Departmental investigation into the accidental release of the free-fall lifeboat and injury to a crew member aboard the Bahamas flag geared bulk carrier MAERSK POMOR at Gladstone, Queensland on 2 January 1998

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Contents

Navigation Act 1912

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and injury to a crew member aboard the Bahamas flag geared bulk carrier

MAERSK POMOR

at Gladstone, Queensland on 2 January 1998

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Summary

On 2 January 1998, the Bahamas flag geared bulk carrier *Maersk Pomor* was undergoing a Port State Control inspection, by a surveyor of the Australian Maritime Safety Authority, at the port of Gladstone, Queensland. As part of the inspection, the Surveyor requested that the engine of the free-fall lifeboat be started and the movement ahead and astern tested.

The 3rd Engineer boarded the lifeboat, started the engine, operated it in the ahead and astern modes and, the test satisfactory, stopped the engine. The Surveyor then requested that the lifeboat's rudder be operated, to port and to starboard.

Standing on the lifeboat boarding platform, from where he could see into the lifeboat, the Surveyor observed the 3rd Engineer unsuccessfully try to turn a spoked wheel, aligned fore and aft adjacent to the coxswain's seat. The 3rd Engineer then restarted the lifeboat engine, after which he again tried to turn the spoked wheel, this time with success. However, instead of the rudder turning, the lifeboat was launched, the 3rd Engineer being thrown to the bottom boards of the lifeboat.

The ship's rescue boat was launched, the lifeboat retrieved and taken alongside the wharf, where the 3rd Engineer was transferred to an ambulance. At Gladstone Hospital it was ascertained the 3rd Engineer had suffered a crush fracture of the first lumbar vertebra and concussion.

Sources of Information

Master and officers, *Maersk Pomor*

Australian Maritime Safety Authority, Gladstone and Melbourn**e.**

Acknowledgement

The Inspector wishes to thank AMSA management for making available a Marine Surveyor, to conduct the field investigation on behalf of the Unit.

Narrative

Maersk Pomor is a Bahamas flag, 48,218 tonnes deadweight, five hold, geared bulk carrier, owned by N. B. Shipping Limited of Nassau and managed by NB Maritime Management AB, Helsingborg, Sweden. Built by Danyard A/S, Frederikshavn and completed in 1995, the vessel has an overall length of 189.85 m, a beam of 32.04 m and a load summer draught of 11.618 m. A crew of Russian nationals is provided by Polar Crewing Ltd, of Murmansk.

The main engine is a six cylinder B&W medium speed diesel of 8580 kW, which provides a service speed of 13 knots.

The vessel is equipped with a single, fully enclosed, free-fall lifeboat, situated on an inclined launching ramp at the stern of the vessel and held in place by hydraulically operated release gear.

Maersk Pomor berthed at the Barney Point coal loading facility, Gladstone, at 1930 on 1 January 1998 and commenced loading a full cargo for Visakhapatnam, India.

The following morning, a surveyor of the Australian Maritime Safety Authority boarded the vessel to conduct a Port State Control inspection. After checking and finding the ship's certificates and the officers' qualifications in order, the Surveyor went about the ship, checking items of equipment. He was accompanied by the 2nd Mate, the 3rd Engineer and the Electrical Engineer.

At approximately 0945, the Surveyor arrived at the free-fall lifeboat and requested that the engine be started and the propeller turned both ahead and astern. The 3rd Engineer boarded the lifeboat and, standing in the centreline passageway, adjacent to the coxswain's seat, started and operated the engine to the Surveyor's satisfaction. He then stopped the engine.

The Surveyor, standing on the boarding platform with the 2nd Mate and Electrical Engineer, then requested that the rudder be operated to port and to starboard, pointing first at the rudder, then to port and finally to starboard as he did so. From his position on the boarding platform, the Surveyor could observe both the 3rd Engineer and the rudder.

On receiving the request to move the rudder to port and starboard, the 3rd Engineer immediately tried to turn a radially spoked wheel, adjacent to the coxswain's seat and aligned fore and aft. The wheel did not move, neither did the rudder, so the Surveyor repeated his request for the rudder to be moved and both the 2nd Mate and Electrical Engineer spoke to the 3rd Engineer in Russian.

The 3rd Engineer appeared to look around the inside of the lifeboat, then restarted the engine and again went to turn the spoked wheel. This time the wheel turned, but instead of the rudder turning, the lifeboat moved down the ramp and launched over the stern. After the lifeboat hit the water, the 3rd Engineer was seen lying on the deck inside the boat, but then the embarkation door closed, concealing him from the sight of those on the vessel.

Feeling certain that the 3rd Engineer had been injured and noting a lack of action by a number of crew members gathering at the poop, the Surveyor took charge of the situation and instructed the 2nd Mate to launch the rescue boat. He then hurried down to the wharf, where he requested a providoring company truck driver to telephone for an ambulance. He then proceeded along the wharf, aft of the vessel and, believing the 3rd Engineer to be in need of immediate first aid, prepared to enter the water to swim out to the lifeboat, which was drifting away on the tide. The truck driver, having telephoned for an ambulance on his mobile telephone, rather than using the public telephone on the wharf, joined the surveyor and, without bidding, also prepared to swim out to the lifeboat. However, before they had time to enter the water, they were hailed from the poop of *Maersk Pomor* and informed that the rescue boat was about to be launched.

The rescue boat, manned by the Mate, the Electrical Engineer and a welder, caught up with the lifeboat midway between the wharf and the tug berth, about 150 m from the vessel. The Electrical Engineer and the welder boarded the lifeboat, the welder tending to the 3rd Engineer while the Electrical Engineer brought the lifeboat back to the wharf under its own power.

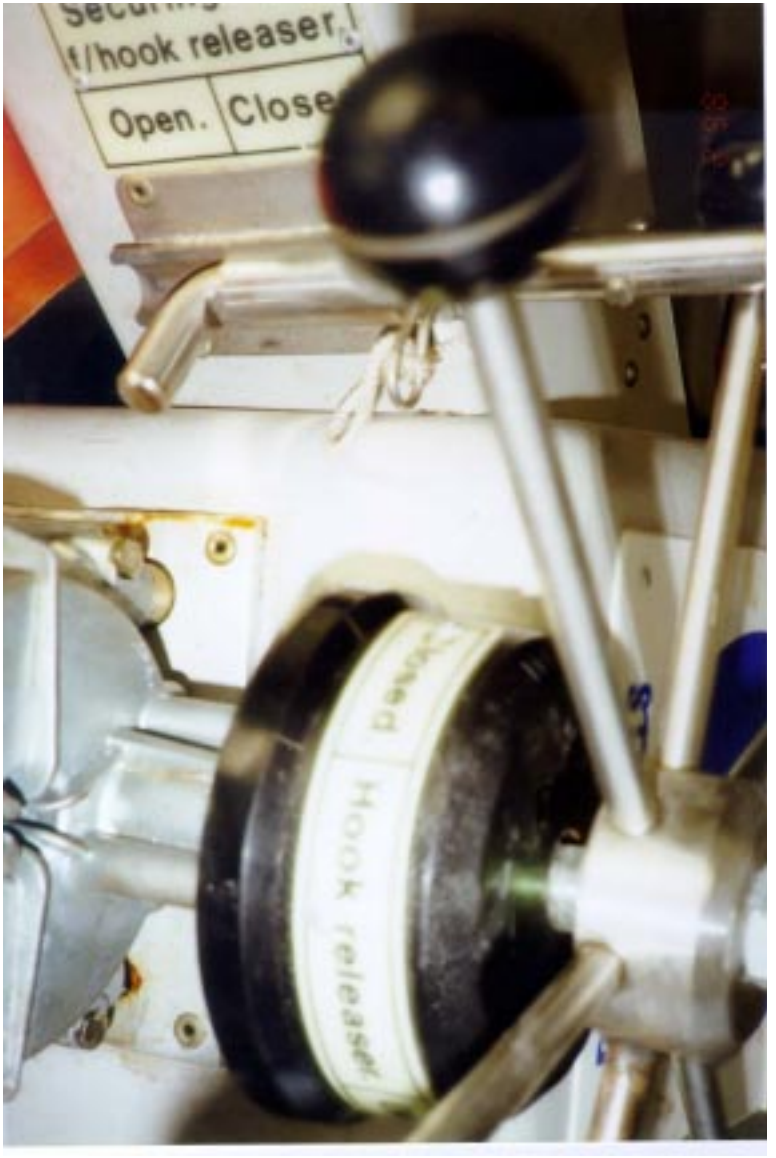
Two ambulances arrived on the wharf and as soon as the lifeboat arrived alongside, ambulance personnel boarded to examine the 3rd Engineer. Initial examination showed the 3rd Engineer to have mild concussion and superficial lacerations to his scalp; he also complained of pain in the lumbar region of his back. The ambulance personnel strapped him in a stretcher, with his neck immobilised, and the truck driver used the stores crane, mounted on his truck, to lift him onto the wharf.

Examination at Gladstone Hospital revealed that the 3rd Engineer had a crush-fracture of the first lumbar vertebra and a CAT scan showed an intrusion into the spinal canal by parts of the crushed lumbar vertebra.

In hospital, with the Chief Engineer, the Mate and the Electrical Engineer acting as interpreters, the 3rd Engineer stated that, because of the lifeboat engine noise, he could not clearly hear the Surveyor's instructions and misinterpreted the hand signals.

Coxswain’s seat and controls

Steering wheel



Lifeboat release gear

Comment and Analysis

The lifeboat

The lifeboat is fully enclosed and is situated above the poop deck on an inclined free-fall launching frame and held in place by hydraulically operated release gear. The lifeboat is designed to allow launching by a single operator within the craft, positioned in the coxswain's seat.

Embarkation is through a door located at the stern of the lifeboat. The crew use harnesses to secure themselves into the stern-facing seats, which support their backs and heads. The deceleration forces generated by the lifeboat coming into contact with the water are safely absorbed by the seats' structure.

The coxswain's seat is located towards the after end of the lifeboat, on the port side, it faces forward and is raised above the level of the other seats. For launching, the seat is secured in a backwards reclining position. Stencilled on the inboard side of the seat are the words "CHIEF MATE".

The lifeboat steering and launching equipment

The steering wheel, compass, engine ignition and rpm tachometer are located on a console immediately in front of the coxswain's seat, while the engine control, similar to a car's automatic transmission control lever, is located on the inboard side of the console.

The release gear, for launching the lifeboat, incorporates a spoked, rimless wheel, located adjacent to the inboard side of the coxswain's seat. To prevent accidental operation of the release gear, the wheel is locked by a stainless steel slip bolt, passed between the spokes, and in turn is prevented from accidental removal by a locking pin.

All instruction labels relating to the release of the lifeboat are in the English language. The release gear is clearly labelled "Hook Releaser", with the open and closed directions of movement, also with an IMO safety

label for “release falls” with a warning note that misuse of the release gear can injure or kill. The securing bolt is also labelled, “securing bolt, hook releaser” and the open and closed positions are marked.

Emergency musters and drills

Requirements under SOLAS are that each member of the crew shall participate in at least one abandon ship drill every month and that each lifeboat shall be launched with its operational crew at least once every three months, although in MSC 66/24 Annex II, for free-fall lifeboats this may be relaxed to once every six months. On board training and instructions in the use of life-saving appliances shall be given as soon as possible, but not later than two weeks after a crew member joins the ship.

On board *Maersk Pomor* lifeboat drills are held once a month (complying with the minimum requirement) when, reportedly, the crew are instructed in the operation of the gear and equipment. When testing the lifeboat release mechanism, the lifeboat is secured in place by a restraining strop, to prevent launching when the release gear is operated. However, the lifeboat had not been launched, nor the release mechanism tested, during the three months preceding the incident.

Consideration of the incident

During the investigation, it was suggested that the 3rd Engineer understood the Surveyor to request that he test the release gear. Although the fact that the 3rd Engineer restarted the engine could indicate that he was in fact following the launch procedure, he should have known that operation of the release gear without the lifeboat being secured by other means would result in the launch of the lifeboat. Also, that he would contemplate a launch with only himself in the boat and without securing himself in the coxswain’s seat is incredible and difficult to accept. More likely is the supposition that, having not been able to turn what he thought was the steering wheel, the 3rd Engineer restarted the engine on the chance that the steering was power assisted.

It is also difficult to accept that the Surveyor’s requests, made as simple, one–word directives, accompanied by pointing gestures, could be misinterpreted as meaning “test the release gear”.

The 3rd Engineer had joined the vessel on 20 October 1997, so had been on board for 10½ weeks and should have attended at least two lifeboat drills. Both the 2nd Mate and the Electrical Engineer had joined the vessel on 27 November 1997 and so had been on board for only five weeks, however, they should have attended at least one lifeboat drill.

From the observations of the Surveyor, the 3rd Engineer immediately trying to turn the release gear wheel, then looking about the inside of the lifeboat before again turning to the release gear, instead of operating the steering wheel, it is readily apparent that the 3rd Engineer was not familiar with the different controls within the lifeboat and, therefore, had not received instruction on them. It is also readily apparent that neither the 2nd Mate nor the Electrical Engineer, who had been standing beside the Surveyor and witnessed the 3rd Engineer attempting to operate the release gear in order to operate the rudder, was familiar with the equipment either.

The lack of knowledge of the three officers about the controls in the lifeboat was the direct cause of the accidental release of the lifeboat. This lack of knowledge also throws considerable doubt as to the effectiveness of the training structure on board *Maersk Pomor*, if indeed the three officers received any training at all on the lifeboat.

The coxswain's seat was clearly marked "CHIEF MATE", indicating that the Mate would normally act as coxswain. Under these conditions, at lifeboat drills, all other crew members are likely to merely proceed to the other seats and gain no benefit from the drill. Even if the position of coxswain is rotated amongst the crew, with only one drill per month, this does not afford sufficient training to ensure that all crew members are fully versed in the operation of the release mechanism, the engine starting procedure and the steering system.

Although the Surveyor was watching the actions of the 3rd Engineer, he was not conversant with the type of release gear fitted to the lifeboat and the labelling was not visible from where he was standing. His experience had been with lever-type release gear, so he was not aware of what the 3rd Engineer was actually doing and therefore, unable to prevent the accidental launching of the lifeboat.

Conclusions

These conclusions identify the factors contributing to the incident and should not be taken as apportioning either blame or liability.

The main contributing factors are considered to be:

1. The 3rd Engineer's lack of knowledge about the free-fall lifeboat controls.
2. The 2nd Mate's and Electrical Engineer Officer's lack of knowledge about the free-fall lifeboat controls.
3. The training regimen on board, in that it had not ensured that the three officers were fully conversant with the free-fall lifeboat controls.
4. The labelling and instructions for the lifeboat release gear, although clear, were not in the language of the crew.

Submissions

Under sub-regulation 16(3) of the Navigation (Marine Casualty) Regulations, 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 the relevant part of the report. Sub-regulation 16(4) provides that such a person may provide written comments or information relating to the report.

The final draft of the report was sent to the following:

The Master, 2nd Mate, 3rd Engineer and Electrical Engineer, *Maersk Pomor*

AMSA Surveyor, Gladstone

Written submissions were received from the Electrical Engineer and the AMSA Surveyor and the text of the report was amended where considered appropriate.

The Electrical Engineer submitted:

"First, at that time (morning, 2nd January 1998) Surveyor of Port State Control checked ship's equipment together with Chief Engineer. As you know, appropriate officer joins when relative equipment must be checked. In time of checking of lifeboat equipment, Surveyor was accompanied by Chief Engineer, 3rd Engineer and 2nd Mate. I joined a little later, when lifeboat engine check had already been performed. 3rd Engineer was inside boat, surveyor stood on the ladder's upper part (boarding platform), Chief Engineer and 2nd Officer behind him, lower several steps. I have to note that it is quite understandable, that 3rd Engineer did not climb into coxswain seat, because it is impossible to operate engine and other controls from its launching position, when men head's top directed to life-boat's stern, and he faces ceiling. I asked Chief engineer, what they were doing, and was told they were checking the rudder performance. I looked with them down under the bottom of the life-boat. I situated lower of all others several steps and could not see, what was going inside boat.

I watched under the bottom, and then arose by steps, and I saw 3rd Engineer standing near the control, holding spoke wheel, and did not pay attention first moment, what he was doing; but next moment boat

launched, and I was shocked, like all around, realizing what happened.

To cry 'rescue boat' does not mean to 'take charge of the situation'. We launched rescue boat under command of Chief Officer. We were three in boat: Chief Mate, me (El. Engineer), and welder. I and welder boarded the life-boat, I started engine and drove to berth (I used steering wheel, not spoke wheel). Welder was busy with 3rd Engineer to make his position more convenient, and with mooring operations. When I drove, I asked 3rd Engineer, why he did that thing. He told me that he had fulfilled exactly first command of Surveyor to turn rudder to starboard, using steering wheel. But next command to put wheel to port he had not heard due to boat engine running. He had seen pointing gestures of Surveyor and had decided he pointed to the spoke wheel and wanted him to test Release Gear, and he made that, being sure that boat had been secured with safety chain. He understood clearly what he was doing. Later same evening in hospital he repeated exactly the same evidence in presence of me (El. Engineer), Chief Officer, Chief Engineer and Port State Control Surveyor.

Conclusions:

1. *It is unaccountable, why one of the participants of the incident is not pointed in your investigation (I mean the Chief Engineer),*
2. *I can blame myself only for lack of attention, not for the lack of the knowledge about free-fall life-boat controls.*
3. *It is rather difficult (if not say impossible) to turn the spoke wheel without pulling out stainless steel slip bolt (locked in by pin). Therefore, 3rd Engineer did that intentionally, obeying (as he thought) the order from State Port Control Surveyor.*

Details of Maresk Pomor

IMO No.	9102045
Flag	Bahamas
Classification Society	Lloyd’s Register of Shipping
Ship type	Geared Bulk Carrier
Owner	N.B. Shipping Ltd, Nassau
Manager	NB Maritime Management AB,Helsingborg, Sweden
Year of build	1995
Builder	Danyard A/S, Frederikshavn
Gross tonnage	29,031
Net tonnage	14,003
Summer deadweight	48,218 tonnes
Length overall	189.85 m
Beam	32.04 m
Draught (summer)	11.618 m
Engine	6 cylinder B&W
Engine power	8580 kW
Crew	19 (Russian)