Marine Safety Investigation Unit

Transport Malta

SIMPLIFIED SAFETY INVESTIGATION REPORT

201702/012 REPORT NO.: 04/2018 January 2018

MV *SULTAN BEY*

Serious injury to a crew member
in position 42° 49.6' N 005° 46.5' E
01 February 2017

Course of events

Sultan Bey was on a voyage from Alexandroupoli, Greece to Marseilles, France. She was laden with 5,003 mt of wheat in bulk.

At about 1500 (LT), on 01 February 2017, the chief mate instructed the bosun to open the hatch covers to ventilate the cargo prior to the ship's arrival.

While the bosun and three able seamen were preparing to open no. 1 cargo hold, a motorman, who was on duty in the engine-room, came on deck to clean the fuel oil vent overflow containment tray, located between hatch coamings nos. 1 and 2.

The bosun noticed the motorman and informed him of the plan and cautioned him to stay clear of the area. At 1530, the bosun started opening cargo hold no. 1, when he heard a loud scream. The operations were immediately halted and the motorman was discovered near the starboard over-flow containment tray, bleeding from the nose and ear.

Figure 1: Main deck showing location of the accident

The injured motorman had been at sea for about three years. He was 36 years old and qualified to STCW A-III/5 (able seafarer engine). The MSIU was informed that upon joining the *Sultan Bey*, he was briefed on safety and again when he was assigned the cleaning oil-water effluent from the containment trays.

Extent of the injuries

Initial medical aid on board arrested the bleeding but the motorman remained unsteady and in severe pain. The master called La Garde MRCC over the ship's radio for medical assistance. Paramedics arrived on board between 1725 and 1800 and the injured motorman was airlifted and taken to a specialised hospital in Toulon, France.

Upon admission, he was diagnosed with a Glasgow Coma Scale (GCS of 13)[1]. Subsequent cerebral scanner indicated a number of fractures and bone fragments in the temporal region and around the base of the skull, affecting the right side of the carotid canal and spreading on to the 'rocher petrous' bone. There was also dislocation of the 'fronto-malaire' reaching as far as the walls of the orbital cavity.

On 06 February 2017, the motorman underwent a surgical intervention. Eventually, he recovered well and was subsequently discharged from hospital on 13 February 2017 for further rest at home.

Probable causes[2]

The cargo hatch covers (Figure 2) are of the MacGregor type, consisting of several steel pontoons linked together with a chain. The opening of the hatch cover is controlled from a power control unit. The pontoons move on rollers, running on tracks fitted on the hatch coaming.

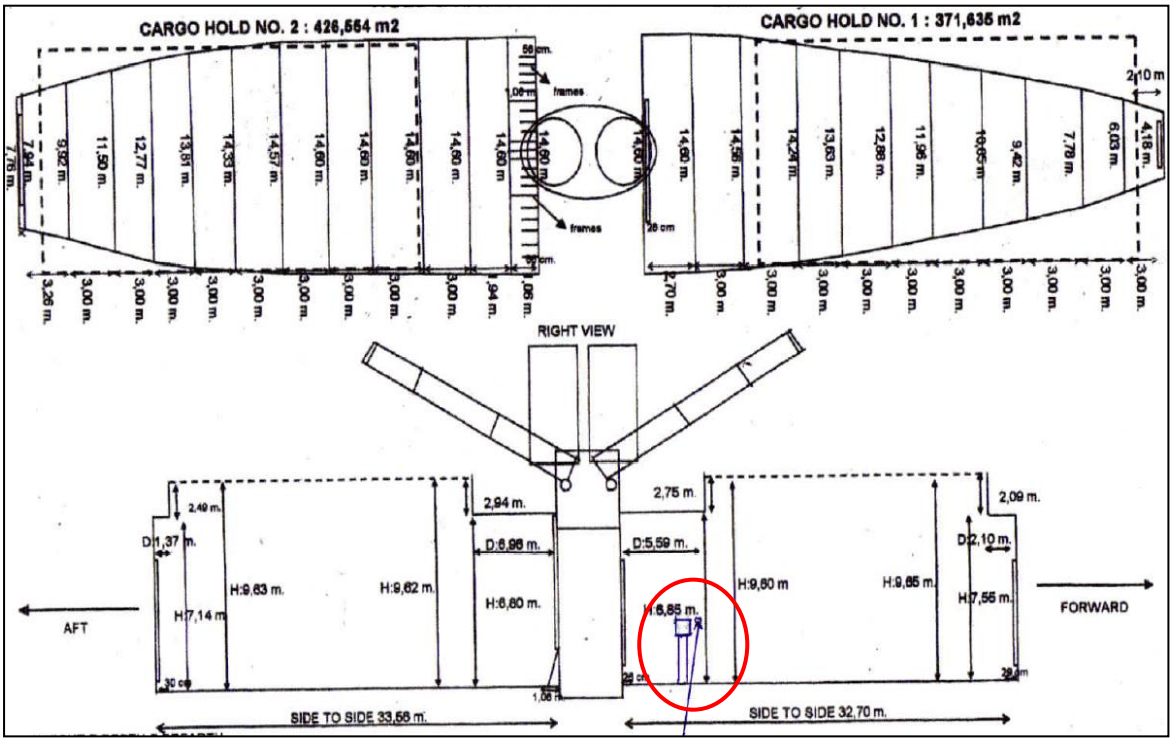

Figure 2: Section of the GA plan, showing the location of the accident

[1] The Glasgow Coma Scale measures the level of consciousness / severity following traumatic head injuries.

[2] The purpose of a marine safety investigation is to determine the circumstances and safety factors of the accident as a basis for making recommendations, and to prevent further marine casualties and incidents from occurring in the future.

When the hatch covers are opened, the individual steel pontoons (pulled by the chain), roll up and tip onto a stowage space behind the hatch coaming. The pontoons in the stowed position tend to sway about the rollers.

The crew members indicated that the motorman was injured on the upper part of the fuel air-vent post (Figure 3).

Figure 3: Location of the accident as witnessed by the crew members

Considering that the injured crew member was wearing PPE, including a safety helmet and that he was not specifically told to reschedule the task, it is very likely that he did not suspect that the pontoon could swing so dangerously close to the fuel air-vent post, entrapping his head as he set about cleaning the containment tray (Figure 4).

It has to be stated that the crew members have neither seen the motorman move abaft the hatch coaming nor witnessed the accident. Moreover, despite several requests, the injured crew member declined to give a written statement or verbal explanation of events.

Figure 4: Deformed and damaged safety helmet

Acceptance of risk

According to the available information, the injured crew member had been informed by his colleagues (on the main deck) of their intention to open the cargo hold hatch cover. It was also reported that during the opening of the first cargo hold hatch cover panels, the crew members walked away from the area and only returned when the covers had been partially open.

There is no doubt that the crew members involved were aware of the risks (the cautionary notice to the injured crew member reflected this). The acceptance of risk to climb up and reach the fuel oil vent overflow containment tray is seen to be related to the perception of risk.

It was clear that the cleaning of the fuel oil vent overflow containment tray could not be done unless the crew member climbed to reach it. That would have been the time when risk was accepted.

In the absence of evidence, it may only be hypothesised that whereas the initial stages of the opening of the cargo hold hatch covers were perceived to be the most dangerous, once the first panels were in the vertical position, the injured crew member may have not anticipated any further movements and hence carried on with his intention to clean the containment tray.

Then, once the matter had been communicated to the crew member and possibly seeing him walking away during the initial stages of the opening of the cargo hold hatch covers, the actions of the crew member were not followed any further. It was considered possible that the crew member climbed up to reach the containment tray at a time when his colleagues were focussed on the opening of the cargo hold hatch cover.

Symbolic safety barrier systems

Photographic evidence of the area did not indicate any symbolic barrier systems fitted (*e.g.*, warning signs) to caution the crew members not to access the containment tray when the hatch covers are either being opened or closed.

SAFETY ACTIONS TAKEN DURING THE COURSE OF THE SAFETY INVESTIGATION[3]

During the course of the safety investigation, the Company has taken the following actions:

- The accident has been discussed during the on board safety management system meeting;
- Daily meetings are being held on board in order to ensure that there are no 'job conflicts';
- Warning signs have been placed in the area;
- Risk assessments have been revised and amended where necessary;
- A safety bulletin has been distributed on board all Company vessels;
- The accident has been discussed during Company safety seminars; and
- Working procedures for the operation of cargo holds' hatch covers have been amended.

RECOMMENDATIONS

Taking into considerations the actions taken by the Company and the vessel, no recommendations were made as a result of the safety investigation.

[3] Safety actions and recommendations should not create a presumption of blame and/or liability.

SHIP PARTICULARS

Vessel Name:	*Sultan Bey*
Flag:	Malta
Classification Society:	American Bureau of Shipping (ABS)
IMO Number:	9437799
Type:	General cargo
Registered Owner:	Pal Bulk 1 Shipping Co. Ltd.
Managers:	Palmali Gemicilik Ve Acentilik A.S., Turkey
Construction:	Steel
Length Overall:	99.89 m
Registered Length:	94.72 m
Gross Tonnage:	4,109
Minimum Safe Manning:	12
Authorised Cargo:	Dry cargo

VOYAGE PARTICULARS

Port of Departure:	Alexandroupoli, Greece
Port of Arrival:	Marseilles, France
Type of Voyage:	International
Cargo Information:	5,003 mt of wheat in bulk
Manning:	14

MARINE OCCURRENCE INFORMATION

Date and Time:	01 February 2017 at 1530 (LT)
Classification of Occurrence:	Serious Marine Casualty
Location of Occurrence:	42° 49.6’ N 005° 46.5’ E
Place on Board	Main deck
Injuries / Fatalities:	One serious injury
Damage / Environmental Impact:	None
Ship Operation:	In passage
Voyage Segment:	Transit
External & Internal Environment:	Daylight. West Northwest light air and a West Northwesterly 0.2 m swell. Good visibility with an air temperature of 08 °C and sea water temperature of 02 °C.
Persons on board:	14