engineer telephoned from the machinery control room about the open booby hatch. The Chief Officer answered the call and the Second Engineer told him what he had found. The Chief Officer was, initially, reluctant to believe that the hatch could have been left open but, after a lengthy conversation with the Second Engineer, indicated that he would investigate it. Shortly afterwards, having completed the hand-over of his watch, the Chief Officer left the bridge accompanied by the duty cadet. He did not mention the subject of the telephone call to anyone on the bridge

before he left. At about 0810, the Master also left the bridge and proceeded to the dispensary, where he was going to assist one of the cadets in sorting out the medical stores which had been received when the vessel was in Melbourne.

At a some time between 0810 and 0820 the Chief Officer called the Bosun and told him that there was a problem up forward which they were going to have to fix. As they passed the starboard accommodation ladder, where the crew were chipping and painting, they detailed two of the ABs to accompany them. The Chief Officer remarked to one of the ABs that he had just come from the forecandle where the booby hatch was open and seawater was coming in.

The booby hatch lid

Arriving at the forecandle, they went into the Bosun's store, so as to avoid the spray on deck, and could immediately see that the hatch-lid was open. The Chief Officer questioned the Bosun, asking him how it was that the hatch had been left open. The Bosun replied that he had closed the hatch himself but had only dogged it down "hand-tight". He then climbed the vertical ladder leading up to the booby hatch and found that the hatch-lid was missing, having been torn off. The Chief Officer and one of the ABs followed him up the ladder, while the other AB made his way back out of the forecandle and up onto the forecandle head via the port ladder from the main deck.

The weather conditions on the forecandle head at the time were described, by those who survived the incident, as "not too bad" and the vessel was shipping no seas, only the occasional shower of spray. One of the ABs, however, felt somewhat apprehensive about being in such an exposed position in those weather conditions.

The missing lid of the booby hatch was seen to be lying on top of the gipsy of the anchor windlass. In addition, mooring lines, which had been coiled abaft the windlass were strewn around the after part of the

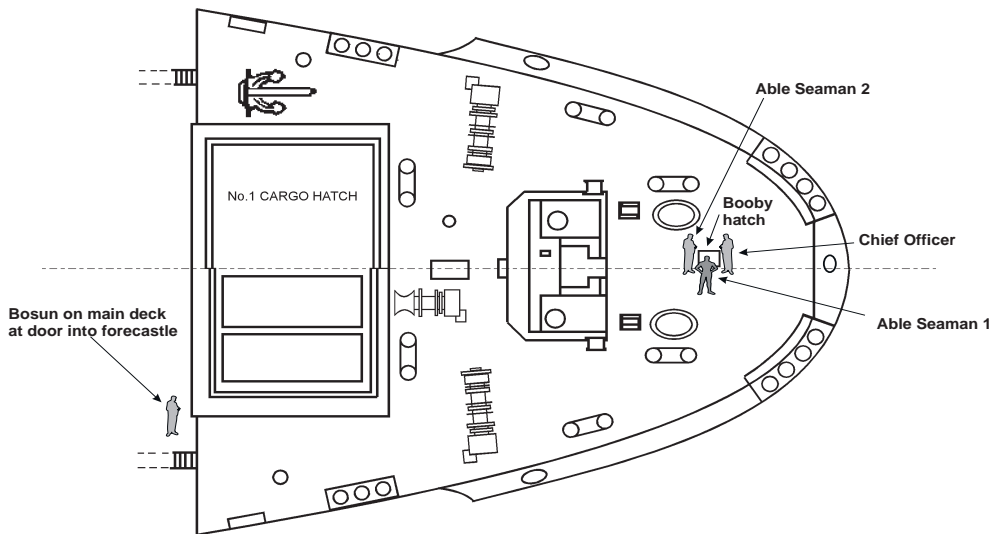
forecastle deck. The ABs, on instructions from the Bosun, set about resecuring the mooring lines before attempting to do anything with the damaged hatch lid. Ten to fifteen minutes later, once the lines had been coiled and lashed, the Chief Officer instructed the three of them to lift the lid down from the top of the gipsy and to attempt to refit it to the hatch.

Attempted repairs

On attempting to fit the lid to the hatch, it was found that it could not be secured, the dogs all having been damaged and distorted, so the Chief Officer instructed the Bosun to get some canvas. After some minutes the Bosun returned with the canvas, but, because of the draught coming from the Bosun's store beneath, they were unable to effectively secure the canvas over the hatch. The Chief Officer was not satisfied and instructed the Bosun to get some plywood to place over the hatch. The Bosun again left the forecastle, by the starboard ladder to the main deck, to make his way into the Bosun's store. The Chief Officer then told the two ABs to secure the hatch lid, somewhere safe, underneath the windlass. The Chief Officer had noticed that the covers to the spurling pipes were not in place around the anchor cables, and there was the likelihood that water had been entering the chain lockers. He instructed the ABs to also fit the covers.

The wave

As they were getting ready to lift the hatch lid once more, one of the ABs was facing to port, the other facing him, to starboard, while the Chief Officer was standing forward of the two, watching them, and facing aft. (See diagram of forecastle, page 12). The AB facing to port felt the bow lifting and, looking up and seeing a big wave approaching, shouted out "very big wave is coming!" He crouched down grabbing hold of the forestay. The bow dug into the wave and the force of the sea coming over the forecastle tore his grip from the



MATILDA BAY - Forecastle Deck
 Showing positions of personnel immediately before wave struck

forestay and carried him bodily over the top of the anchor windlass, throwing him against the centre-line mooring winch immediately forward of no.1 cargo hatch. The other AB was swept against the front of the anchor windlass on the port side. The Chief Officer was swept underneath the windlass.

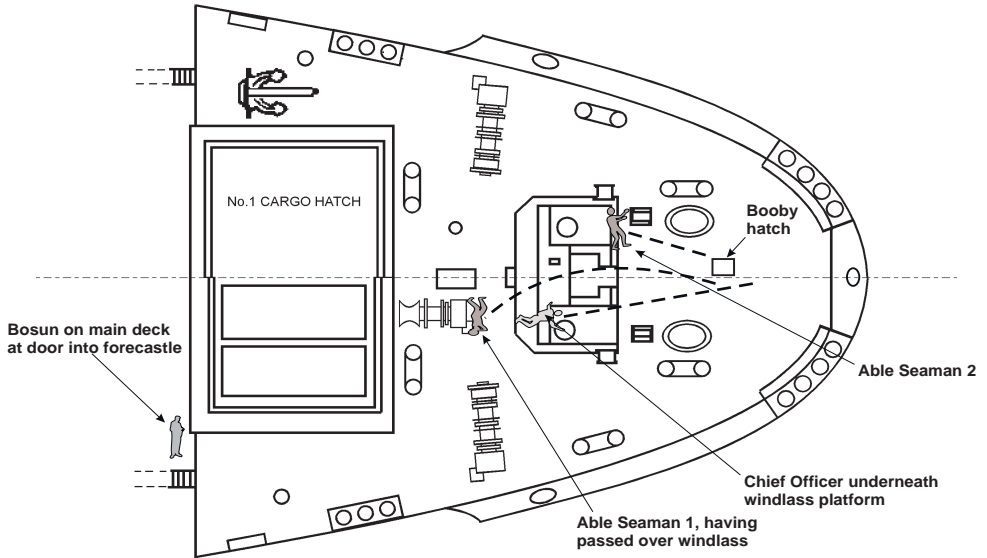
At approximately 0825, the Master, in the dispensary, had felt the ship shudder as it struck the wave and, on the bridge, the Third Mate had felt the bow rise then crash down violently into the swell. The vessel was completely enveloped in spray which reached as high as the bridge windows. The Bosun had just reached the starboard door into the store, when he felt the vessel dig into the swell and, from the security of the break of the forecastle, saw the seas pouring from the forecastle deck.

Aftermath

The AB who had been swept over the windlass found himself lying in front of the centre mooring winch in a state of shock. He was bruised and stunned, his head having struck some part of the windlass. As he got up, he could see no sign of either the Chief Officer or the other AB who had been on the forecandle with him. He made his way as fast as he could down the starboard ladder to the main deck, fearing that a second wave may strike at any time. At the bottom of the ladder he encountered the Bosun. He shouted at the Bosun that the Chief Officer and the other AB had been washed overboard then, in pain from badly bruised legs and with blood coming from his head, he sat down at the bottom of the ladder. Having twice asked the AB for confirmation that the Chief Officer and the other AB had been washed overboard, the Bosun told him to go back to the forecandle to check that the two missing men were not still there. The AB, being afraid to go back, protested to the Bosun, and pointed out that he was injured and his head was bleeding.

The Bosun, with the injured AB following him, was proceeding aft when a second wave struck the ship. As they reached the vicinity of the starboard accommodation ladder, the Bosun instructed the duty AB, who had been working there, to relay a message to the bridge about what had happened.

Meanwhile, the other AB, in front of the windlass, had found himself lying on the deck in considerable pain from injuries to his legs. He shouted several times to the Chief Officer to help him but, receiving no reply, then tried shouting for help from the other AB who had also been on the forecandle. Again there was no reply. After shouting for a while, he sensed that a second wave was coming, as the bow again lifted. Crying and fearing for his life, he held on tightly to the deck hydraulic pipes.



MATILDA BAY - Forecastle Deck

Showing positions of personnel immediately after wave struck

Chief Officer located

The motion of the vessel however, subsided, and soon afterwards, being unable to stand, he started to slowly crawl across the forecastle towards the starboard ladder. As he reached the starboard side of the windlass he saw the Chief Officer lying underneath the windlass operating platform. He crawled over to him and with his head close to that of the Chief Officer, asked him if he was alright. Receiving no answer and, believing that the Bosun was nearby, as he had only gone to get some plywood, the AB again started shouting for help. He expected the Bosun to return at any minute but, after what he estimated as some twenty minutes, he left the Chief Officer and crawled over to the ladder leading down to the main deck. On reaching the main deck, he forced himself to stand and made his way along the starboard side where, from the vicinity of No.2 hatch, he saw the Bosun near the accommodation ladder preparing a lifebuoy. He shouted again to the Bosun, telling him come immediately, as the

Chief Officer was lying under the windlass with much blood on his face and in a bad condition.

The Bosun was reluctant to go forward, believing that nobody was there. The rest of the crew had gone to the bridge as lookouts but, being assured again by the distraught AB that the Chief Officer was under the windlass and badly injured, he went forward. He found the Chief Officer and tried talking to him but received no answer. Having waited for about five minutes, and as nobody else had arrived on the forecastle, he returned aft where he met one of the fitters and instructed him to get a stretcher.

The Bosun, accompanied by other members of the crew with the stretcher, then made his way forward again to the forecastle, while the injured AB went aft to the crew's changing room from where he was helped into the ship's hospital.

Events on the bridge

As the wave had struck, the Third Officer had been going about his routine watchkeeping duties. He was unaware that any of the ship's personnel were up on the forecastle head. The watchkeeping AB had been given the job of stencilling the vessel's new name on the lifebuoys around the ship, although the Third Officer had told him, on account of the weather, not to do the ones on the forecastle.

At 0830, about ten minutes after the ship had dug into the swell, the watchkeeping AB rushed into the bridge in a state of panic, babbling in a language that the Third Officer could not understand. After a few moments, however, the Cadet, a Filipino, rushed out onto the starboard bridge wing with the AB. The Third Officer, following the two and seeing them looking aft, soon understood that there was a man overboard. He asked the AB how long ago the man had gone overboard and from which side of the ship. The AB, however, did not understand what the Third Officer was asking and, still in a state of panic, was not able to make an intelligible reply.

Williamson turn

The Third Officer attempted to call the Master on the bridge telephone but, as the telephone was not working, then shouted to the cadet to go and fetch him. As the cadet left the bridge, the Third Officer ordered the AB to put the helm to “starboard 15°” to commence a Williamson turn, sounded the man-overboard alarm and made an announcement over the ship’s PA system. The announcement was heard by some of the ship’s crew but not heard by several others. As he ran to the engine room telegraph, the injured AB with the head wound came into the wheelhouse, also in a state of shock and panic. Preoccupied with the Williamson turn, the Third Mate told the AB to sit down just inside the bridge until he had things under control, when he would attend to him.

Shortly afterwards, the Master, having heard the general alarm, arrived on the bridge. The ship had turned through about 60° and the Third Officer, having advised the engine room of what was happening, was putting the helm over to hard-to-port. He told the Master of the report he had received of three men overboard and instructed others, who were arriving on the bridge, to look out from the bridge wings. The report of three men involved was shortly afterwards changed to two men and at this point some confusion set in.

The Third Officer had not been able to see anyone in the water and so had not released the lifebuoy from the port bridge wing. After pressing the “man overboard” button on the GPS, to record the vessel’s position, and advising those acting as lookouts to scan an arc around a bearing of 100°, he handed out the ship’s walkie-talkie radios and a radio network was quickly established between the officers, with the exception of the Second Officer. The Second Officer had just joined the ship in Melbourne and was not yet familiar with the routines on board. As a result, with his radio switched to the wrong channel, he could not be contacted. He soon arrived on the bridge, however, having heard the man overboard alarm.

Confusion

The Third Engineer and the Second Officer were despatched forward with a radio to investigate and clarify the situation on the forecastle. Moments later, garbled reports were received on the bridge that the Bosun had seen the Chief Officer and the AB forward. It was not immediately apparent to those on the bridge whether this meant on board or in the water, and everyone started to scan the sea in the areas of the port and starboard bow, before the Bosun shouted from the main deck that they were up forward. It was soon confirmed by the Third Engineer that, although they had not found the other AB, they had found the Chief Officer underneath the windlass. The Master called the Second Officer on his radio and instructed the party up forward to check the forecastle for a possible missing AB.

The AB with the head injury had been sent down from the bridge to find the Second Mate in order to have his wound dressed, so it was now assumed, on the bridge, that he and the Chief Officer were the two men initially thought to have been washed overboard. A little later the bridge received a telephone call from the Chief Engineer in the engine room, saying that one of the ABs who was thought to have been overboard was actually in his cabin.

Crew muster

When news was received on the bridge that three men had been involved, the confusion intensified and the Master decided to initiate a muster. After he had telephoned the engine room and the hospital, and had rung “emergency stations” on the ship’s alarms, the Third Officer took a crew list and made his way to the muster station in the alleyway on the port side of ‘E’ deck. On the way, he stopped at the hospital where he found the Bosun, Chief Cook, Second Officer and the Chief Officer who, by this time, had been brought aft by stretcher from the forecastle. The Third Officer was immediately concerned by the apparent condition of the Chief Officer and ran back to the bridge to inform the Master. The cadet was given the task of completing the

head-count while the Third Officer returned to the hospital to tend to the Chief Officer's injuries.

Once the head-count was completed, it became apparent that nobody was missing and the Master resumed course for Fremantle at full sea speed before going to check on the condition of the Chief Officer in the hospital.

Injuries

He saw immediately that the Chief Officer was in a very serious state. The two injured ABs were also in the hospital, one with bandages on his head but both talking. When asked, they told the Master that they were all right. The Chief Officer's left leg was at an unnatural angle and he was bleeding profusely from his ears and nose and from the wounds on his head. His breathing was laboured and there was a wheezing from his chest which indicated to the Master that he may have suffered chest injuries. Although to all other intents he was unconscious, his arms were thrashing around and had to be restrained to enable dressings to be applied to his injuries.

The Master instructed the Second Officer to do the best he could to staunch the bleeding, then returned to the bridge to contact the MRCC in Canberra to request assistance. The Master's call to the MRCC was made at 0947 (2347 UTC on 16 August). He requested a medevac helicopter, advising that the ship had taken a wave on board and that he had three injured men, one very seriously, needing urgent medical attention. Thirteen minutes later he was advised by the MRCC to alter course for Port Lincoln while the possibilities of a medevac were investigated. The ship accordingly altered course for Port Lincoln and increased speed to 20 knots.

Treatment

The Master then returned to the hospital for another check on the Chief Officer. The Second Officer was quite distressed that he had not

been successful at stopping the bleeding which, by this time, had soaked the bedding and, at 1130, ship's time, a call was placed to HMAS Penguin, a Naval establishment in Sydney, with a view to obtaining medical advice from a doctor on how best to treat the Chief Officer. After some delays, a doctor was eventually contacted. The Second and Third Officers had prepared a list of the injuries suffered by the three men and documented the blood pressure, pulse rate and respiration of the Chief Officer who, by this time, had been quite still for some ten to fifteen minutes and did not respond to any form of stimulus. His breathing had become shallower and slower. On account of the apparent severity of the Chief Officer's injuries, the doctor was able to offer little advice beyond administering oxygen if his breathing was difficult, to avoid the use of morphine or other drugs and to strap his legs together and raise them about 30cm.

At 1140, the Chief Officer's vital signs had weakened and he was becoming colder. The Second and Third Officers started to administer oxygen. The doctor had recommended a flow rate of 4 litres/minute, however the equipment on board was only capable of a maximum of about 1.5 litres/minute and the ship was supplied with only 2 small oxygen cylinders. The oxygen had no apparent effect.

By 1240 the condition of the Chief Officer had deteriorated further. His pulse was very weak and there was little chest movement. The Master, Second and Third Officers applied CPR for about 30 minutes, before administering oxygen again. By 1315 they were unable to detect any vital signs. At 1330, having again tried CPR and then oxygen, they reluctantly stopped. It was apparent that the Chief Officer was dead.

Resumption of voyage

Leaving the Second and Third Officers to wash and prepare the body of the Chief Officer according to the instructions in the Ship Captain's Medical Guide, the Master returned to the bridge where a message had

been received from the MRCC that a medevac was not possible that night because of the darkness and weather conditions in the area where it had been planned. The vessel did not have charts of the Port Lincoln area on board, so the Master decided that the safest course to follow was to resume the passage to Fremantle. He called the MRCC and the P&O agents in Melbourne and Fremantle to advise them of his intentions and, at 1400, the ship resumed its voyage.

Returning to the hospital about half an hour later, the Master assisted the two traumatised deck officers in placing the body of the Chief Officer in a body-bag and transporting it to the ship's refrigerated meat room, for preservation, until the vessel arrived at Fremantle on the evening of 19 August. The meat room was then locked, the cook having been previously instructed to remove enough frozen stores to last for the next three days.

Cause of death

An autopsy was carried out on the body of the Chief Officer the day after the vessel arrived in Fremantle. It showed that he had died of multiple injuries, including a fractured skull, bleeding in the brain, fractured ribs, bruising of the left lung and a fractured thigh bone in the left leg.

Comment and Analysis

Personnel

The Master had been in command of other container ships for three years before his appointment to Matilda Bay and, at the time of the incident, had been in command of Matilda Bay for a period of about five weeks. Some years before, he had sailed with the Chief Officer when the latter was a Second Officer and, as a result, held him in high regard. At that time, he had felt that he would soon become a Chief Officer and, as such, that he would be very competent. During the five weeks that they had sailed together on Matilda Bay this expectation had been realised and he had noticed that, although the Chief Officer tended to do a lot of the jobs himself, he got on well with the crew and tended to get good work from them without being overbearing.

The Chief Officer had held that rank in two other vessels before being appointed to Matilda Bay. He had completed one full voyage on Matilda Bay, a period of about three months at sea, before his death. It was felt that he had familiarised himself well with the ship and its routines during this time and he had been well regarded by the other officers on board.

The Third Mate, on watch at the time of the incident, had been employed by P&O Swire Containers for approximately three years. At the time of the incident he had been on Matilda Bay for a period of just over three weeks, although he had served on other container ships for some nine months. The remainder of his sea experience had been on tankers.

The Bosun had been on Matilda Bay for three months. It was his second voyage with the company, the previous voyage being on board a different vessel. His earlier experience, of approximately fifteen years at sea, had been with Greek shipping companies.

On board communication

When he left the bridge shortly after 0800, having completed his watch, the Chief Officer did not give any indication, to anyone on the bridge, of the fact that he was going forward to the forecandle to check on the report of the open booby hatch. In fact, nobody else on the bridge was aware of the nature of the telephone call which he had just received from the Second Engineer.

Although there is no evidence to indicate just why the Chief Officer did not inform anyone of his intentions, it is conceivable that, subconsciously, he felt the situation on the forecandle reflected on his responsibilities and the high standards that he usually maintained. This being so, he would have wanted to rectify the problem as quickly as possible and with the minimum of fuss.

The fact that he took three men forward with him, would indicate that the Chief Officer had first been to the forecandle to check on the report, without anyone's knowledge. He would not have needed to enlist help simply to close a small hatch. It is further confirmed by his comment to one of the ABs, when he said that he had just come from the forecandle where he had seen the hatch cover open and seawater coming in.

After gathering the Bosun and the two ABs near the starboard accommodation ladder to accompany him forward, he again did not inform the bridge that they were going to the forecandle. Nobody in the group was carrying a walkie-talkie radio and the result was that the

Officer of the Watch on the bridge was unaware of the fact that anyone was there. On any container ship, and Matilda Bay is no exception, there is a very restricted view of the decks forward of the bridge on account of the stack of containers (see photo, page 27) and the Officer of the Watch would not have been able to observe them walking forward. In order to allow some visibility of the water directly ahead of the vessel, containers are stacked three high in the forward three bays and four high in all bays aft of those but, even so, it is not possible to see the forecastle, at all, from the bridge (See photo page 27).

Had the Officer of the Watch or the Master been informed that the cover on the booby hatch on the forecastle head was damaged or missing, the prudent safety measures to have adopted in such weather conditions would have been to turn the ship out of the weather for the duration of the repairs, even if they were only temporary, and to ensure that radio communications were established with those on the forecastle.

Problems were encountered with the ship's telephone system both before and during the incident on account of the fact that if one telephone handset is left "off the hook" the entire exchange becomes inoperative. This had happened at least twice on the previous day when, in the heavy weather, desk-top telephones sets had fallen off the desk. The problem manifested itself again when the Third Mate tried to contact the Master after receiving the "man overboard" report.

The problem of different, or unfamiliar, languages on board a ship when the ship's complement is made up of different nationalities, was also evident during the incident. It was particularly apparent when the Filipino AB who reported the "man overboard" to the bridge could not be understood by the Officer of the Watch. It also contributed to the general confusion about how many, if any, men had been washed overboard while the Master was attempting to get an accurate

assessment of the situation in the early stages of the incident and there was general confusion for a period of about fifteen minutes. The language problem is greatly exacerbated in an emergency, such as on this occasion, when some members of the crew are in a state of panic or excitement.

The lack of communication between the Chief Officer and the bridge was a major factor in the cause of the incident and language difficulties, combined with shock, were major factors in the confusion which existed shortly after it.

Securing for sea

When the Chief Officer, the Bosun and the two ABs arrived at the forecandle, they found that the hatch cover had been torn off, the mooring lines were strewn around the forecandle and the covers were not in place on the spurling pipes. (These covers, secured around the anchor cables, prevent the chain lockers filling with water from the forecandle deck in heavy weather.)

It is evident from the above that the vessel had not been properly secured for sea after its departure from Melbourne some 39 hours earlier. The Bosun confirmed, in his comment to the Chief Officer in the forecandle, that he had done up the dogs on the booby hatch only hand-tight .

The booby hatch cover

The hatch cover (see photograph page 27) had been seen, still in place, by the Bosun the previous afternoon (16 August), but it would appear to have been torn off by the weather, when the vessel was pitching heavily, at some time during the evening. If such a hatch cover, even in an exposed position like the forecandle head, had been properly secured by tightening the dogs correctly, it would be less likely to have been torn off by seas coming over the bow. If not done up



View of windlass from forecastle head



Position under windlass platform where Chief Officer was found



View from front of windlass showing opening through which Chief Officer passed

tightly, any slight movement would allow the cover to “work” up and down each time it was hit by a sea, weakening and damaging the hinges and dogs in the process, until it was torn off. This effect would be exacerbated by the fact that the hinges for the cover were on the after edge of the hatch coaming, thus the opening faced forward - into the oncoming seas.

Information received during the investigation revealed that the same hatch cover had been torn off in similar fashion once before, about six months earlier. After that, an eyepad had been welded to the underside of the cover and a bottle-screw, with one end attached to the eyepad and the other to a rung of the ladder underneath, was used to strengthen the holding-down arrangements for the cover.

This bottle-screw had not been in place before the hatch cover was torn off during the night of 16 August, a further indication that the cover had not been properly secured for sea.

Following the death of the Chief Officer, the hatch cover was repaired when the ship was at Fremantle and it was rotated 180°, so that the hinges were on the forward edge of the coaming and the opening faces aft.

Weather conditions

At 1200Z 16 August, (2130 16 August, Central Australian Standard time), a low pressure area had its centre located roughly 900 miles to the South South East of Matilda Bay. A front with a minimum pressure of 1005.2 hectapascals had passed the vessel that evening, bringing winds from the south west at force 7. The sea state was recorded in the Log as state 6 and the swell as varying between 6 and 7.



The booby hatch on forecastle head



View forward from the bridge (some containers already discharged)



Booby hatch viewed from within the forecastle (bottlescrew in position)

In the “Fleet Operations Guide”, supplied to the company’s ships by the China Navigation Company, under the section “General Operations and Procedures - Deck”, at section 3.1.3, it states;

“Should a vessel encounter seas and swell of sufficient strength that pounding is possible or damage likely to occur to ship and/or cargo, then engine speed must be reduced to prevent same whilst always retaining steerage way. An appropriate entry is to be made in the Official Log and a copy sent to Management.”

The Master had complied with this instruction. The weather conditions had caused the vessel to pitch to the point where, at 2100, the Master felt that it was prudent to reduce speed in order to ease the motion.

Entries in the Log however, indicate that the vessel was still “pitching moderately” throughout the night and the wind strength remained at around force 6/7 throughout the night. At 0800 on 17 August, entries in the Log book indicate that the wind was still blowing force 7 from the south-west, with a sea state of 7 and a swell of 6.

Although there was a high pressure area moving in from the west, the isobars on the weather fax, transmitted by the Bureau of Meteorology at 1200Z on 16 August, were evenly-spaced indicating that the wind speed would have remained fairly constant throughout the night and into the morning. The approaching high would, however, also indicate that the weather was about to moderate.

The Master, when he went to the bridge at 0720, assessed the weather conditions. In spite of the inclement weather, he considered that the ship was quite comfortably riding the large swells and, although there was spray occasionally coming aboard, it was not shipping seas. It was generally agreed by the Master, the Chief Officer and the Third Officer, that the weather was moderating slightly and there would be no need to restrict access to the weather decks. In spite of this, however, the Third Officer, on watch from 0800-1200, instructed his

watchkeeping AB not to work on the forecastle, although he could progress painting the ship's name on lifebuoys on the other weather decks. This would be a routine precaution for a non-essential task such as he was carrying out.

Because of the very restricted view of the decks forward, conditions on the forecastle are judged, from the bridge, by the amount of spray coming from the sides of the bow and over the forward containers on the deck. This judgement requires a degree of experience, both of container ships in general and also on any particular vessel.

Container ships are usually designed with a considerable flare to the bow, and, although it would be considered an old vessel, having been built in 1970, Matilda Bay has such a flare as can be seen in the photograph on the front cover. Newer ships are designed with even more flare to the bow than that shown, the idea of the flare being to deflect seas to the sides, away from the forecastle deck, so that the ship can maintain the high speeds, for which it is designed, without risk of damage to the cargo of containers stowed on deck.

“Freak” waves

Factors which influence the way in which the motion of a vessel is affected by the seas include the swell height, the swell length (or period), the swell direction, the wave height and the wave direction. The swell direction, over a short period of time, will remain consistent, but all the other factors can be varying on a minute by minute basis. Waves, and swells, are generated by the wind. The Beaufort wind scale shows that a force 7 (near gale) can be expected to generate waves with a mean height of 4 metres, but with a probable maximum height of 5.5 metres. A sea state 7 (high) corresponds with a wave height of 6 to 9 metres, somewhat higher than might be expected from a force 7 wind.

On the occasion of Matilda Bay running into a particularly deep trough at about 0825 that morning, the swell was reported to be coming from about two points (22°) on the port bow. The wind, a south westerly, was coming from 4 or 5 points on the port bow. A wind of force 7, swell of height 6 metres and a sea of state 7, as recorded in the bridge log at 0800, could result in wave and swell combining periodically to form a peak-to-trough height of as much as 15 metres. Such combinations, which are not uncommon and cannot be regarded as freak, have frequently resulted in sudden and unexpected damage to the equipment on the forecastles of ships in what may, at the time, have appeared to be only relatively heavy weather. On this occasion, the Chief Officer and the ABs had been working on the forecastle for about 20 minutes in apparent safety. Nevertheless, it would have been prudent for the Chief Officer to have had one of the group keep a “weather eye” out for an exceptionally heavy sea.

Collision bulkhead door

Although only incidentally related to the death of the Chief Officer, the investigation revealed that it was customary to leave open the doors in under-deck passageways leading through the collision bulkhead aft of the forecastle. These are water-tight doors in a bulkhead which protects the rest of the vessel from flooding in the case of damage to the forepart of the ship in a collision. When open, this protection is negated. The doors bore no notices indicating that they were to be kept closed at sea, only being opened for access. It was because the door in the port underdeck-passageway was open that the water on the deck in the Bosun’s store was able to trickle all the way aft, reaching the door from the main switchboard space and thus attract the attention of the electrician.

Conclusions

These conclusions identify the different factors which contributed to the circumstances and causes of the incident and should not be read as apportioning blame or liability to any particular organisation or individual.

1. The Chief Officer died as a result of multiple injuries received when he was swept underneath the windlass by an unexpectedly high sea coming over the forecastle.
2. The ship, at the time of the incident, having slowed down on the previous evening, was proceeding at an appropriate speed for the prevailing weather conditions.
3. The forecastle had not been properly secured for sea when the ship sailed from Melbourne, on 15 August, and this resulted in the cover of the booby hatch being torn off by the heavy weather encountered crossing the Bight.
4. The fact that the Chief Officer had not informed the bridge or the Master of his intention to proceed forward meant that no assessment was made of the risk of working on the forecastle, repairing the hatch cover, in the prevailing sea conditions.
5. The fact that the Officer of the Watch was unaware that men were to work on the forecastle resulted in the course of the ship being maintained into the heavy weather when it could have been changed to run with the weather for the duration of the repairs, thereby making it safer to work forward.

6. Neither the Chief Officer, nor anyone else in the group on the forecastle, had a radio with which to maintain contact with the bridge. This, combined with language difficulties and shock, contributed to the confusion which prevailed for a while after the incident and to the delay before the Chief Officer was found underneath the windlass.

7. The Master and officers of Matilda Bay did everything possible under the circumstances, and with the medical equipment available on board, to save the life of the Chief Officer.

Submissions

The provisions of sub-regulation 16 (3) of the Navigation (Marine Casualty) Regulations require if a report, or part of a report, relates to a person's affairs to a material extent, the Inspector must, if it is reasonable to do so, give that person a copy of the report or relevant part of the report. Sub-regulation 16(4) provides that such a person may submit written comments or information relating to the report. The final draft of the report, or parts of thereof, was sent to the following:

Master and Bosun of Matilda Bay

China Navigation Co. Ltd

An acknowledgement was received from China Navigation Co. Ltd

Details of Vessel

Name	Matilda Bay
Previous names	Arafura, Chitral
IMO No.	7015913
Flag	Hong Kong
Classification Society	Lloyd's Register of Shipping
Ship Type	Container 1410 TEU
Builder	Mitsubishi Heavy Industries Ltd
Year Built	1970
Owner	P&O Swire Containers Ltd
Operator	China Navigation Company Ltd
Gross tonnage	25,093
Nett tonnage	14,126
Summer deadweight	23,016 tonnes
Length overall	214.84 m
Beam	30 m
Depth	16.7 m
Engine	9 Cylinder Mitsui B&W
Engine power	25,156 kW
Crew	34