



## SAFETY INVESTIGATION REPORT

201807/022

REPORT NO.: 13/2019

July 2019

The Merchant Shipping (Accident and Incident Safety Investigation) Regulations, 2011 prescribe that the sole objective of marine safety investigations carried out in accordance with the regulations, including analysis, conclusions, and recommendations, which either result from them or are part of the process thereof, shall be the prevention of future marine accidents and incidents through the ascertainment of causes, contributing factors and circumstances.

Moreover, it is not the purpose of marine safety investigations carried out in accordance with these regulations to apportion blame or determine civil and criminal liabilities.

### NOTE

This report is not written with litigation in mind and pursuant to Regulation 13(7) of the Merchant Shipping (Accident and Incident Safety Investigation) Regulations, 2011, shall be inadmissible in any judicial proceedings whose purpose or one of whose purposes is to attribute or apportion liability or blame, unless, under prescribed conditions, a Court determines otherwise.

The report may therefore be misleading if used for purposes other than the promulgation of safety lessons.

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### **MV SHARK** Collision and subsequent foundering of fishing vessel *Mohammed Badry* in position 37° 19.44' N 008° 29.47' E 25 July 2018

### SUMMARY

On 25 July 2018, the Malta registered bulk carrier, *Shark* was underway on an Easterly course heading for the port of Ravenna, Italy.

Thirty minutes after taking charge of the watch at midnight, the second mate and ordinary seaman sighted four fishing vessels on the port side.

The OOW was not concerned with the situation, until one fishing vessel was visually sighted close, off the port bow. The OOW started to alter course to starboard but could not take

sufficient action to avoid the collision.

At 0105, *Shark* collided with the Algerian fishing vessel *Mohamed Badry*, 22 nautical miles Southwest of Ile de la Galite, off the coast of Tunisia. As a result of the collision, the fishing vessel foundered and one of the fishermen tragically lost his life.

As a result of the actions taken by the Company in the wake of the accident, the MSIU has not issued any recommendations to the Company.



## FACTUAL INFORMATION

### **MV Shark**

*Shark* is a 5,229 gt, Maltese registered bulk carrier, owned by Rory Malta Ltd. and managed by Q-Shipping B.V. The vessel was built by Ningbo Xinli Shipbuilding Co. Ltd., in the People's Republic of China in 2008 and classed by RINA.

The vessel has a length overall of 120 m, and a deadweight of 8,151 tonnes. Propulsive power is provided by one internal combustion medium speed diesel engine, producing 2,500 kW at 750 RPM. The estimated service speed of the ship is 12 knots.

*Shark* is equipped with the following navigational equipment (Figure 1):

- Global Positioning Systems (GPS);
- Gyro and Magnetic Compasses;
- S-Band and X-Band radars with automatic radar plotting aid (ARPA);
- Automatic Identification System (AIS);
- Speed and distance log (through the water);
- Bridge Navigation Watch Alarm System; and
- Echo Sounder.

She is also fitted with a Voyage Data Recorder (VDR).

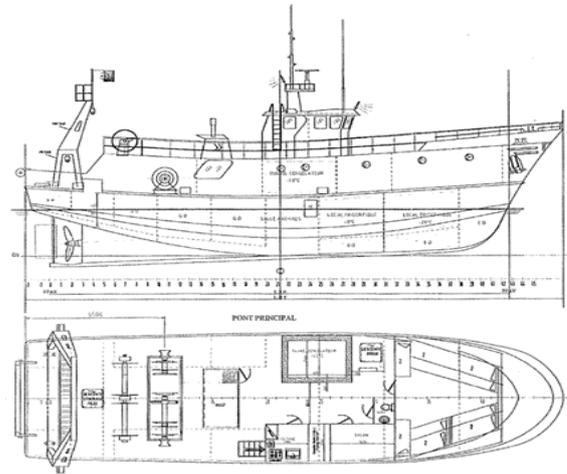


**Figure 1: Layout of the main console and navigational equipment**

### **MFV Mohamed Badry**

*Mohamed Badry* was built in 2006 as a fishing trawler and was registered in Bejaia, Algeria. The steel hull had a length of 25 m, a breadth of 7.0 m and a depth of 3.25 m. She was propelled by a 675 kW GUASCOR high speed diesel engine. Her gross tonnage was 182.25.

The trawler had left the port of Annaba, Algeria on 20 July 2018, for fishing operations, off the coast of Algeria and Tunisia, in an area 25 nm North of El Kala. At the time of the accident, she had eight persons on board. A general arrangement plan of *Mohamed Badry* is shown in Figure 2.



**Figure 2: GA Plan of MFV Mohamed Badry**

### **Crew on board Shark**

*Shark* was manned in accordance with her Minimum Safe Manning Certificate, issued by the flag State Administration. Except for two seafarers, all crew members were Turkish nationals.

The master was 41 years old. He first went to sea in 1993. He joined Q-Shipping in 2017 and signed on board *Shark* on 27 March 2018.

At the time of the accident, the second mate was the navigational OOW. He was 29 years old. This was his first contract with the

Company. He had joined the vessel on 28 February 2018.

The lookout on board was a 24 year old, ordinary seafarer (OS). He had mainly worked on motor yachts before joining *Shark* on 28 February 2018.

### Environment

The weather on the early morning of 25 July 2018 was clear. The visibility was good. The full moon light was softly lightening the vessel's deck. The wind was Northeast Beaufort Force 2 and the swell was 0.5 m. The air and sea temperature were 23 °C and 28 °C respectively.

### Narrative<sup>1</sup>

*Shark* sailed from Figueira da Foz, Portugal, on 20 July 2018, bound for Ravenna, Italy. She had on board 6,988 tonnes of clay in bulk. Her departure draft was 6.50 m forward and 6.70 m aft.

On 25 July 2018, the second mate and one of the OS reported for the 0000 to 0400 navigational watch. The autopilot was set on a course of 089° and her speed was 10.20 knots.

At around 0030, the OS sighted four small vessels on the port side, each of them showing a bright white light. Suspecting that they were fishing vessels, he informed the OOW. The OOW reported that he had observed the fishing vessels' navigation lights. The fishing vessels were also detected on the radar. Their relative position at 0045 is shown in Figure 2.

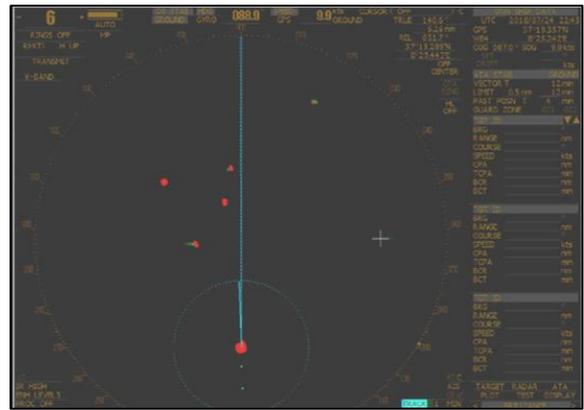


Figure 2: Radar target of fishing vessels on *Shark*'s port bow at 0045

At 0055, the OOW started making changes to the course, about five degrees to starboard, to pass clear of the boats. A few minutes later, he returned the vessel's heading back on 089°. Soon after plotting *Shark*'s position on the paper chart at 0100 (37° 20.2' N 008° 29.2' E), the OOW and his OS reported that they saw a fishing vessel, reflected by the light of the full-moon on the port bow<sup>2</sup>, with no navigation lights (Figure 3).



Figure 3: Radar image showing the fishing vessels at 0101

The second mate swiftly changed the steering to manual and set the helm hard over to starboard. He also instructed the OS to run over to the port bridge wing to check whether the collision had been avoided.

<sup>1</sup> Unless otherwise stated, all times are ship's time (UTC + 2).

<sup>2</sup> This was *Mohamed Badry*.

Although, the vessel had turned and reached a heading of 120.5°, her course over ground was 090°. At 0105, *Shark* collided with *Mohamed Badry* in position 37° 19.44' N 008° 29.47' E (Figure 4).



Figure 4: Radar image showing collision at 0105

### Post collision events

The master was woken up by the noise, vibration and a phone call from the OOW. When he arrived on the bridge at around 0107, the vessel was turning to starboard and her speed had dropped to about 8 knots. As soon as he became aware of the fishing vessel stuck to the port anchor, he set the helm to amidships and the engine speed was gradually reduced to stop.

The general alarm was sounded and the deck lights were switched on. No injuries were reported and the crew members were put on stand-by. The Company was informed and a distress message was sent out on the VHF radio. The message was answered by the Algerian Coast Guard, which confirmed its assistance.

Meanwhile, lifebuoys were released, a pilot ladder rigged, and one of the life boats launched as soon as persons were observed in the sea. Between 0125 and 0240, a total of seven fishermen were rescued. The body of

the eighth fisherman was recovered by the Algerian Coast Guard search and rescue vessel.

On the instructions of MRCC Algeria, *Shark* set her course for Annaba to disembark the fishermen.

### Structural damages

A few minutes after the vessel's helm was set to amidships and the main engine was stopped, *Mohamed Badry* became free from the vessel's port anchor and foundered soon after. No serious structural damages were found on *Shark*, except for a slight indentation on its bulbous bow, and minor scratch marks below the port anchor's hawse pipe (Figure 5).



Figure 5: Photo showing minor structural damage in the bow area

## ANALYSIS

### Aim

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 or incidents from occurring in the future.

## Cooperation

During the course of this safety investigation, MSIU received assistance from the Algerian Maritime Administration (AMA) to receive information on the fishing vessel and the crew members serving on board.

## Fatigue, drugs and alcohol

The hours of rest of the OOW and the OS on board *Shark* were in accordance with the MLC and the STCW Convention requirements. After the collision, both the OOW and OS were tested for drugs and alcohol by the master. The results were negative. Therefore, fatigue, drugs and alcohol were not considered by the MSIU to have influenced the behaviour or actions of the bridge team.

## Conflicting evidence

During the analysis of statements compiled by AMA on the day of the accident, the account given by the OS and the OOW with respect to *Mohamed Badry's* navigation lights was found fundamentally different from the accounts given by the fishermen.

*Mohamed Badry's* skipper and the rest of the crew reported that the navigational side lights (red and green), as well as the white and green light for trawl fishing were exhibited. The crew on board *Shark* stated to the safety investigation that they recall that the navigation lights of *Mohamed Badry* had been switched on just before the collision, although they also had stated to AMA that they had started seeing the fishing vessels' from afar.

After analysing the discrepancy in the statements, the MSIU considered that it is unlikely for a fishing vessel engaged in fishing out at sea not to exhibit its regulatory lights. There was, however, a probability that these lights on a small vessel like *Mohamed Badry* may either have been

swamped by the working floodlights, or intermittently visible due to rolling or pitching movement at sea.

## Activities on board

On board *Mohamed Badry*, it is very likely that the crew members were engaged in activities related to fishing. The skipper and one of the crew members, however, testified that they were in the wheelhouse. Although the radar was operational, they did not see the merchant vessel until she was almost upon them. They also stated that a light was flashed by *Shark* to warn them.

The OS and OOW on board *Shark* informed AMA that they started seeing the fishing vessels' navigation lights at around 0030 but no further observations were made until *Mohamed Badry* was unexpectedly sighted on *Shark's* bow at 0102. The way the dynamics of events evolved, it would appear that crew members were involved in activities, which competed with watch keeping duties.

## Assessment of events leading to the collision

When the OOW and the OS arrived on the bridge, the course was 089° and the speed was 10.2 knots. There was no other traffic. The X-band radar was set on the six-mile range in relative motion, and off-centred. At around 0030, the fishing vessels were visually sighted and the radar targets were displayed on the radar screen. The nearest of the four fishing vessels was about two points<sup>3</sup> on the vessel's port bow, distance three nautical miles. She was later identified as *Mohamed Badry*.

The distinct radar trail (Figures 2 and 3) indicated that *Mohamed Badry* was making

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<sup>3</sup> One point is equivalent of an angle of 11¼ degrees.

way and its direction suggested that she was likely to close on *Shark*'s track.

The OOW did not recall the time when the course was changed to starboard (Figure 6) to clear the fishing vessels. However, he stated that after making the course alteration and passing the four fishing vessels safely, there were no other vessels visible around *Shark* and no targets were detected on the radar.



Figure 6: Radar image at 0055 showing *Shark* on a heading of 095°

An analysis of the images indicated that targets were neither acquired on the ARPA nor were compass bearings taken to determine the risk of collision. It was also evident that the alteration of 5° to starboard that the OOW reportedly made had no significant effect on the relative position of the fishing vessels and the vessel was brought back on the original course.

In fact, the VDR radar display showed that none of the four fishing vessels had passed clear of the vessel and a new target had actually appeared on the starboard side (Figure 7). Although the MSIU found no evidence of either the OOW or OS being away from the bridge, it is not known what

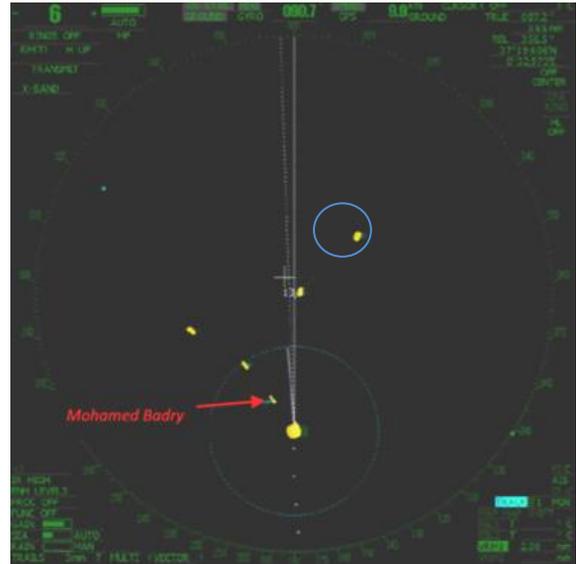


Figure 7: Radar image at 0000 showing *Mohamed Badry* on *Shark*'s port bow

they were doing during this critical period.

It was apparent that *Mohamed Badry*'s advance, both visually and on the radar, was missed by the bridge team. It was only after plotting the vessel's position on the chart and returning to the bridge front that the OOW noticed *Mohamed Badry*. By then, the fishing vessel was so close off the port bow that a collision was unavoidable. In spite of the OOW switching the steering controls to manual and altering to starboard, it was far too late for *Shark* alone to avoid the collision (Figure 8).

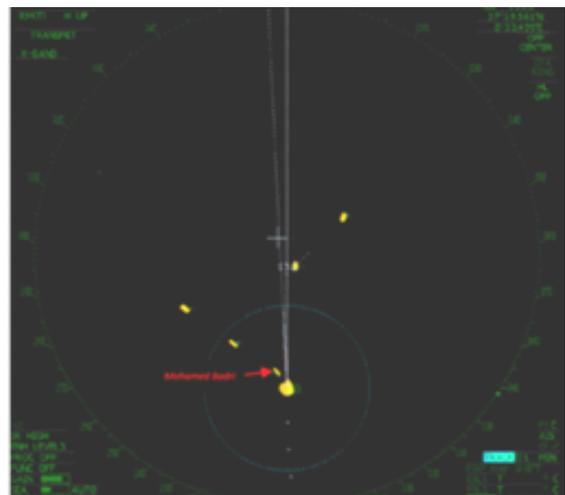


Figure 8: Radar image at 0103 showing *Mohamed Badry* just before the collision (red arrow)

## CONCLUSIONS

1. A close quarter situation developed to the extent that a collision could not be avoided;
2. At the time of the accident, the fishing vessel *Mohamed Badry* was engaged in trawl fishing;
3. *Mohamed Badry* was on the port side of *Shark*. Its radar trail indicated that she was making way through the water and in a crossing situation with *Shark*;
4. It is likely that *Mohamed Badry*'s regulatory navigation lights were either obscured by her bright working lights, or intermittently visible due to the vessel's movement;
5. In all probability, the attention of the bridge look-outs on both *Mohamed Badry* and *Shark* was directed elsewhere;
6. ARPA radar and compass bearings were not used to determine CPA, TCPA to fully appraise the developing situation and to determine the risk of collision.

## SAFETY ACTIONS TAKEN DURING THE COURSE OF THE SAFETY INVESTIGATION<sup>4</sup>

During the course of the safety investigation, the Company:

- Issued a Circular Letter on the appropriate use of radar information;
- Amended the 'Navigation in Coastal Waters' checklist to include the use of two radars at different ranges;
- Issued directions to its Compliance Department to discuss the accident during on board visits.

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<sup>4</sup> Safety actions shall not create a presumption of blame and / or liability.

**SHIP PARTICULARS**

Vessel Name:	<i>Shark</i>	<i>Mohamed Badry</i>
Flag:	Malta	Algeria
Classification Society:	RINA	<i>Not Applicable</i>
IMO Number:	948499	<i>O.N.: BJ276</i>
Type:	Bulk Carrier	Fishing Trawler
Registered Owner:	Rory Malta Ltd.	SARL de peche marine Nadine Limited
Managers:	Q. Shipping B. V.	<i>Not Applicable</i>
Construction:	Steel	Steel
Length Overall:	119.95 m	25.0 m
Registered Length:	112.99 m	<i>Not Applicable</i>
Gross Tonnage:	5,229	182.25
Minimum Safe Manning:	14	<i>Not Applicable</i>
Authorised Cargo:	Dry bulk	Fish in bulk

**VOYAGE PARTICULARS**

Port of Departure:	Figueira da Foz, Portugal	Annaba, Algeria
Port of Arrival:	Ravenna, Italy	<i>Not Applicable</i>
Type of Voyage:	International	Short International
Cargo Information:	6,988 tonnes of clay	<i>Not Available</i>
Manning:	16	8

**MARINE OCCURRENCE INFORMATION**

Date and Time:	25 July 2018 at 0105 (LT)	
Classification of Occurrence:	Very Serious Marine Casualty	
Location of Occurrence:	37° 19.44' N 008° 29.47' E	
Place on Board	Bulbous Bow	Ship side
Injuries / Fatalities:	None reported	One fatality
Damage / Environmental Impact:	Slight bulbous bow damage	Foundered
Ship Operation:	In passage	Fishing
Voyage Segment:	Transit	
External & Internal Environment:	Weather was clear with visibility of 6.6 miles, Northeasterly wind Beaufort Force 2 and a Northeasterly swell, 0.5 m. The air temperature was 23 °C and the sea temperature was 28 °C.	
Persons on board:	16	8