



**REPUBLIC OF TURKEY
MINISTRY OF TRANSPORT, MARITIME AFFAIRS
AND COMMUNICATIONS
Accident Investigation Board**



**Report on the Investigation of
The Fatal Accident On Board
M/V HAZAL**

**Port of Ünye
13th June 2013**



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PURPOSE

The main purpose of investigating a marine accident is to identify the factors causing the accident, with the aim of improving the safety of lives of personnel and passengers at sea, preventing similar accidents in the future and enhancing safety of navigation. It is not the purpose to apportion liability, nor to apportion blame to anyone or any party.

NOTE

This marine accident is investigated in accordance with the Bylaw on the Investigation of Marine Accidents, which came into force after being published in the Official Gazette with reference number 26040 on 31st December 2005 and the Bylaw on the Investigation of Marine Accidents and Incidents which came into force after being published at the Official Gazette No.29056 on 10th July 2014 and which revoked the former Bylaw.

The rules and procedures in *“The Code of the International Standards and Recommended Practices For A Safety Investigation Into A Marine Casualty Or Marine Incident (Casualty Investigation Code)”* and the *“European Union Directive 2009/18/EC”* have also been considered during the investigation process and drafting of this investigation report.

This report is not written with apportionment of liability in mind and is not intended to be used in court of law. It endeavours to identify and analyze the relevant safety issues pertaining to the specific accident, and to make recommendations aimed at preventing similar accidents in the future.

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SUMMARY



Figure 1: Location of the Accident

All times in this report are local times (GMT+2)

M/V HAZAL was discharging her cargo of 6.537 tonnes of coal in bulk at the port of Unye, on the Black Sea coast of Turkey.

Vessel had loaded the cargo from Tuapse in Russia and berthed at Unye around 07:00 on 12th June 2013.

Discharging cargo from the vessel started at 12:00 the same day, by shore cranes.

Accident happened at 02:45 on 13th June; one worker lost his life. His duty was to shovel the coal from between the frames and on the surface of the hold so that the bobcat (work machine with a scoop) could carry to the center of the hold, after which the shore crane was grabbing the cargo and discharging on shore.

The bobcat was moving forward and backwards for this operation. While it was moving backwards, it hit the worker. The worker was injured and taken to hospital immediately, losing his life shortly afterwards.

CHAPTER 1 – FACTUAL INFORMATION

1.1 INFORMATION ABOUT VESSEL AND ACCIDENT

Particulars of HAZAL

Name : M/V HAZAL

Flag : Malta

Place and Date of Built : China / 2004

Port of Registry : Valletta

Type of ship : General Cargo

Owner : Platin Shipping and Trading / İstanbul

Gross Tonnage : 4649

Net tonnage : 2743

DWT : 6858 mt

IMO No : 9335707

Call sign : 9HMF9

Length overall : 112,76 m.

Breadth : 17,60 m.

Depth : 6,20 m.

Draft : 6,30 m.

Crew : 14

Port of Departure : Russia / Tuapse

Port of Arrival : Turkey / Ünye

Accident Details

Date and Time : 13 June 2013 / 02:45 (Local Time)

Location of the Accident : Port of Ünye

Consequence : 1 loss of life

1.2 WEATHER AND SEA CONDITIONS

At the time of the accident, calm weather conditions prevailed in the region. Weather was cool. Wind was blowing from the northwest (NW) at force 2-3 on the Beaufort Scale. The sea state was calm. Sky was clear.

1.3 THE ACCIDENT - COURSE OF EVENTS

M/V HAZAL had loaded her cargo of 6,537 MT of Russian washed sized coal in bulk at the port of Tuapse in Russia on 9th of June 2013 and berthed at the port of Ünye in Turkey at 07:00 on 12th of June to discharge the cargo.

Discharging commenced on the same day at 12:00 hours, using the shore crane. The shore crane was grabbing the coal from the hold and discharging it directly onto the trucks.

Vessel has three holds and the discharging operation started from No.1 cargo hold and before the cargo in No.1 hold was completely finished, it was stopped and continued in No.2 and No.3 holds. Then they resumed discharging from No.1 hold. Accident occurred in No.1 cargo hold and at the time of the accident the least quantity of Cargo was in No.1 hold, compared to No.2 and No.3 holds.



Figure 2: Location of the accident: No.1 hold

Close to the finish of the cargo, shortly after midnight, three shore workers and the bobcat driver embarked the vessel, climbing down the ladder. Bobcat was embarked on the vessel before the workers by the shore crane at around 23:00.

At the end of the cargo, when the remaining coal would be difficult to access by the crane, bobcat was sweeping or holding and carrying and thus accumulating the cargo to a convenient place inside the hold so that the shore crane could readily grab. The shore workers were using their shovels to bring the coal within reach of the bobcat, especially from between the frames, where the scoop of the bobcat could not access.

Bobcat driver was using the vehicle swiftly fore and backwards, accumulating the coal into a heap. Shovel workers were having a rest and watching the bobcat during its operation. There was coal dust in the air which was somehow disturbing the workers, decreasing their fresh air.

The deceased worker stood up from where they were resting and proceeded to the frames at the the fore part of the hold to move the coal between those frames. While he was trying to pass behind the bobcat, the bobcat hit him and he fell on the floor. His friends/coworkers ran to help him; he was conscious at that time. He was taken out of the hold on a stretcher and taken to hospital by an ambulance. As a result of the injury he was suffering, the worker lost his life.

1.4 COMPANY AND THE WORK

The workers, including the shovelers, crane driver and the bobcat drivers were all working for the same company, Simge Kömür İç ve Dış Ticaret Ltd. Şti. The company is engaged in coal importing from Russia. Around 90% of the cargo is discharged in Ünye while the rest is discharged in Espiye.

1.5 DISCHARGE OPERATION

Discharge operation is carried out by the shore crane. Shore crane grabs the cargo from the hold and discharges directly onto the trucks. There are two old cranes at the berth and there is a new one at the company's worksite. This new one is brought to the berth when needed. The new one was being used at this discharging operation.

1.6 THE SHOVEL WORKERS

The shovel workers are normally working at the premises (worksite) of the company. One worker packs the bulk coal into a sack and another worker sews the mouth of the sack after the coal is packed inside and a third worker loads the sack from the conveyor onto the truck.

The same workers go on board ships when necessary. Usually, they are not needed for the discharge operation. It is approximately 3 ships out of 40, that their involvement would be necessary. These workers are involved in discharging from the ship when the cargo holds of the ship have frames and twin decks and thus the cargo needs to be shoveled from between those frames and twin decks. Therefore the shovelers are not going on board ships frequently.

The workers' work routine is normally from 08:30 until 17:30, Sunday being the day off. They may be asked to work overtime according to the workload. When there is a vessel discharging at the port, they may be asked to stay at work until the ship's cargo is totally discharged.

On the day of the accident, the shovelers and the bobcat driver went into the cargo hold using the permanent ladder inside the hold.

Usually the coal is watered to minimize the dust, but that day water was not poured on the cargo.

1.7 THE BOBCAT

Bobcat is launched into the cargo hold by the shore crane. Bobcat does not have much work at the company worksite or at the berth, but it is usually used inside the ship. At the worksite, it is mostly used as a breaker.

Inside the ship, bobcat's job is to carry or sweep the coal to within reach of the shore crane. The edge of the scoop of the bobcat is straight and made of steel. It can carry up to 1220 kg of cargo.



Figure 3: Bobcat inside the hold

Company has two bobcats; old one is Model 250 and new one is Model 650. The bobcat which was used on the day of the accident was the new one. It was bought two years ago. Its manoeuvre is fast and its scoop can be raised and lowered.



Figure 4: Bobcat from different sides and from inside the cabin

Bobcat has its own projector lights and they are strong enough for the illumination of the site. The driver cabin is totally closed, but there are windows on either side which can be opened by the driver. However, the window has protection bars outside and the driver cannot hold his head out of the cabin.

CHAPTER 2 – ANALYSIS

2.1 Working Environment

Coal cargo is a cargo which has some quantity of dust. While the bobcat is working inside the hold, this dust rises into the air and shovel workers need to protect themselves from inhaling the dust. The workers were using face masks to prevent dust. The cargo was normally being watered to prevent dust from rising, but for this hold, such watering was not applied.

Other than the masks, the workers had safety shoes and gloves, to ensure their safety inside the hold. However, they were not wearing overalls.

Workers were not adequately familiar with the working conditions on board a ship. They normally worked at the worksite at the company premises at open air and at daytime. ILO's (International Labour Organization) "Occupational Safety and Health (Dock Work) Convention, 1979 (No. 152)" Article 38(1) implies that; **"No worker shall be employed in dock work unless he has been given adequate instruction or training as to the potential risks attaching to his work and the main precautions to be taken."**¹ The term "worker" has also been defined in this Convention as "any person engaged in all and any part of the work of loading or unloading any ship as well as any work incidental thereto". Workers who were employed in the discharging of M/V HAZAL were not given any training that was required by this ILO Convention.

There were portable lights of the vessel to illuminate the hold and the lights of the bobcat were also providing good lighting inside.

Bobcat did not have a side mirror to observe the back, when it would go backwards. The back window of the bobcat was usually stained with dust and was being covered with dust quickly again even if it would be cleaned. There is a wiper in the front

¹ Turkey became party to this Convention with the Law No.4946, on 16th July 2003.

window, which is also equipped with a water spray; but the back window does not have such a mechanism.

2.2 Working Hours

Normally, working routine is from 8:30 in the morning until 17:30 in the afternoon. When there is a ship at the port, the bobcat drivers and the workers (shovelers) work until the discharging operation is completed.

On the day of the accident, the bobcat driver and the shovelers started work at 8:30 as usual. Bobcat driver arrived at the port in the morning and the shovelers went to the port in the afternoon, after they finished their lunch at the company's worksite.

All the workers and the bobcat driver went into the hold after midnight, close to the end of the cargo inside that hold. They were inside the hold for more than two hours at the time of the accident; it was at 2:45. Thus, the workers and the driver had been at work for more than 18 hours already.

Both in the Labour Law (No.4857, adopted on 22nd May 2003) Art. 63 and in the workers' contracts, it is stipulated that working hours shall not exceed 11 hours a day. The time period that the workers had been working on the day of the accident was far above the limits stipulated in the Law and in the work contracts.

CHAPTER 3 – CONCLUSIONS

3.1 Bobcat did not have a signal, visual or audial, to warn the workers while it was moving backwards.

3.2 Workers were not well trained or familiarised with the risks of the work.

3.3 There were not reflective bands over the clothes that the workers were wearing, which would enable them to be seen and realised easily.

3.4 Overtime working hours were well above the limits in the Law and in the work contracts. Despite these prolonged working hours, workers were also not provided with proper living conditions at the port.

CHAPTER 4 – SAFETY RECOMMENDATIONS

It is recommended that;

4.1 The Company (Simge Kömür İç ve Dış Ticaret Ltd. Şti.) should;

4.1.1 Show due regard to the working hours determined by Law and stipulated in the contracts,

4.1.2 Provide training and familiarisation to workers and bobcat drivers who are being assigned to work on board ships,

4.1.3 Ensure that there are reflective bands over the clothes that the workers are wearing, which will enable them to be seen and realised easily,

4.1.4 Provide fair working and living conditions at the port for the workers and bobcat drivers,

4.1.5 Equip the bobcats with a signal for backward movements.

The content of this Report shall not be used to blame or to apportion liability between the parties of the accident.