



Panama Maritime Authority
Directorate General of Merchant Marine
Maritime Affairs Investigation Department

M/V “BLUE STAR I”
IMO No. 9375159
R-002-2020-DIAM
CASUALTY DATE: 05th October 2019





REPORT ON THE INVESTIGATION OF COLLISION BETWEEN

m.v. “BLUE STAR I”

IMO number 9375159

AND

m.v. “PRINZESSIN ISABELLA”

ENI number 04804660

At Danube River near Tulcea, Romania

On the 05th October 2019

In accordance to Resolution No. 106-135-DGMM of September 9th of 2013 from the Merchant Marine General Directorate of the Panama Maritime Authority, on it's second article stipulates; “Similarly investigations are not designed to exert actions criminal, civil or administrative, at which they will be subject only to the purposes stated in the Code for the Investigation of Marine Casualties and Incidents adopted by the International Maritime Organization (IMO)



GLOSSARY OF ABBREVIATIONS

AB	Able Seafarer
AIS	Automatic Identification System
COC	Certificate of Competency
COLREG	Convention on the international regulations for preventing collisions at sea
DOC	Document of compliance
DWT	Deadweight
ENI	European Number of Identification
FWD	Forward
GPS	Global Positioning System
HRS	Hours
IMO	International Maritime Organization
ISM	International Safety Management
kW	Kilowatt
LBP	Length Between Perpendiculars
LR	Lloyd’s Register of Shipping
LT	Local Time
LOA	Length overall
M	Metres
MCR	Maximum Continuous Rating
ME	Main Engine
MGO	Marine Gas Oil
MSC.255(84)	Code for the International Standards and Recommended Practices for a Safety Investigations into a Marine Casualty or Marine Incident (Casualty Investigation Code).
MT	metric tonnes
NAVTEX	Navigational Telex
OOW	Officer of the Watch
PMA	Panama Maritime Administrator
RMRS	Russian Maritime Register of Shipping
RPM	Revolutions per Minute
SMS	Safety Management System
SOLAS	International Convention for the Safety of Life at Sea
STCW	Standards of Training, Certification and Watchkeeping for Seafarers
VDR	Voyage Data Recorder
VHF	Very High Frequency
UTC	Coordinated Universal Time



INVESTIGATION OBJECTIVES

Ref. IMO Resolution MSC.255 (84)/MSC.257 (84) *CODE FOR THE INVESTIGATION OF MARINE CASUALTIES AND INCIDENTS*.

The objective of any marine casualty investigation is to prevent similar casualties in the future. Investigations identify the circumstances of the casualty under investigation and establish the causes and contributing factors, by gathering and analyzing information and drawing on conclusions. Ideally, it is not the purpose of such investigations to determine liability, or apportion blame. However, the investigating authority should not refrain from fully reporting the causes because fault or liability may be inferred from the findings.

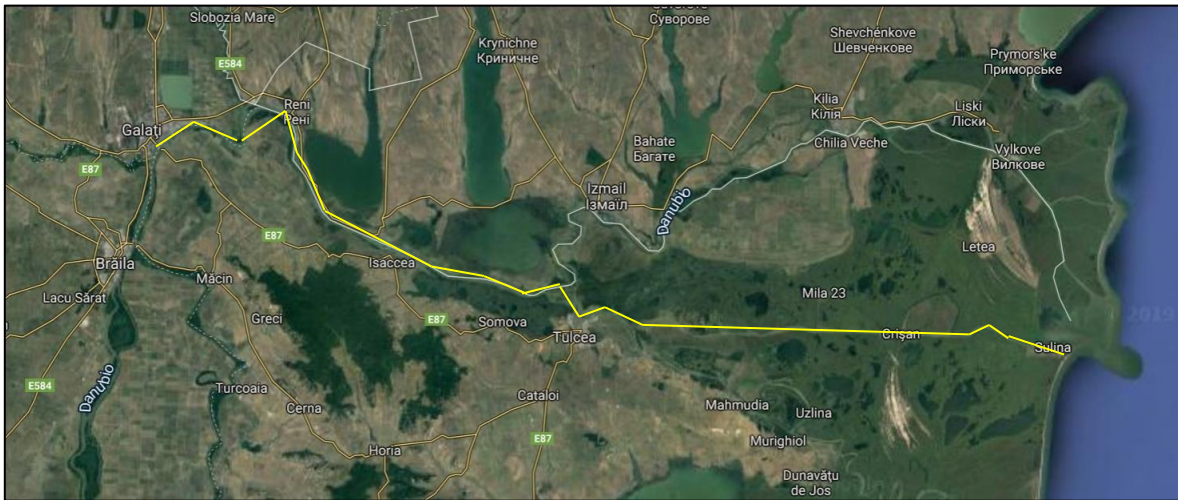


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1. SUMMARY

- 1.1 The BLUE STAR I IMO no. 9375159 was sailing on the 5th October 2019 in ballast upstream on the Danube River with pilot onboard on a voyage from Sulina, Romania to Galati, Romania.



Source Google maps

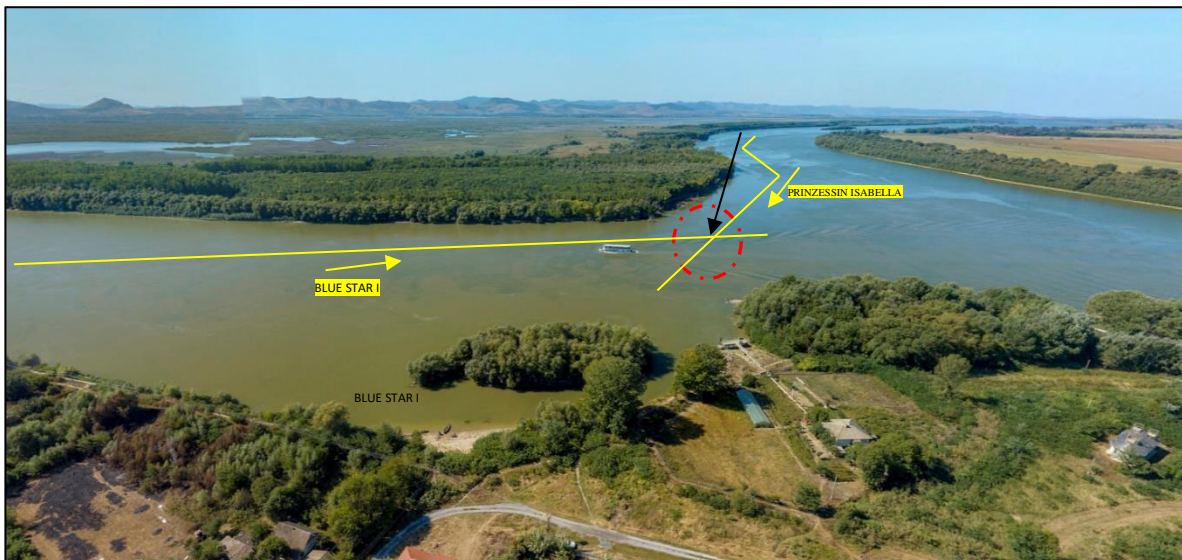
Figure 1.1 – Voyage of BLUE STAR I

- 1.2 On the mean time the PRINZESSIN ISABELLA, ENI number 048054660 was sailing downstream with passengers onboard from the Port of Oltenita, Romania to the Port of Tulcea, Romania.



Figure 1.2 – Voyage of PRINZESSIN ISABELLA

- 1.3 During the passage around 05,15 hrs UTC both ships approached closer to each other towards the river elbow at point M.43
- 1.4 Vegetation impeded visual contact one to each other.
- 1.5 With no instructions received from neither VTS nor pilot and without any communications between ships, both vessels found themselves on the elbow in a cross situation causing the fore end of the BLUE STAR I colliding with the starboard side of the PRINZESSIN ISABELLA.



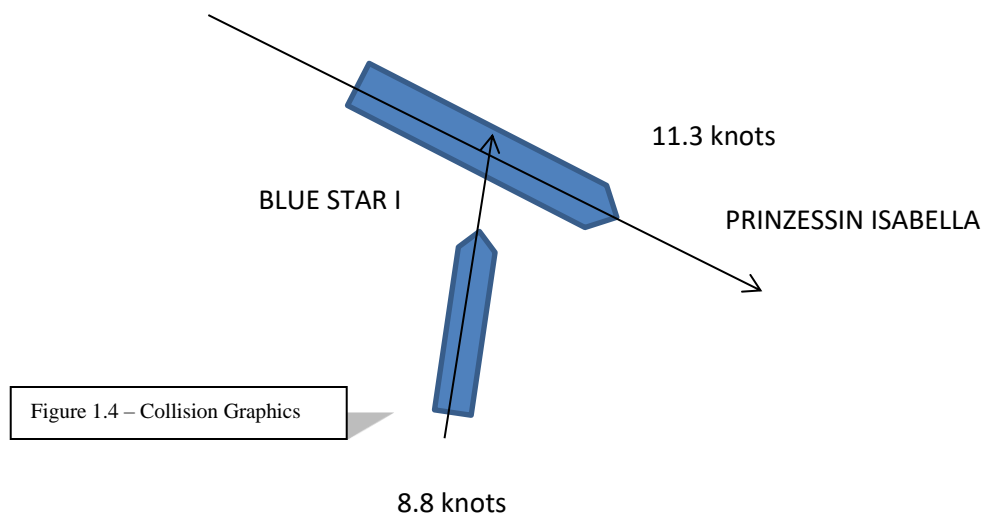
Source Google maps

Figure 1.3 – Position of Collision

- 1.6 As a consequence of the collision, a number of cabins on the starboard side of the PRINZESSIN ISABELLA were heavily damaged and a number of passengers were injured.



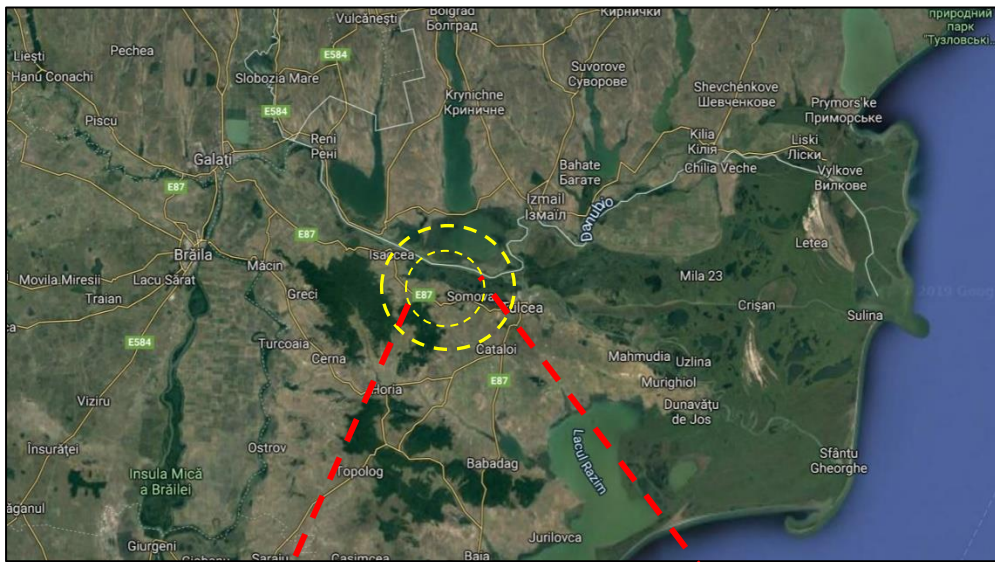
- 1.7 At the time of the collision the BLUE STAR I was in ballast and had a total of 296mt of MGO with the following drafts,
- | | |
|-----|--------|
| Fwd | 2.01 m |
| Aft | 3.30 m |
- 1.8 Following the collision the PRINZESSIN ISABELLA continued her voyage to the Port of Tulcea to treat the injured passengers in shore facilities.
- 1.9 All crew were mustered for immediate rescue operations.
- 1.10 This marine safety investigation was classified as a serious marine safety investigation in accordance with Chapter 2 of the MSC.255(84). Additionally, no marine pollution was caused as a result of this marine accident.
- 1.11 This report will try to analyse the different contributing factors leading to this collision as well as listing possible remedial actions to prevent similar collisions.
- 1.12 Time given in this report is in local format.





1.1 CASUALTY DETAILS

Particulars	Details
TIME AND DATE	05:23.05 UTC, 05 th October 2019
LOCATION /GEOGRAPHICAL POSITION OF INCIDENT	N 45° 13.536' - E 028° 44.508'
CREW/PASSENGERS ON BOARD	BLUE STAR I 14/0 PRINZESSIN ISABELLA 40/170
INJURIES / FATALITIES/ POLLUTION	BLUE STAR I 0 / 0 / No PRINZESSIN ISABELLA 4 / 0 / No
DATE OF INVESTIGATION	05 th October 2019



Source Google maps

Figure 1.5 – Incident location





2. PARTICULARS

BLUE STAR I

NAME	: BLUE STAR I
FLAG	: PANAMA
PORT OF REGISTRY	: PANAMA
OFFICIAL NUMBER	: 33789-08-C
CALL SIGN	: 3ELP3
IMO NUMBER	: 9375159
TYPE	: General Cargo
L.O.A.	: 98.00 m
L.B.P	: 91.54 m
BREADTH	: 15.80 m
DEPTH	: 7.40 m
G.R.T	: 3254
N.R.T	: 1958
DEAD WEIGHT	: 5245

- 2.1 The vessel was keel laid on the 14th December 2004 and delivered on 09th November 2005 at Xiangshan Quianjing Shipbulding Co. Ltd. Ningho, China.
- 2.2 At the time of the accident the vessel was owned by BLUE STAR MARINE CO. LTD represented by the firm ARIAS, FABREGA & FABREGA in Panama and managed by FETIDA MARITIME LTD. of Odessa, Ukraine with company identification number 5416952.
- 2.3 The vessel was classed with RMRS as KM * (Self-propelled ship) at the time of the accident she had all the statutory certificates up to date and valid.

- 2.4 Last statutory and class renewal and surveys had been carried out in Chornomorsk, Ukraine on the 02nd December 2018.
- 2.5 The vessel is powered by an eight (8) cylinder, GUANGZHOU 4-stroke engine which is designed with an MCR of 1,765 kW coupled through a gearbox to a fixed pitch propeller.
- 2.6 The service speed of the vessel is of 11.00 knots and she is certified for the carriage of a total of seventeen (17) persons.
- 2.7 The cargo compartments are designed with a total of two (2) holds capable to carry a total of 6,749.70 m³
- 2.8 The vessel is designed with a summer deadweight of 5,245 mt.

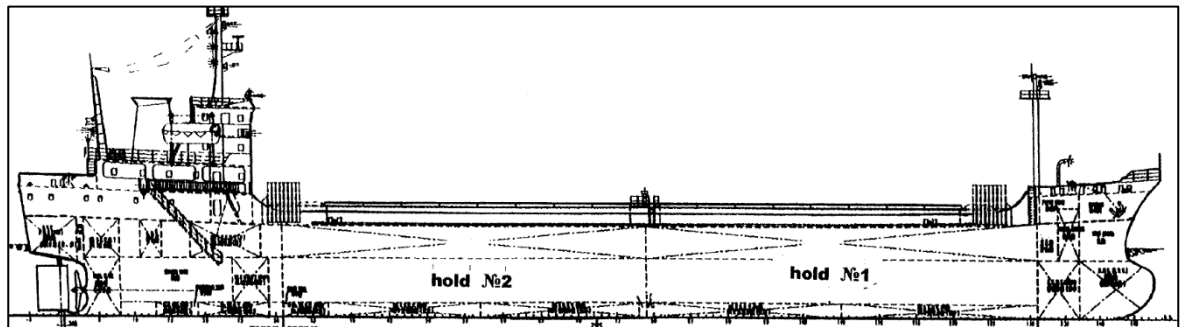


Figure 2.1 BLUE STAR I General Arrangement profile



Figure 2.2 – BLUE STAR I General views

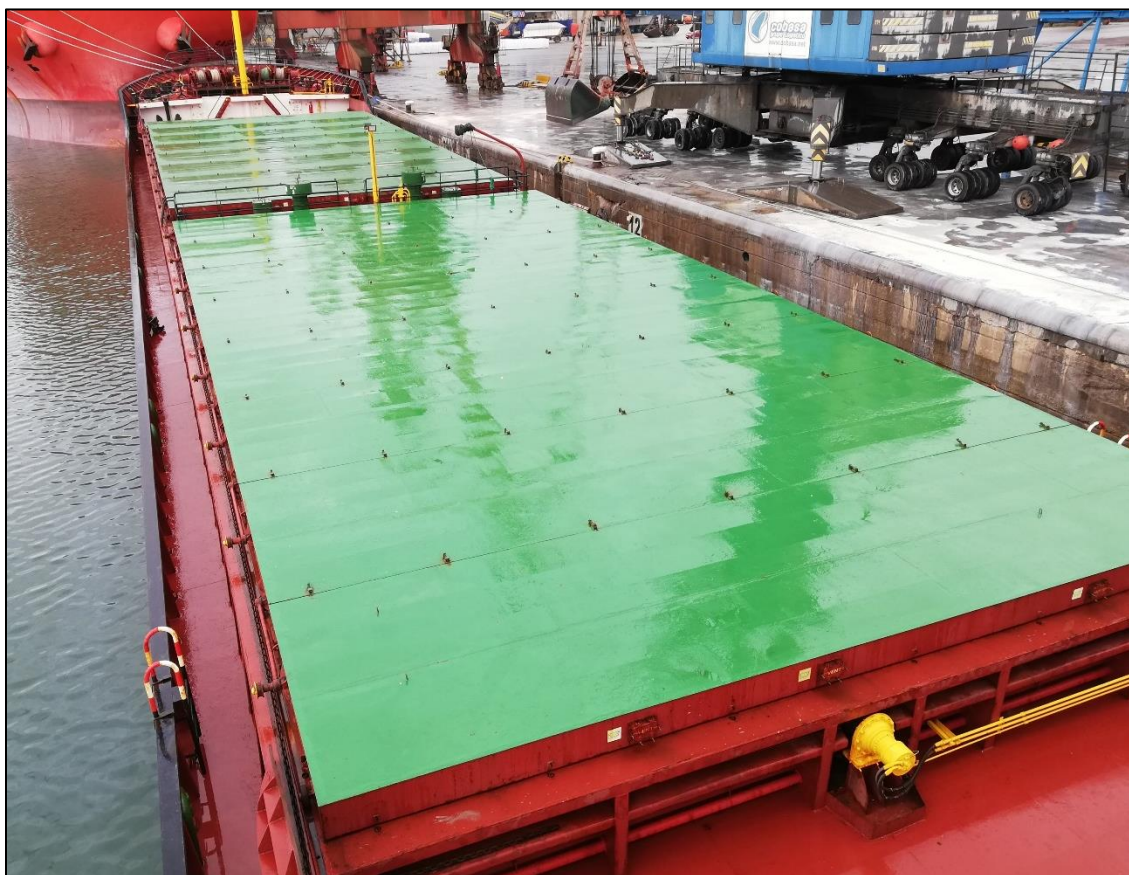


Figure 2.3 – BLUE STAR I General views

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2.9 The last Port State Control (Paris MoU) survey prior the accident was carried out in Piraeus, Greece on the 05th April 2019 with the following deficiencies recorded.

1. Main engine malfunction alert message. Incident not reported
2. ISM not as required

2.10 The last survey carried out by the Panama Maritime administration was carried out in the Port of Torre Annunziata, Italy on the 13th August 2019 with the following deficiencies recorded.

1. Food segregation.
2. A/C system out of order
3. SOLAS old edition
4. Substitute persons missing on muster list



Ship Certificates

Statutory inspections and certificates	Class/Flag	Issue date	Expiry date
International Tonnage Certificate	RMRS	17.10.2008	-
Cargo Ship Safety Construction Certificate	RMRS	04.04.2019	27.12.2022
Cargo Ship Safety Equipment Certificate	RMRS	20.12.2017	27.12.2022
Cargo Ship Safety Radio Certificate	RMRS	20.12.2017	27.12.2022
International Load Line Certificate	RMRS	20.12.2017	27.12.2022
International Oil Pollution Prevention Certificate	RMRS	04.12.2017	04.04.2022
International Air Pollution Prevention Certificate	RMRS	20.12.2017	27.12.2022
Document of Compliance (ISM)	RMRS	04.09.2019	10.09.2024
Safety Management Certificate	RMRS	03.10.2019	04.10.2024
International Sewage Pollution Prevention Certificate	RMRS	20.12.2017	27.12.2022
Maritime Labour Certificate	RMRS	09.08.2018	13.08.2023
Certificate of Class	RMRS	20.12.2017	27.12.2022
International Energy Efficiency Certificate	RMRS	02.04.2014	-



Navigational Bridge Arrangements

- 2.11 The vessel holds a valid cargo ship safety equipment certificate and cargo ship safety radio certificate with valid Forms E and R respectively.
- 2.12 The navigational bridge is fitted with the following equipment.

Description	Maker	Model
Radar 1	KODEN 2900 mdr105p	
Radar 2	FURUNO	FAR 2117
Gyro Compass	CHINA SHANGHAI	HQ 50DL
A.I.S.	SAMYONG	SI-30A
GPS 1	SAMYONG	SPR 1400
VDR	HEADWAY	HWT-105
Echo Sounder	FURUNO	FE700

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Description	Maker	Model
NAVTEX	SAMYONG	SNX-300
VHF DSC	FURUNO	FM8500
VHF 1	SAMYONG	SS 6000 A
VHS 2	ICOM	IC M45
MF/HF	SAMYONG	SRG 11550 DN
INM C 1	SAMYONG	-
INMC 2	FURUNO	-
Emerg. VHF	SAMYONG	STV 160

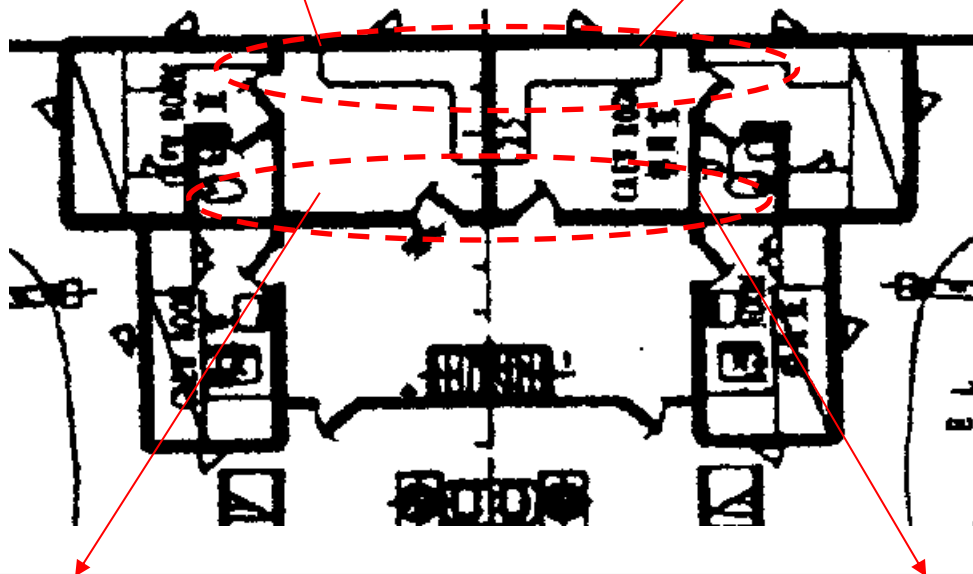


Figure 2.4 – BLUE STAR I Navigational bridge arrangement

2.13 The navigational bridge consists of a main console fwd with all the main navigational equipment. On the port side the VDR, radar, speed log and the VHF are fitted.



Figure 2.5– Light console



Figure 2.6– VHF and lights



Figure 2.7– VHF



Figure 2.8– Speed log



Figure 2.9– Radar Port side

- 2.14 On the starboard side, the second radar is fitted as well as the VHF, engine telegraph below the forward windows there is a large radar which partly occupies the visibility outside if looking forward.



Figure 2.10– Ship’s Computer



Figure 2.11– Radar Stbd side



Figure 2.12– Emergency communications



Figure 2.13– AIS and VHF DSC

- 2.15 The main console on the centre line houses the main steering stand with the gyro integrated.



Figure 2.14– Steering stand

- 2.16 The radio room is fitted on the port aft of the navigational bridge.



Figure 2.15– Radio room



Background of Managers

- 2.17 FETIDA MARITIME LTD. with IMO id 5416952 holds a Document of Compliance certificate issued by RMS on the 04th September 2019, valid to 10th September 2024.
- 2.18 The company is situated in Odessa, Ukraine.
- 2.19 At the time of accident the company was managing one (1) ship only.
- 2.20 The BLUE STAR I was under its management since 2008.



PRINZESSIN ISABELLA

NAME : PRINZESSIN ISABELLA
FLAG : MALTA
PORT OF REGISTRY : VALLETTA
OFFICIAL NUMBER : 11079
CALL SIGN : 9HKQ9
ENI NUMBER : 04804660
TYPE : Passenger Ship
L.O.A. : 125.50 m
L.B.P : 125.50 m
BREADTH : 11.40 m
DRAFT : 1.60 m
G.R.T : 1964
N.R.T : 1350

- 2.21 The vessel was keel laid on the 30th July 2002 at De Hoop Shipyard in in The Netherlands.
- 2.22 At the time of the incident the vessel was owned by PRINZESSIN ISABELLA SHIPPING LIMTED in Floriana, Malta.
- 2.23 The vessel is powered by two 4-stroke engines which designed with an MCR of 1205 bhp.
- 2.24 The service speed of the vessel is of 11.00 knots.
- 2.25 The vessel is designed with three (3) decks, for a total carriage of one hundred and seventy (170) passengers and twelve (12) crewmembers.



- 2.26 The vessel is designed with a reception, saloon and a panoramic restaurant, a lift, wheel chair elevator, gymnasium, shop, reading room, laundry.
- 2.27 On the top deck there are twenty five (25) double cabins with balcony. On the middle deck there are fifty (50) cabins with panoramic windows and the lower deck is fitted with fourteen (14) cabins with smaller windows.

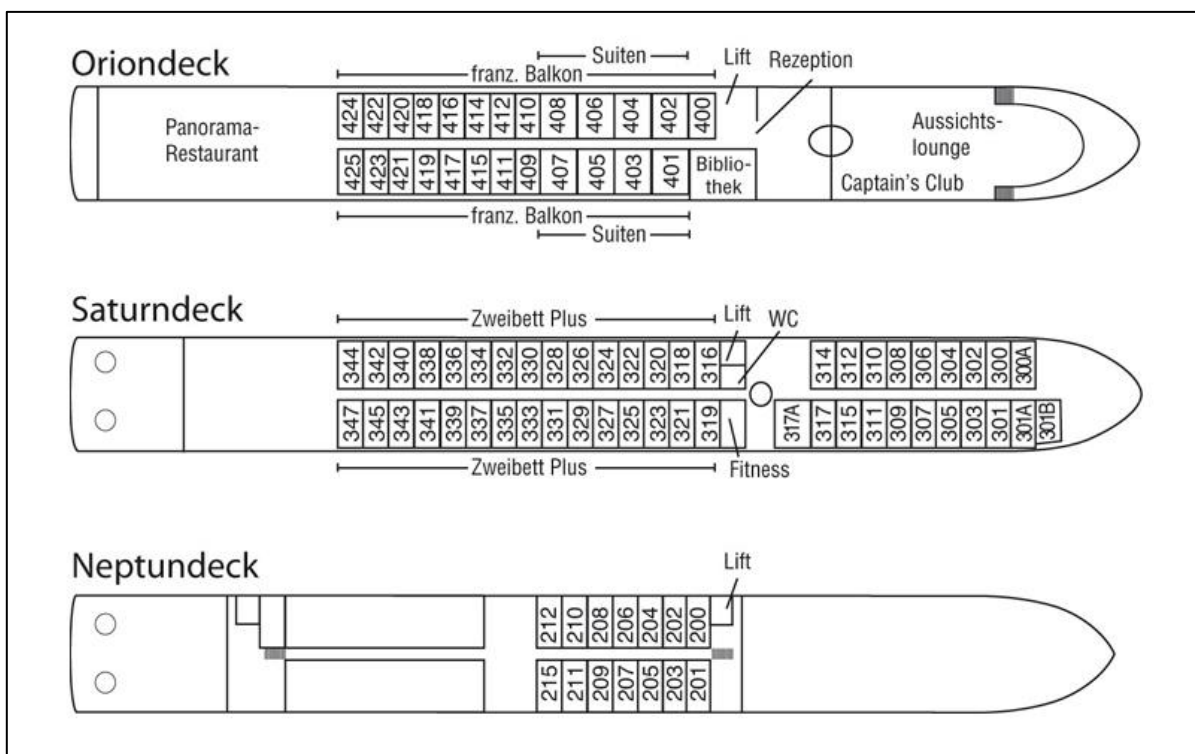


Figure 2.16– Cabin Arrangements



3 NARRATIVE OF EVENTS

- 3.1 All times noted in this report are given in the style of the standard 24-hour clock without additional annotations. Ship times used on this report are UTC.

BACKGROUND

- 3.2 The BLUE STAR I anchored in Tulcea anchorage, Romania and took pilot after passing Sulina Canal, on the 5th October 2019.
- 3.3 The vessel proceeded to Tulcea on the Danube river upstream with pilot onboard as required by the GALATI LOWER DANUBE RIVER ADMINISTRATION A.A.
- 3.4 Weather conditions were as follows,

Sea Beaufort Scale	Mean wave height (m)
0	0

- 3.5 Meantime the PRINZESSIN ISABELLA was sailing downstream on the Danube river from the Port of Oltenita in Romania to the Port of Tulcea.
- 3.6 Towards the km 43, on the elbow of the river; both ships approached to each other on collision course.
- 3.7 Both ships collided on the elbow of the river causing serious damages to PRINZESIN ISABELLA and injuring a number of passengers who where rushed to hospital for treatment.



IN THE RIVER

- 3.8 The vessel arrived to Sulina, Romania from Piraeus on the 4th October 2019.
- 3.9 Pilot boarded at 15,50 hrs the BLUE STAR I at Sulina Canal and proceeded to Sulina canal towards the Danube river.
- 3.10 The BLUE START I arrived to the Danube river on the same day at 20,00 hrs where she dropped anchor waiting for river pilot to proceed to Galati, through the Danube river.
- 3.11 On the 05th October 2019, the weather and sea state were good and recorded on the bridge logbook prior the accident as follows.

Date	Wind	Swell	Sky	Max Temp. °C
05th October 2019	0	0	C	+11

Beaufort Scale

- 3.12 The pilot boarded the BLUE STAR I on the 5th October 2019 at 04.10 hrs.
- 3.13 The Master handed the pilot card which was acknowledged by the pilot on arrival to the bridge.
- 3.14 At 04,25 hrs the vessel started to heave up both anchors and at 05.00 hrs she was underway upstream on the Danube river.
- 3.15 The Master took over the watch on the bridge at 05,00 hrs with pilot onboard.
- 3.16 Vessel was proceeding at an average speed of 8.4 knots.
- 3.17 Meantime the PRINZESSIN ISABELLA was proceeding downstream the river at an average speed of 11.7 knots.
- 3.18 Both ships where approaching a river elbow at point M43.



- 3.19 At 05,10 hrs the PRINZESSIN ISABELLA appeared on the AIS /radar but apparently unnoticed by the Master and the pilot.
- 3.20 As gathered on data from the VDR no VHF contact attempts on the BLUE STAR I were received
- 3.21 During the transit Master was talking to someone else on the bridge on preparations of the ship for authorities and preparation of garbage to be disposed ashore.
- 3.22 Vegetation on the elbow of the river was impeding visual contact from the bridge of the BLUE STAR I and although both ships were approaching fast one to the other no echo was received on the radar.

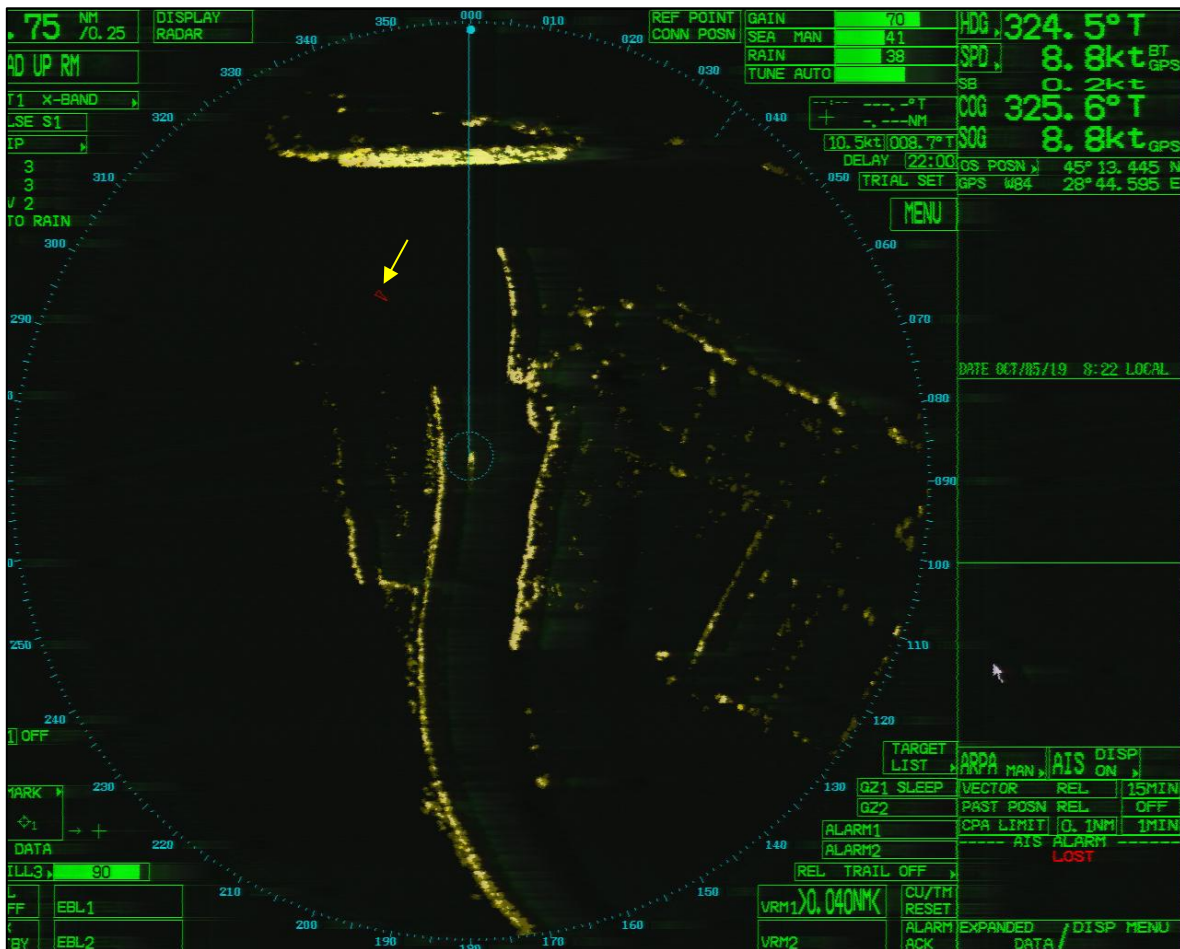


Figure 3.1 – View of radar seconds prior getting visual contact with PRINZESSIN ISABELLA



- 3.23 The PRINCESSIN ISABELLA approaching at 11.3 knots continued to be unnoticed on the radar while the BLUE STAR I was sailing at 8.8 knots on the right hand side of the river.
- 3.24 Within seconds at 05hr 22min 35s both ships sighted each other.

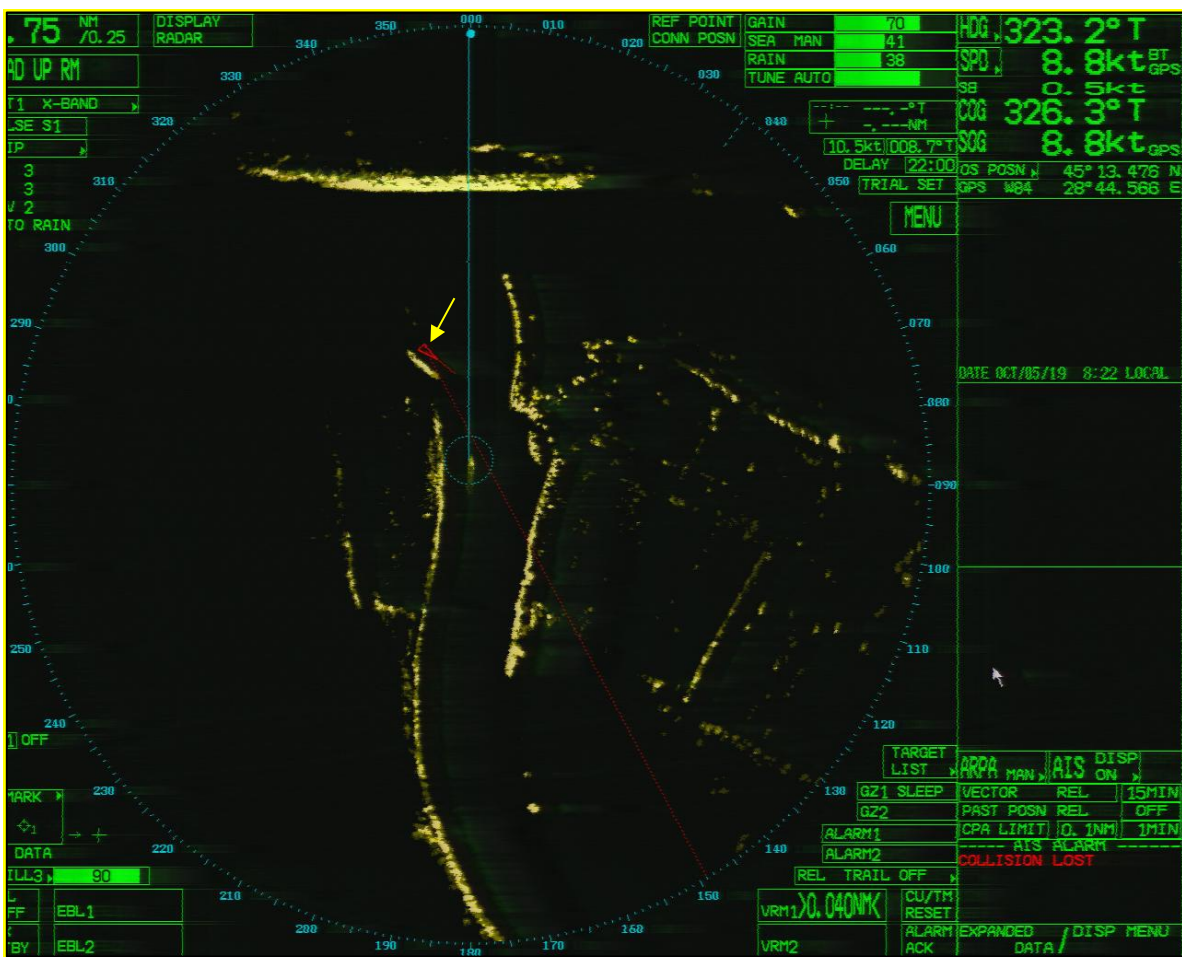


Figure 3.2 – Moment at which the echo is shown on the radar.

- 3.25 In view that there was no space on her starboard side between the BLUE STAR I and the shore river line, the PRINZESSIN ISABELLA turned to port side to try to avoid the BLUE STAR I but at that time, at 05hr 23min 05s the fore end of the BLUE STAR I collided with the starboard side of the PRINZESSIN ISABELLA

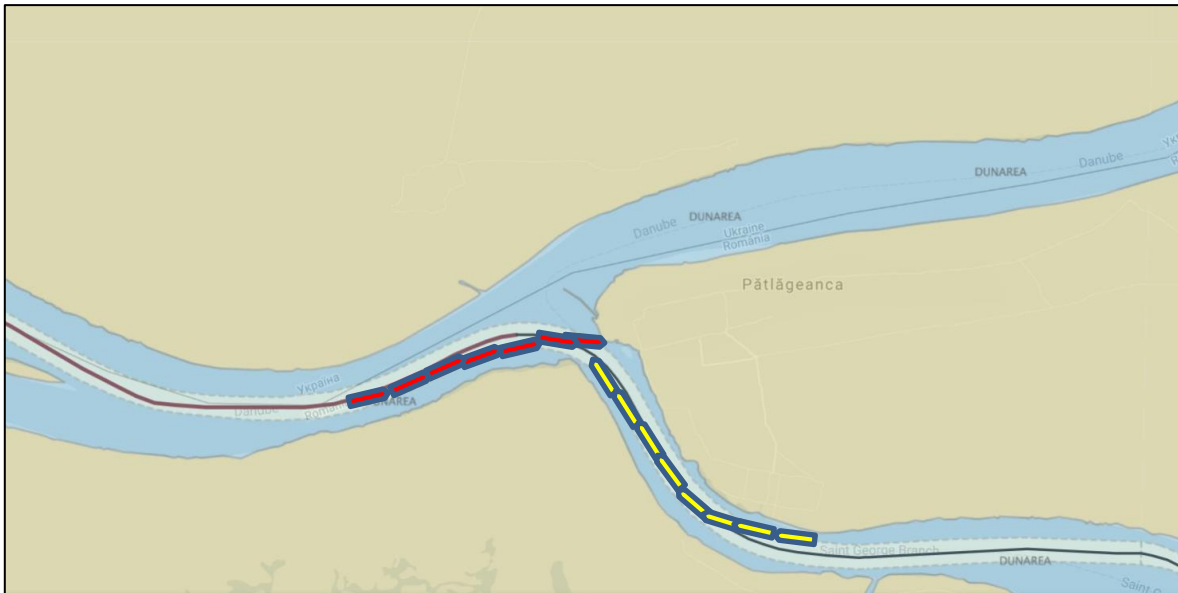


Figure 3.3 – Sailing positions of BLUE STAR I and PRINZESSIN ISABELLA

- 3.26 The PRINZESSIN ISABELLA did not stop but instead continued to the Port of Tulcea while assessing the damages and the passengers in case any shore assistance was urgently required.
- 3.27 Tulcea traffic control was informed.
- 3.28 On the BLUE STAR I meanwhile the Master was questioning the pilot how did it happen and if he did not see the PRINZESSIN ISABELLA.



4. SEQUENCE OF EVENTS – VDR FLOW CHART

<u>Time</u>	<u>Event</u>
05 th Oct. 2019	
04h55m	Position 45° 12.50N – 28° 47.599E Speed – 8.8 knots. A conversation is recorded between Master and some other crew (not identified) about preparation of vessel for authorities on arrival and tasks to be carried out on arrival. PRINZESSIN ISABELLA visible on radar as AIS but not identified by the OOW (Master) Vessel is on right hand side of the river.
05h10m	Position 45° 12.80N – 28° 46.928E Speed – up to 9.2 knots. PRINZESSIN ISABELLA remains unnoticed on radar AIS. Some paper work is recorded.
05h15m	Position 45° 12.949N – 28° 45.734E Speed – 9.3 knots. PRINZESSIN ISABELLA remains unnoticed on radar AIS 2 nautical miles from BLUE STAR I. Vessel moving towards the middle of the river.
05h20m	Position 45° 13.163N – 28° 44.904E Speed – 8.4 knots. PRINZESSIN ISABELLA remains unnoticed on radar AIS 0.91 nautical miles from BLUE STAR I approaching at 11.7 knots. PRINZESSIN SABELLA calls Tulcea.
05h21m10s	Position 45° 13.301N – 28° 44.744E Speed – 8.4 knots. PRINZESSIN ISABELLA remains unnoticed on radar AIS 0.60 nautical miles from BLUE STAR I approaching at 11.7 knots. Vessel approaching the river elbow and moving towards the left hand side of the river.
05h21m38s	Both ships continue approaching with no visual contact nor communications.
05h22m16s	Both ships continue approaching with no visual contact nor communications.
05h22m26s	Speed 8.8 knots. First visual contact recorded. PRINZESSIN ISABELLA 0.23 nautical miles from BLUE STAR I approaching at 11.3 knots
05h22m28s	Speed 8.8 knots. First radar echo on screen. PRINZESSIN ISABELLA 0.18 nautical miles from BLUE STAR I approaching at 11.2 knots
05h22m45s	Position 45° 13.476N – 28° 44.566E Speed – 8.8 knots. First order “portside” from pilot given followed by some foul language and “hard to port” Such orders are repeated

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	twice among more swearing
05h23m00s	Position 45° 13.536N – 28° 44.508E Speed – 8.7 knots. Crash loud noise recorded. PRINZESSIN ISABELLA speed 11.4 knots Master start questioning pilot how did it happen.

5. Damages/Pollution/Fatalities

5.1 The PRINZESSIN ISABELLA suffered damages to approximately eleven (11) cabins

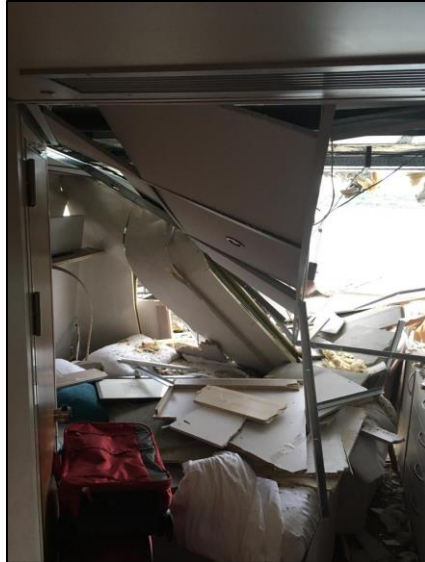


Figure 5.1 – Damages to Cabins



Figure 5.2 – Damages to Cabins



Figure 5.3 – Damages to Cabins



Figure 5.4 – Damages to Cabins

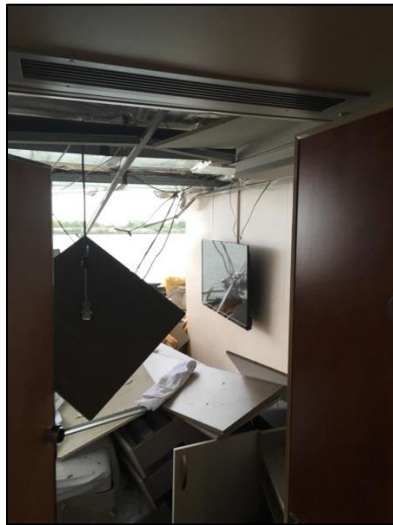


Figure 5.5 – Damages to Cabins

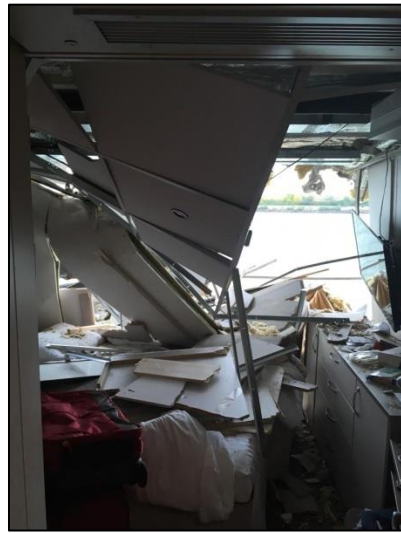


Figure 5-6 – Damages to Cabins



Figure 5.7 – Damages to Cabins

- 5.2 The upper deck of the PRINZESSIN ISABELLA was also damaged by the fore end of the BLUE STAR I



Figure 5.8 – Damages to upper deck

- 5.3 A total of four (4) passengers were taken to Hospital for treatment. Three (3) of the passengers returned onboard.

- 5.4 The BLUE STAR I suffered damages to the bulbous bow with a hole leading to the fore peak tank and some minor damages to the hull coatings on the fore end.



Figure 5.9 – Damages to bulbous bow



Figure 5.10 – Scratches on coating

6. ANALISYS

- 6.1 The bridge team at the time of the accident on the BLUE STAR I was formed by the Master, one AB helmsman and the pilot.
- 6.2 On the VDR records the pilot is the only one heard giving orders directly to the helmsman.
- 6.3 The bridge team at the time of the accident on the PRINZESSIN ISABELLA was formed of the Master and the 3rd Officer.
- 6.4 At the time of the collision the BLUE STAR I was sailing upstream at 8.8 knots while the PRINZESSIN ISABELLA was sailing downstream at 11.2 knots towards the elbow of the river with limited visual sight due to vegetation.
- 6.5 The BLUE STAR I is installed with an AIS interfaced with the radar and minutes before the eye contact and radar echoes seen on screen, the PRINZESSIN ISABELLA was displayed on AIS on the radar although not targeted.

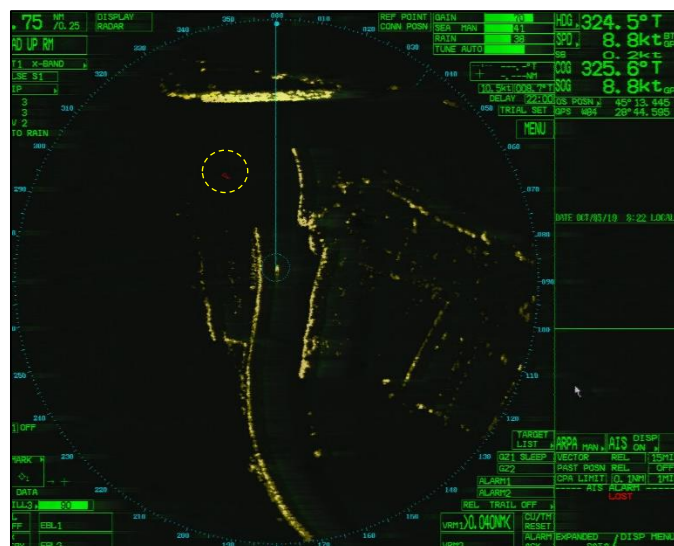


Figure 6.1 – PRINZESSIN ISABELLA showing on radar AIS



- 6.6 Despite having the PRINZESSIN ISABELLA displayed on the radar, the AIS data box was empty hence not target selected.
- 6.7 VDR records gathered for the investigation give no evidence of PRINZESSIN ISABELLA and BLUE STAR I communicating to each other agreeing to pass port to port towards the elbow of the river.
- 6.8 VDR records on BLUE STAR I give no account of pilot on bridge communicating with Tulcea traffic control or PRINZESSIN ISABELLA, nor giving any instructions to either the watch officer or the helmsman.
- 6.9 Sailing with pilot onboard was compulsory by the BLUE STAR I as required in Ch. 1.05 of the “Special Navigation Rules for the Danube” issued by the GALATI LOWER DANUBE RIVER ADMINISTRATION A.A.
- 6.10 The BLUE STAR I was steaming on the left side of her sailing direction while the “Special Navigation Rules for the Danube” requires ships to sail on the right hand side of her sailing direction.
- 6.11 In Article 3.02 of the “Special Navigation Rules for the Danube” the direction may be changed after announcing the intention by acoustic or visual signals and by radio communication which was not the case as far as seen on the actions taken and the VDR records.
- 6.12 Right after visual contact by the BLUE STAR I the pilot starts to give orders to steer hard to port. Master is not heard during the maneuver.
- 6.13 After the collision the Master is heard on the VDR asking pilot how did it happened hence denoting that Master did not know how the collision happened.
- 6.14 Master asked Pilot after the collision why did he decide to go port hence denoting that all decisions and obligations were given to the pilot and the Master was not performing an effective watch.



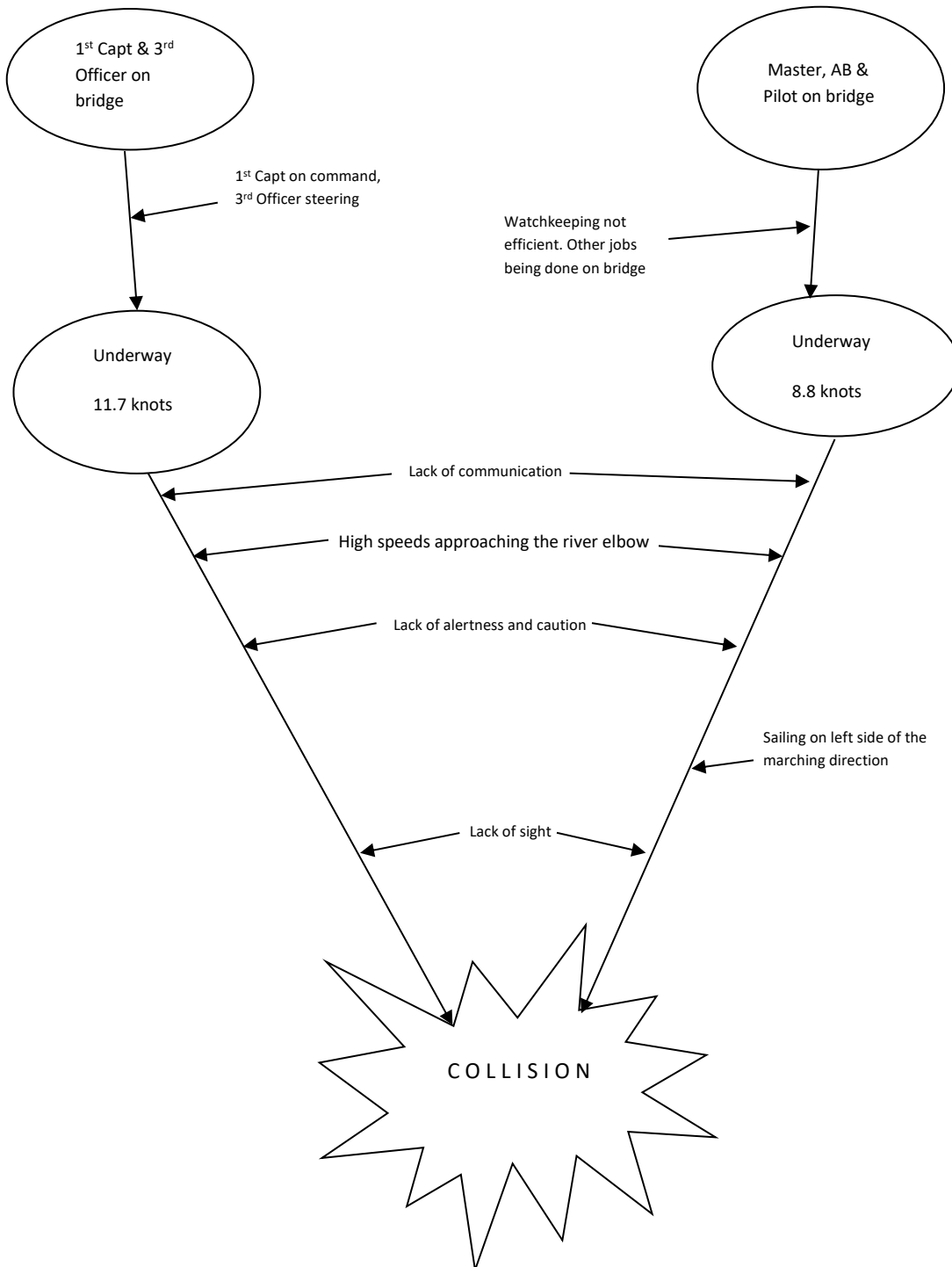
- 6.15 No communications between PRINZESSIN ISABELLA and BLUE STAR I were heard on the VDR.
- 6.16 From the time the vessel was sighted to the time of collision there were only thirty two (32) seconds hence no sufficient time to maneuver.
- 6.17 COLREG applies to all ships and all navigable waters as mentioned in Regulation 1(a).
- 6.18 Both ships approached to each other at a high speed.



7. HUMAN ERROR ANALYSIS

PRINZESSIN ISABELLA

BLUE STAR I





- 7.1 Some of the contributing human error factors are listed below:
- Inadequate risk assessment while navigating on narrow River
 - Inadequate watch by the Master while pilot was on the bridge.
- 7.2 Master was well familiar with the vessel and had a good rest prior the watch.
- 7.3 Master was paying more attention to preparations to arrival on destination rather than maintaining an effective watch.
- 7.4 VTS did not intervene in view of both ships approaching each other at the elbow of the river.



8. CONCLUSIONS

- 8.1 Although Master was on the bridge there was no evidence that the Master was paying any attention to the navigational equipment nor communicating with the Pilot or keeping an effective watch.
- 8.2 The Master was not performing an effective watch. Leaving all decisions and watch keeping to the Pilot while Master was discussing on the bridge with someone else all tasks to prepare the ship for authorities on arrival to destination.
- 8.3 The ship/pilot information exchange was not effective.
- 8.4 No records of PRINZESSIN ISABELLA trying to contact BLUE STAR I are recorded on VDR.
- 8.5 Not an effective watch was maintained by VTS since nobody was able to foresee the danger on the elbow of the river.
- 8.6 Proper lookout as described by COLREG Rule 5 was not maintained.
- 8.7 Safe speed towards the river elbow was not considered safe. (COLREG Rule 6)
- 8.8 Lack of alertness and caution taken by the pilot while approaching the river elbow. (COLREG Rule 9.f)
- 8.9 The OOW or the pilot on the BLUE STAR I did not detect the PRINZESSIN ISABELLA on radar hence COLREG Rule 19.
- 8.10 No voyage plan was executed for the Danube river transit.
- 8.11 The BLUE STAR was supposed to be sailing on the right hand side of their marching direction. Article 3.01 Par. 1 of the Danube Special rules and COLREG Rule 9 (a)



- 8.12 No attention was paid by VTS on the tight bend where no ships were allowed to approach one to the other at less than 1 nautical mile. Article 3.06 Par. 1 of the Danube Special rules.
- 8.13 None of the ships used all available means to avoid the collision. COLREG Rule 7 (a)
- 8.14 Radars were not properly used. No evidence of officers of the watch paying attention to the radar AIS data showed prior the collision to obtain early evidence of collision. COLREG Rule 7 (b)
- 8.15 No action to avoid collision was made in ample time. COLREG Rule 8 (a)
- 8.16 None of the vessels sounded a prolonged blast when approaching the river bend. COLREG Rule 34 (e)



9. CORRECTIVE ACTIONS

- 9.1 At the time of the investigation no corrective actions were observed from the operator of the BLUE STAR I.
- 9.2 It was unknown if any corrective actions were carried out by operators of PRINZESSIN ISABELLA, Danube pilots or Tulcea VTS.



10. RECOMENDATIONS

To Owners:

- 10.1 Distribute a safety notices throughout the fleet describing the accident and including the accident in the following scheduled safety training since the vessel is on the same route constantly. (ISM)
- 10.2 Comprehensive review SMS manuals in regards to navigation with pilot onboard and ship/pilot exchange of information procedures. (ISM)
- 10.3 Carry out an internal investigation of the accident to establish the contributing factors and identify measures to be considered to avoid a similar accident. (ISM)
- 10.4 Include river navigation involving pilot onboard on the Passage and its monitoring during navigation. (ISM) (SOLAS Ch. V Reg. 34 Par. 2.3) (Resolution A.893(21) “Guidelines for voyage planning”)
- 10.5 Review and amend risk assessment related to navigation on rivers.
- 10.6 Specify and highlight on the ISM that despite the duties and obligations of a pilot, the pilot’s presence on board does not relieve the Master of the watch officer of the navigational bridge from their duties and obligation for the safety of the ship. (Resolution 960(23) “Recommendation on operational procedures for maritime pilots other than deep sea pilots”)
- 10.7 Ensure that all members of the bridge team are well familiar with COLREG Rules. (COLREG)
- 10.8 Comprehensive review of safety manuals, procedures and checklists in regards to navigation with pilot onboard and ship/pilot exchange of information procedures. (ISM)
- 10.9 Ensure Master is well familiarized with Article 5.07 of the GALATI LOWER DANUBE RIVER ADMINISTRATION A.A.



To Panama Maritime Administration:

- 10.10 Propose to Segumar the issue and distribution of guidelines for preparation and execution of voyage plans addressed o all operators, Masters and watch officers to make them aware of IMO Resolution A.893(21), adopted on 25 November 1999, “Guidelines for voyage planning”

To Danube Pilots / VTS:

- 10.11 Carry out an internal investigation of the accident to establish the contributing factors and identify measures to be considered to avoid a similar accident.
- 10.12 Ensure all pilots are refreshed and familiarized with Resolution A.960(23) Annex 2
- 10.13 Ensure all pilots are refreshed and familiarized with Danube special navigation rules issued by the GALATI LOWER DANUBE RIVER ADMINISTRATION A.A.
- 10.14 Ensure all pilots are well aware of the need of a proper lookout by ship´s crew and officers additionally of their attendance onboard.
- 10.15 VTS to be aware of traffic in river elbow in compliance with Article 3.01 Par. 1 of the Danube Special rules.



Panama Maritime Authority
Directorate General of Merchant Marine
Marine Accident investigation Department