



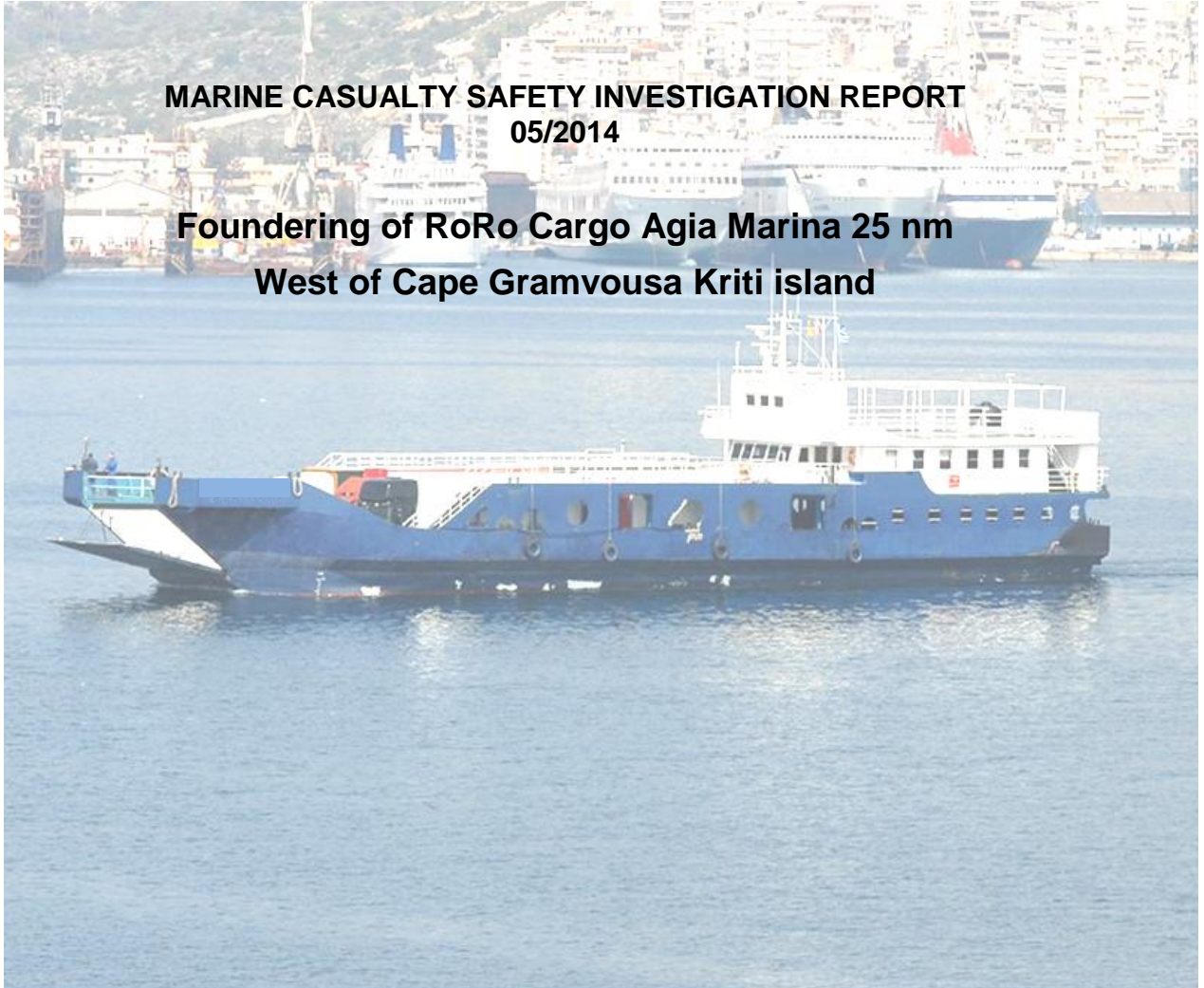
HELLENIC REPUBLIC



HELLENIC BUREAU FOR MARINE CASUALTIES INVESTIGATION

**MARINE CASUALTY SAFETY INVESTIGATION REPORT
05/2014**

**Foundering of RoRo Cargo Agia Marina 25 nm
West of Cape Gramvousa Kriti island**



October 2016

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Foreword

The Hellenic Bureau for Marine Casualties Investigations was established by Law 4033/2011 (Government Gazette 264/12.22.2011), in the context of implementing EU Directive 2009/18/EC.

HBMCI conducts technical investigations into marine casualties or marine incidents with the sole objective to identify and ascertain the circumstances and contributing factors that caused it through analysis and to draw useful conclusions and lessons learned that may lead, if necessary, to safety recommendations addressed to parties involved or stakeholders interested in the marine casualty, aiming to prevent or avoid similar future marine accidents.

The conduct of Safety Investigations into marine casualties or incidents is independent from criminal, discipline, administrative or civil proceedings whose purpose is to apportion blame or determine liability.

This investigation report has been produced without taking under consideration any administrative, disciplinary, judicial (civil or criminal) proceedings and with no litigation in mind. It does not constitute legal advice in any way and should not be construed as such. It seeks to apprehend the sequence of events occurred on the 21 September 2014 that resulted in the examined serious marine casualty.

Fragmentary or partial disposal of the contents of this report, for other purposes than those produced may lead to misleading conclusions.

The investigation report has been prepared in accordance with the format of Annex I of respective Law (Directive 2009/18/EC) and all times quoted refer to local time (UTC +2) unless otherwise stated.

Under the aforementioned framework HBMCI has conducted a safety investigation into the foundering of Ro/Ro Cargo AGIA MARINA, Flag of Togo, IMO 8975122 that occurred on 21 September 2014, 25 nm west of Cape Gramvousa at NW of Kriti Island, Greece, resulting in the loss of three of her crew members including the Master while four crew members were rescued.

This report is based on data acquired by interviews and collection of evidence by the parties engaged in the marine incident. No electronic evidence could be obtained in order to support the sequence of events leading to the marine casualty.

Correspondence with Agia Marina owners or managers could not be established.

Glossary of Abbreviations and Acronyms

1.	AB	Able seaman
2.	AIS	Automatic Identification System
3.	Bfrs	Beaufort (measurement unit of wind force)
4.	COC	Certificate of Competency
5.	gt	gross tonnage
6.	HCG	Hellenic Coast Guard
7.	IMO	International Maritime Organization
8.	ISM	International Management Code for the safe operation of ships and for pollution prevention
9.	kts	knots (nautical miles per hour)
10.	Lat, Long	Latitude, Longitude
11.	LT	local time
12.	m	meters
13.	nm	nautical mile (1852 m)
14.	OOW	Officer of the Watch
15.	RO	Recognized Organization or Classification Society. An organization which meets the relevant conditions set forth by respective international legislation and has been authorized by the flag State Administration to provide the necessary statutory services and certification to ships entitled to fly its flag
16.	SOLAS	Convention for the Safety of Life at Sea 1974, as applied
17.	UTC	Universal Coordinated Time
18.	VDR	Voyage Data Recorder

1. Executive Summary

Marine casualty synopsis

On the 24th of April 2014, at approximately 01:00, Ro-Ro cargo AG MARINA (figure 1) was on passage at the sea area 25 nm west of Gramvousa Islet Crete, Greece. It was reported that on 21 April 2014 she had departed from Montenegro manned with seven crew members and loaded with six trucks to be discharged at a port of Ukraine.



Figure 1. RoRo Cargo Agia Marina. The photo was taken by the time she was named Agios Nikolaos.

On the day of the casualty the vessel had inter alia a provisional Certificate of Registry, a provisional Minimum Safe Manning Certificate and a provisional License for Radio Station Installation, all issued by the Togolese Maritime Administration on 20 January 2014 and valid until 19 July 2014. The navigational crew of AG MARINA was comprised of two navigational Officers, the Master and the Chief Mate. The vessel operated on a “6 on - 6 off” single bridge watch schedule with the Master performing the 0600-1200 and 1800-2400 watch while the Chief Mate was on the 0000-0600 and 1200-1800 watch.

At 00:00 on 24 April 2014, the Chief Mate relieved the Master and took over the bridge watch. By that time encountering weather condition were heavy with northern wind close to 8 bfrs and high waves.

At approximately 15 minutes after the watch hand-over a big wave hit Agia Marine on her aft section and forced her to turn to starboard.

Subsequently the vessel started encountering heavy list to starboard eventually increasing under heavy rolling.

Chief mate alerted Master and the rest of the crew resting at their cabins located at the same deck with the bridge.

Master ordered the crew to put on their thermal suits and lifejackets in order to abandon the ship.

According to statements, all crew members jumped into the sea and Agia Marina sank within twenty minutes.

Four crew members that reported to have been grouped, managed to get on a floating life raft.

Piraeus JRCC launched a SAR operation deploying Coast Guard patrol vessels, airborne units as well as nearby vessels.

At approximately 0735 Agia Marina's life raft was spotted by M/V Princess Maria and the four castaways were recovered and transferred ashore by the Coast Guard patrol vessel. The Search & Rescue Operation continued for the next three days following 72 hours nevertheless the Master and the two crew members of Agia Marina were not found.

Additional information

Following the vessel's foundering several tobacco boxes without customs labels were found nearby the casualty area and were collected by a Coast Guard patrol vessel and delivered to the Greek Customs Authorities, indicating that they were the cargo of the trucks loaded on Agia Marina.

Correspondence with Agia Marina owners or managers could not be established.

2. Factual Information

2.1 Particulars of Agia Marina

Name of Vessel	AGIA MARINA
Call Sign	5VCP2
Company (ISM Code A 1.1.2)	Not applicable (less than 500 gt)
Ownership	HERO Marine S.A, Majuro, Marshall Islands
Flag State	TOGO
Port & no of Registry	LOME TG-00539L
IMO Number	8975122
Type of Vessel	Ro/Ro Cargo
Classification Society	N/A
Year built	1966
Shipyard	Savvas Shipyard, Elefsis, Greece
Construction	Steel
LOA (Length over all)	48.50 m
Breadth (extreme)	12.20 m
Depth	2.27 m
Draught	1.67 m
Gross tonnage	350
Net Tonnage	105
Engine	3x27 KW Scania 4 stroke diesel engines
Document of Compliance	Not Applicable
Safety Management Cert.	Not Applicable
Last Port State Control inspection	10-01-2014
Classification Society	Dromon Bureau of Shipping

2.2 Voyage Particulars

Vessel's name	Agia Marina
Port of departure	N/A Montenegro
Port of arrival	N/A Ukraine
Type of voyage	Coastal
Cargo information	Loaded with 6 trucks
Manning	07 crew members
Minimum safe manning	06

2.3 Marine casualty information

Vessel's name	Agia Marina
Type of casualty	Very serious
Date and time	24 April 2014 at approximately 0100
Position	lat: 35° 37' 37'' N / Long 023° 00' 50'' E
Location	25 nm West of Cape Gramvousa, West of Kriti Island, Greece
External environment	North winds 8-9 Bfrs / Gale - sea state moderately high waves visibility poor - scattered clouds - night time
Ship operation	Navigation
Voyage segment	Underway to Ukraine
Consequences (to individuals, environment, property)	04 crew members rescued - 03 crew members reported missing and never found Restricted pollution of diesel oil Total loss

2.4 Emergency response

Authorities & services involved - S & R Units

Hellenic Coast Guard Search & Rescue Coordination Center	→ Coast Guard Officers
Hellenic Coast Guard	→ 1 Offshore Patrol Vessel → 1 HCG Search & Rescue Boat → 1 Surveillance Aircraft → 1 Frontex Surveillance Aircraft
Chania Coast Guard Authority	→ 1 Patrol boat → 2 Patrol vehicles from shore
Hellenic Air Force	→ 1 Helicopter
Hellenic Navy	→ 1 Navy Ship
Nearby vessels	→ 22 cargo ships in total

3. Narrative

The evolution of the events is only based on crew's interviews as Agia Marina was not required to be equipped with VDR and did not carry an Automatic Identification System.

3.1 Ro-Ro Cargo Agia Marina

Ro-Ro Cargo Agia Marina was a small cargo ship (landing craft freighter) structured with a single open loading deck and capable of transporting tracked or wheeled vehicles between nearby ports, build in Elefsis Greece, in 1964 (figure 2).

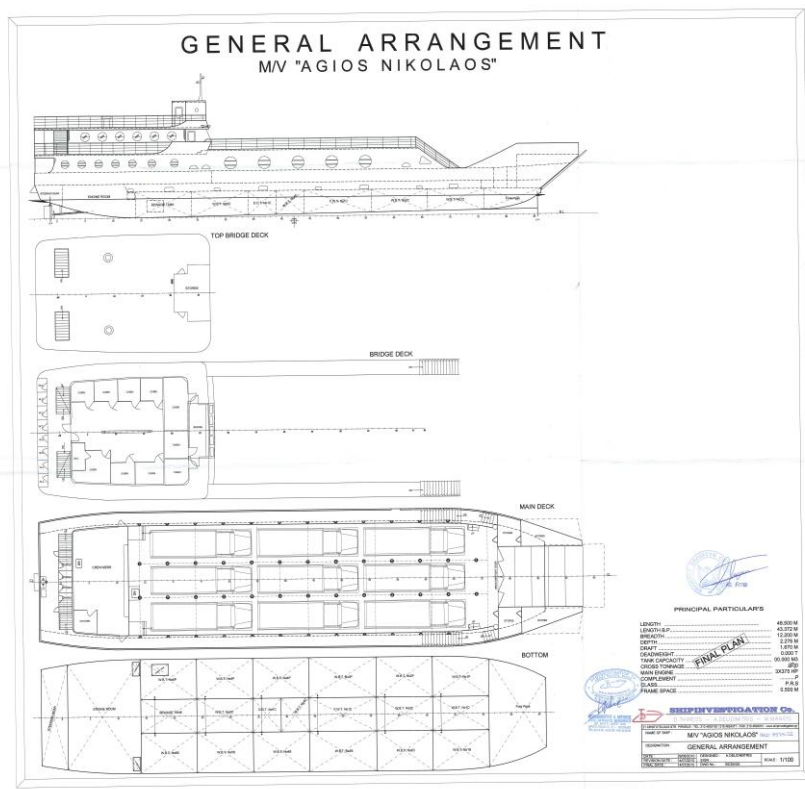


Figure 2. The general arrangement plan of Agia Marina, issued by the Phoenix Register of Shipping under her previous name Agios Nikolaos.

Based on reports she was operating in coastal ferry lines, in Greece for many years. During recent years and according to her Statutory Certificates she was reported to operate in coastal voyages in the Mediterranean Sea.

By the time of the marine casualty she was flying the flag of Togo.

Agia Marina, based on her gross tonnage of 350, was classified as a non SOLAS vessel. Taking into account that the vessel concerned was found to have changed Flag and names during the past 5 years, a short summary of her flag and name history is presenting below:

.1 2011 – Name Agios Nikolaos/Flag Sierra Leone/Class Phoenix Register

On 19 January 2011, she was detained in the port of Salamis, Greece following a Port State Control Inspection. By that time, she was named Agios Nikolaos flying the flag of Sierra Leone. Her Class Certificates were issued by Phoenix Register of Shipping and she was reported to be operating under the ownership of Miriam Maritime Co.

.2 December 2013 – Name Titan/Flag Togo/Class Columbus American Register

On 20 December 2013, Agios Nikolaos was renamed to Titan and was registered in Lome Registry under the flag of Togo. Her ownership was recorded to be "Thelmi S.A" based in Global Plaza, 50th Street in the City of Panama.

Titan issued a "Provisional Certificate of Registry" valid until 19 March 2014 under the notation that: *"This Certificate is issued for a single voyage in ballast condition from Greece to Mersin, Turkey"*.

Additionally, the "Tonnage Certificate" was issued and a "Provisional Minimum Safe Manning Certificate" with the same aforementioned notation.

On 24 December 2013 she was inspected at Salamis, Greece by the Classification

Society of Columbus American Register under the authority of the Flag state of Togo. On 03 January 2014, the Columbus American Register issued the following short term Class Certificates:

- “Short Term Cargo Ship Safety Certificate”, valid until 19 March 2014;
- Cargo Ship Safety Certificate, valid until 19 March 2014;
- Load Line Certificate valid until 19 March 2014;

However, it is noted that from the above certificates, only the Short Term Cargo Ship Safety Certificate could be obtained as following correspondence with the local Office of Columbus American Register in Greece, it was reported that vessel’s file was scrapped after the expiration of issued certificates.

On 09 January 2014, the vessel was inspected by the Port State Control Office, in Salamis and a number of deficiencies that remained open from the previous inspection carried out on 19/01/2011 were verified to have been rectified.

The PSC inspection of Titan continued the following day and deficiencies were found and recorded related to navigational equipment that required action to be taken by Titan in order to rectify them.

Titan’s detention order was lifted and permission for a single voyage to Mersin, Turkey as per her Flag annotation on the Provisional Certificate of Registry was granted by the Local Authorities.

Titan was reported to have sailed for Mersin, Turkey where she was subjected to an intermediate survey due to the change of her Class.

.3 January 2014 – Name Agia Marina/Flag Togo/RO Dromon Bureau of Shipping

More specifically, according to evidence collected during the safety investigation that followed the marine casualty, on 20 January 2014, Titan was found to have been renamed to Agia Marina under the same flag of Togo and the same port and number of registry that is Lome TG-00539L.

On 20 January 2014, a new set of Provisional Statutory Certificates was issued by the Directorate of Maritime Affairs of the International Ship Registry of Togolese Republic that were valid until 19 July 2016, as presented below:

Provisional Certificate	Date of issue	Valid	Annotation/conditions
Registry	24/01/2014	19/07/2014	
International Tonnage	24/01/2014		
Radio Station License	24/01/2014	19/07/2014	Navigation trading area A1 (GMDSS)
Minimum Manning	Safe 24/01/2014	19/07/2014	Trading area: Coastal voyages in Mediterranean, Black Sea ports

Based on Agia Marina (former name Titan) Provisional Certificate of Registry her owners recorded to be “HERO MARINE S.A” based in Trust Company Complex, Ajeltake Road, Ajeltake Island, Majuro, Marshall Islands.

On 21 January 2014, Agia Marina was inspected by a Surveyor of her new Classification Society of “Dromon Bureau of Shipping”, in Mersin Turkey.

On 24 January 2014, the “Dromon Bureau of Shipping” under the authority of the Republic of Togo had issued the following Class Certificates that were obtained from her Flag State during the safety investigation’s evidence collection process as quoted below:

Certificate	Date of issue	Valid	Notations/Conditions
Hull Classification	24/01/2014	01/08/2015	10A1 Landing craft - Restricted
Machinery Classification	24/01/2014	01/08/2015	MC – Restricted
International Load Line	24/01/2014	01/08/2015	Permanent services restrictions
Cargo Ship Safety	24/01/2014	01/08/2015	Permanent services restrictions
Cargo Ship Safety Radio	24/01/2014	01/08/2015	Permanent services restrictions

According to her Hull and Machinery Class Certificates' notations Agia Marina was permitted to conduct:

1. Coastal voyages in Mediterranean and Black Seas;
2. Under fair weather conditions;
3. Under wind force not exceeding 4 BF Scale;
4. With wave height not more than 2 meters.

3.2 The occurrence

According to information obtained through the interview process, on 21 April 2014, Agia Marina was reported to have departed from Montenegro, loaded with 6 trucks that were carrying boxes of cigarettes. It was stated that all trucks were secured and lashed with chains from eight lashing points.

The port of arrival was not exactly specified however based on owners' instructions to the Master she was to deliver her cargo in Ukraine.

On 23 April 2014, Agia Marina was sailing about 30nm miles west of Cape Gramvousa, located at the northwest past of Kriti Island.

As stated by interviewed crew members, due to the stormy weather conditions and the prevailing Northerly winds force 6 to 7 bfrs with high waves, Agia Marina was following a southern course, running before the wind with a course of approximately 190° and speed close to 8 knots while steering was in autopilot mode.

Approximately ten minutes before midnight the Chief Mate came on the bridge to relieve the Master. As stated, although the weather was very bad, the Master went to his cabin and the Chief Mate took over the watch.

According to the Chief Mate, he continued with the same course and speed steering in autopilot when at about 0015 a big wave hit the aft section of Agia Marina causing her to heavily list to starboard while simultaneously she was forced to turn to starboard.

He immediately went to inform the Master that was resting in his cabin, located on the same deck and alerted the rest of crew.

It was reported that when the Master came on bridge efforts were made to try to navigate Agia Marina safely bringing her back on southern course, however it was almost impossible to steer and maneuver her. At the same time the rest of the crew got on the bridge.

It was furthermore stated that the Master having assessed the encountering situation, presumed that a water ingress had occurred and he intended to send a crew member to start the bilge pump. Nevertheless, seconds after he decided that it was impossible as Agia Marina was almost under no command and huge waves close to 6 meters of height were hitting her port side, causing heavy rolling and listing to starboard.

The Master ordered the crew to put on their thermal protection suits and their life jackets and activated the VHF DSC emergency distress call. It was reported that during the last

moments before abandoning Agia Marina he tried to activate the EPIRB and take the SART devices.

Soon after he ordered his crew to abandon Agia Marina and according to statements all crew members jumped into the sea.

It was reported that the Bosun was the first to jump followed by the Cook, the Chief Mate and the Chief Engineer. The Bosun had seen the Master and the rest two crew members – the Electrician and the Engineer – abandoning Agia Marina however they were not observed, seconds after and never recovered from sea.

The exact time of the abandonment could not be determined nevertheless based on rescued crew statements during the interview process it was estimated around 0030 to 0040.

According to crew statements Agia Marina remained floating listing heavily to starboard for approximately 20 minutes. At approximately 0100 as estimated by the rescued crew members she capsized and sank within seconds, 25nm W of Kriti Island (figure 3).

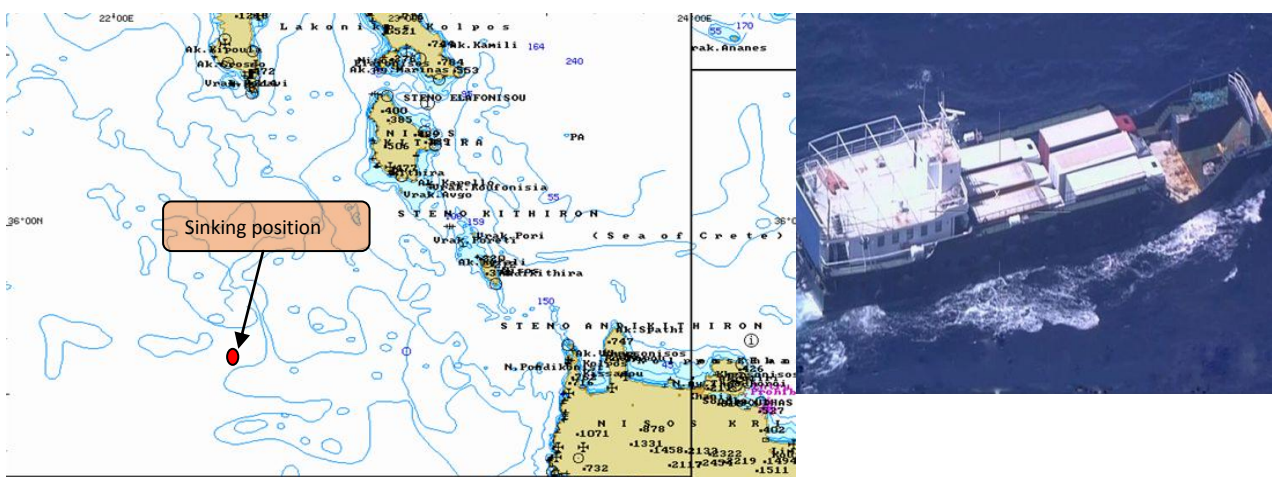


Figure 3. Agia Marina loaded with trucks and her sinking position

A life raft that was released from the sinking Agia Marina was observed by the four crew members grouped together in the sea who managed to get on it.

It was stated that a parachute red rocket was fired and castaways started calling their colleagues still in the sea. However, they did not get any reply.

The four crew members that were in the life raft were spotted by M/V Maria Princess that was participating in the Search & Rescue Operation launched by the Search & Rescue Coordination Center of the Hellenic Coast Guard.

3.3 Emergency response by the Coastal State Competent Authorities

The Search & Rescue Coordination Center of the Hellenic Coast Guard, received a distress call from Agia Marina's EPIRB.

A large-scale Search & Rescue operation was immediately launched and Hellenic Coast Guard S&R means were deployed on casualty scene together with a navy ship of the Hellenic Navy.

A mayday relay was broadcasted and communication was established with near-by vessels.

Airborne S&R units were also mobilized and joined the operation and more specifically one Hellenic Coast Guard Surveillance Aircraft and one Frontex Surveillance Aircraft.

One Helicopter of the Hellenic Air Force was also engaged.

The Search and Rescue Operation was continued for the next three days following the casualty date and 22 near-by vessels were instructed to join the operation.

Despite the large-scale S&R operation the Master and the two crew members of Agia Marina were not found.

3.4 HBMCI Safety Investigation

The Hellenic Bureau for Marine Casualties Investigation launched a safety investigation on the examined marine casualty on the grounds of respective provisions of Directive 2009/18/EC, as incorporated in national legislation by Law 4033/2011 (government gazette A´ 264) and IMO Casualty Investigation Code.

Although HBMCI had immediately notified all interested parties involved in the marine casualty including the Owners, however no communication was established.

Seeing the above, casualty vessel's documents could not be obtained and verified such as Statutory Certificates, crew list, Seafarers Certificates of Competence etc.

The Flag State of Togo, following correspondence, provided the Survey Status report of Agia Marina, together with Certificates issued by the Administration and her Classification Society.

Agia Marina's rescued crew members were interviewed by the investigation team at Athens airport during their repatriation on the 03 May 2014.

It is noted that during the investigation process several information were sourced indicating that the casualty vessel was engaged in illegal cigarettes trade in the past and was listed as a vessel of interest for the competent authorities fighting against smuggling.

It was furthermore reported that in 2013 referred vessel under different name and Flag as well as its crew was arrested during illegal cigarette trade and was ceased by Court Order.

In relevance, during evidence and information gathering and correspondence exchanged with the Registrar of the Togolese Maritime Administration, it was emerged that Agia Marina's Master had faked Certificates of Competency and on 23 April 2014 the Flag State had informed the deputy Registrar in Cyprus to inform the owners and replace the Master. As a result, the pending endorsement by the Togolese Flag, following the Master's recruitment on board Agia Marina, was not issued.

In addition to the above the Togolese Registrar reported that the 2nd Engineer's CoC copy was not clear and consequently the respective Administration did not issue the pending Certificate of Endorsement of the referred seafarer's Certificate, following his recruitment on board Agia Marina.

4. Analysis

The analysis of the examined marine casualty aims to identify and determine the factors and causes which contributed to the occurrence, taking into account the sequence of events and the collection of the investigation information and data focusing both on specific points of the temporal evolution of them, as well as on the root causes in order to draw useful conclusions leading to safety recommendations.

Nonetheless the information obtained from several resources denoted that certain factors that played key roles into the foundering of Agia Marina, were outside the respective legal framework that governs the safe operation and management of similar to Agia Marina vessels as well as to legal trading.

On above grounds, the analysis of the marine casualty was only focused on specific identified factors that led to conclusions.

4.1 Agia Marina crew

4.1.1 The Master

According to information collected the Master was 59 years of age.

No other information could be obtained for his credentials, as correspondence and communication with the Owners of Agia Marina could not be established.

The Flag State informed the investigation team that the Master of Agia Marina had a fake Certificate of Competence as well as a fake GMDSS operator's certificate.

The Master was reported missing following Agia Marina's foundering and was never found.

4.1.2 The Chief Engineer

The Chief Engineer was 38 years of age. According to information obtained through the interview process, he had joined Agia Marina on 20 January 2014, in Cyprus where Agia Marina was subjected to Class inspection, in Mersin, Turkey.

It was reported that he had graduated from a Marine Academy in Kherson, Ukraine and had served on bulk carriers and cargo vessels as 3rd Engineer and on fishing vessels as 2nd Engineer as well as on small coasters.

It was the first time he was recruited as Chief Engineer due the small size and tonnage of Agia Marina.

He was conducting the 0800-1200/2000-2400 engine watch.

4.1.3 The Chief Mate

The Chief Mate was 30 years old. He had graduated from a Maritime College in Odessa, Ukraine, in 1999. It was reported that he had started serving on vessels since 1999, initially as OS and later as AB. Having completed a two years of studies in a Naval Academy in Odessa, he obtained 2nd Officer's Diploma.

He had served as Navigator on fishing vessels and on small coasters trading in the Mediterranean and Black Sea.

He stated that he had joined Agia Marina on 14 January 2014, in Famagusta, Cyprus, however he did not meet her previous crew and the former Chief Officer and had been under a two days' familiarization period.

He was recruited on Agia Marina following her Master's call, as they knew each other from the past.

He was performing the 1200-1800/2400-0600 bridge watch and he was on duty during the marine accident.

4.1.4 The Bosun

The Bosun was 56 years of age. He stated that he had 30 years of seagoing experience, mainly on fishing vessels and few years on Salvage vessels.

He had joined Agia Marina on 14 January 2014, in Famagusta, Cyprus.

By the time of the marine accident he was sleeping in his cabin located on bridge deck.

4.1.5 The Cook

The Cook, aged 36, stated that he had 12 years of seagoing experience and that he joined that he had joined Agia Marina on 14 January 2014, in Famagusta, Cyprus.

By the time of the marine accident he was sleeping in his cabin, located on the bridge deck.

4.2 Manning and personnel

As already reported, the Directorate of Maritime Affairs of the International Ship Registry of Togo had issued a provisional Minimum Safe Manning Certificate pursuant to SOLAS/Chapter V/ Regulation 14.2, as applied by the time the Certificate was prepared and in view of IMO Res. A. 955(23) adopted in 2003. However, it is noted that aforementioned SOLAS Regulation was amended by resolution MSC.325 (90) that was adopted on 24 May 2012. Seeing this, the amended Regulation 14.2 provided that:

The Administration shall establish appropriate minimum safe manning following a transparent procedure, taking into account the relevant guidance adopted by the Organization according to IMO Assembly Res.A1047(27) adopted on 30 November 2011 by which the referred Res. A. 955(23) in Agia Marina's Minimum Safe Manning Certificate was revoked. Seeing the above it was deduced that instead of the IMO Res. A. 1047(27), the IMO Res. A.995(23) was erroneously recorded in the Minimum Safe Manning Certificate.

Agia Marina's crew complement was consisted of the Master, the Chief Mate, the Chief Engineer, the 2nd Engineer, the Bosun and one deck rating in compliance with the requirements of her Flag State while the Cook was counting in excess of her Minimum Safe Manning.

4.3 Bridge & Engine Department shipborne watch arrangement and operation

Agia Marina shipboard watch arrangement was conducted under a six-hours single watch schedule by the Navigational Officers recruited.

The Master was performing the 0600-1200/1800-2400 bridge watch and the Chief Mate was performing the 1200-1800/2400-0600 watch.

Moreover, taking into account that the Master CoC (STCW 78/A-II/3 for certification of officers in charge of a navigational watch and of masters on ships of less than 500 gross tonnage, engaged on near-coastal voyage) issued in Kerch, Ukraine, on 12.02.2011 was

faked, it derived that Agia Marina by the time of the marine accident was operating in contravention with the Minimum Safe Manning requirements as provided by her Flag under the respective provisions of SOLAS '74 and STCW '78 Convention and Codes. Likewise, the Togo Registrar report for refusing to endorse the 2nd Engineer's CoC as its copy was not clear, led to the conclusion that Agia Marina operation under the Master and the 2nd Engineer that reported to be on board her during the marine casualty was not in line with the relevant International Conventions and Codes.

4.4 Main navigational equipment & aids

Based on information obtained through the interview process it was reported that Agia Marina was equipped with 2 Radars, 1 GPS, 1 electronic chart with GPS and 1 NAVTEX. The aforementioned systems reported to have been operative and in good condition. The respective Cargo Ship Safety Certificate issued by Agia Marina's Class before the marine accident, recorded the lifesaving equipment and general remarks to the condition of hull, extinguishing appliances, navigational lights etc. without specific references to the navigational equipment and aids. Consequently, the reported navigational equipment could not be verified as no relevant information could be sourced from the owners that did not reply to the correspondence addressed, or any other document.

4.5 NAVTEX - weather forecast

Agia Marina, as stated was equipped with a NAVTEX.

NAVTEX is the primary method for broadcasting Marine Safety Information (MSI) as part of the GMDSS for delivery of navigational and meteorological warnings and forecasts, as well as urgent maritime safety information to ships.

However, during the interview process, it was stated that weather bulletins and forecasts were obtained from weather web sites on a regular 24 hours' basis, as Agia Marina was operating in coastal voyages.

On 23 April 2014, despite the fact that the weather bulletin was received through NAVTEX and strong winds 7 to 8 bfrs at the sea area between South Peloponnese and WNW Kriti Island were forecasted while similar meteorological information were obtained from a web page, they were disregarded by the Master and the Chief Officer. This was also in contravention to the operating restrictions posed by Agia Marina

The Master's and Chief Officer disregard to weather conditions anticipated to be encountered at the sea area Agia Marina was navigating is considered a contributing factor into the examined case.

4.6 Navigational performance - operational limitations

In view of the above, it was further identified that despite the weather bulletins, Agia Marina was found to navigate at the sea area West of Kriti Island under heavy weather conditions despite the permanent service restrictions set out by her RO "Dromon Bureau of Shipping" to operate under fair weather conditions and wind force not exceeding 4 BF Scale.

Taking under consideration the above it was evident that the navigational performance of the Master and the Chief Mate of Agia Marina was poor failing to elaborate and

comprehend the weather information in relation to her operational limitations that were disregarded putting in danger crew and ship's safety.

Considering the above, the Master's decision to navigate at open sea in bad weather conditions as well as the poor navigation in relation to Agia Marina operational limitations are considered contributing factors into the examined case.

4.7 Agia Marina passage planning and execution

According to information obtained through the interview process, Agia Marina had departed from a port of Montenegro, that was not actually defined for a port in Ukraine, that was to be specified by the Owners during the progress of her passage.

Seeing the above and notwithstanding the fact that her passage planning and used nautical charts or navigational equipment could not be retrieved and accessed due to her sinking, it was deduced that the sea area she was navigating on the night of the marine casualty could not be considered as a voyage segment that could be included in a passage planning towards the Dardanelles Strait and from there to Marmaras Sea and Black Sea.

More specifically, in view of basic voyage planning methods and guidelines the standard route planning from Adriatic Sea to Black sea, includes coastal passages close to West of Greece and South of Peloponnese that lead to voyage segment from SE of Peloponnese through the Aegean Sea before entering the Dardanelles Chanel.

Nevertheless, as already reported, on the day of the marine casualty Agia Marina was navigating approximately 25nm W of Kriti Island, that is at least 50nm SSW of Cape Maleas, located at the SE end of Peloponnese which is the last waypoint for vessels coming from the Adriatic Sea or W sea areas of the Mediterranean Sea, heading towards the Dardanelles Strait (figure 4).

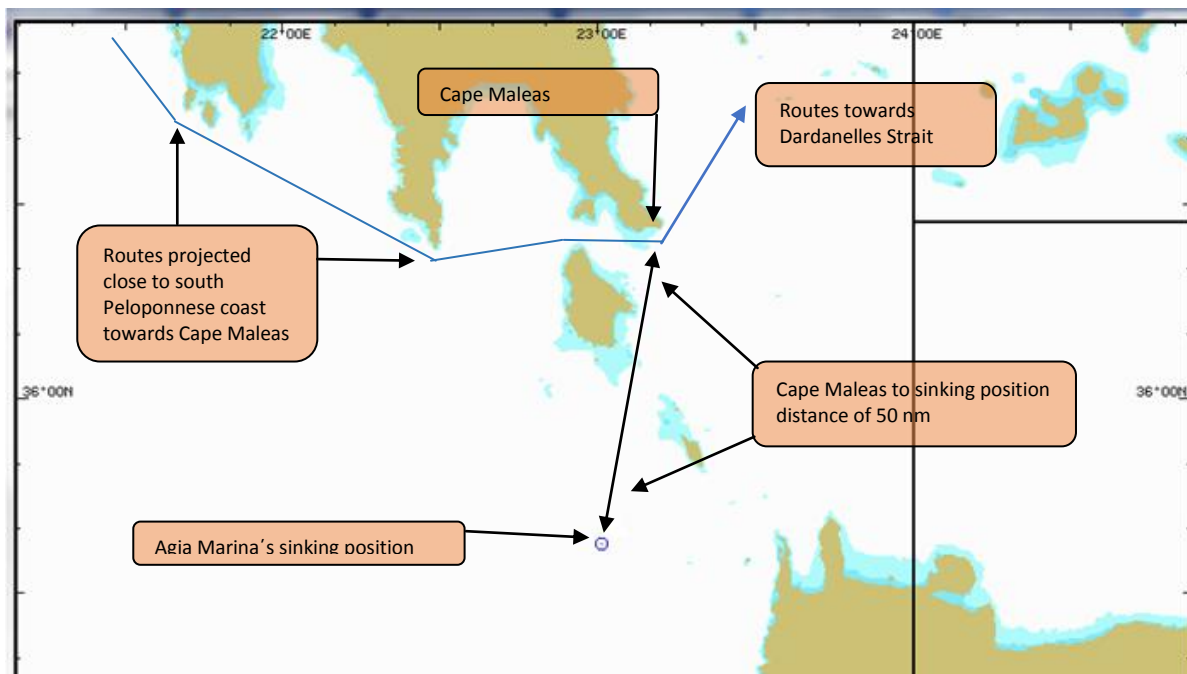


Figure 4. Sketch on electronic chart of the routes to be followed towards Dardanelle Strait compared with Agia Marina's sinking position.

In consideration of the aforementioned it derived that the Navigational Officers failed to plan and conduct an appropriate passage plan in view of the reported indented voyage disregarding basic navigational methods under good seamanship that is the knowledge

and skill pertaining to the safe operation, navigation and management of a ship as deemed appropriate.

Said knowledge is imperative and mandatory and moreover foreseen by STCW '78 as applied and more specifically in Table A-II/3 "Specification of minimum standard of competence for officers in charge of a navigational watch and for masters on ships of less than 500 gross tonnage engaged on near-coastal voyages" for the Function: "Navigation at the operational level", Column 1 that requires competence to: "Plan and conduct a coastal passage and determine position".

4.8 Automatic Identification System

The installation of Automatic Identification Systems on board vessels is provided by SOLAS 74, Ch. V, Reg. 19.2.4 which states:

"2.4 All ships of 300 gross tonnage and upwards engaged on international voyages and cargo ships of 500 gross tonnage and upwards not engaged on international voyages and passenger ships irrespective of size shall be fitted with an automatic identification system (AIS), as follows:

.....

.2 ships engaged on international voyages constructed before 1 July 2002:

.....

*.2.4 in the case of ships, other than passenger ships and tankers, of 300 gross tonnage and upwards but less than 50,000 gross tonnage, not later than the first safety equipment survey*1 after 1 July 2004 or by 31 December 2004, whichever occurs earlier;*"

According to vessel's past PSC Inspection records it derives that during the inspection carried out in Piraeus on 19/01/2011, when the vessel was named Agios Nikolaos under Sierra Leone Flag, she was not equipped with AIS as well, and a respective deficiency was recorded. The vessel was detained and remained for a period of more than three years in Piraeus where she changed her name and flag. Before she sailed from Piraeus she underwent an additional PSC Inspection during which she was found to be equipped with an AIS and the related deficiency of the previous inspection was recorded as rectified.

Considering the above it derives that Agia Marina was required to be equipped with an Automatic Identification System which had been installed in the past. However, the record of equipment of her Cargo Ship Safety Radio Certificate issued by "Dromon Bureau of Shipping", did not include the AIS requirement according to the respective SOLAS provisions. Moreover AIS data of the vessel's movements prior to the casualty could not be acquired from competent Authorities' marine traffic monitoring systems or other open sources

4.9 Environmental Conditions

As already reported, the environmental conditions at the time prior to the marine casualty were reported to be bad considering the size of Agia Marina navigating at a sea area with high seas.

Sea state	Gale / moderately high waves
Wind	Northerly 8-9 beaufort
Air temperature	12 ° C
Barometric pressure	998 mb
Visibility	poor / scattered clouds

Taking under consideration the prevailing weather condition during the day of the marine casualty in relation to Agia Marina size and operational limitations it is inferred that the environmental conditions contributed to her sinking 25nm W of Kriti Island.

The following conclusions, safety measures and safety recommendations should not be taken as a presumption of blame or liability under any circumstances. The juxtaposition of these should not be considered with any order of priority or importance.

5. CONCLUSIONS

(references denote respective parts of the analysis)

- 5.1 The Master of Agia Marina had fake Certificate of Competence as well as fake GMDSS operator's certificate (§ 4.1.1 & 4.2).
- 5.2 Agia Marina's Minimum Safe Manning Certificate, issued on 20/01/2014, took into account the IMO Res. A.995(23) which had been revoked by IMO Assembly Res.A1047(27) adopted on 30 November 2011 (§ 4.2).
- 5.3 Agia Marina operation under the Master and the Chief Engineer was not in line with the relevant International Conventions and Codes (§ 4.3).
- 5.4 The Master and Chief Officer disregarded the weather conditions anticipated to be encountered at the sea area Agia Marina was navigating (§ 4.5).
- 5.5 The navigational performance of the Master and the Chief Mate of Agia Marina was poor failing to elaborate and comprehend the weather information in relation to her operational limitations (§ 4.6).
- 5.6 The operational limitations of Agia Marina were disregarded by the Master and the Chief Mate (§ 4.6).
- 5.7 The Master's decision to navigate at open sea in bad weather conditions as well as the poor navigation in relation to Agia Marina operational limitations put Agia Marina and her crew at risk (§ 4.6).
- 5.8 The Navigational Officers failed to plan and conduct an appropriate passage plan in view of the intended voyage disregarding basic navigational methods under good seamanship and the safe operation of Agia Marina (§ 4.7).
- 5.9 STCW '78/Table A-II/3, as applied/Function: "Navigation at the operational level" was not for the competence to: "Plan and conduct a coastal passage and determine position" was not demonstrated by the Master and the chief Officer of Agia Marina (§ 4.7).
- 5.10 Agia Marina was not equipped with Automatic Identification System as it was not provided by her Statutory Certificates issued by the RO, in contravention to the respective provisions of SOLAS (§ 4.8).

6. ACTIONS TAKEN

No action taken were reported in view of Chapter 9 of ISM Code as Agia Marina was not operated under ISM Code.

7. SAFETY RECOMMENDATIONS

7.1 The Classification Society of the vessel (DMS) is recommended to:

38/2014: Review the Statutory Certificate issuance system in order to ensure that all equipment required by the applied International Conventions is recorded at the respective fields of the Certificates.

7.2 The Togolese Maritime Administration is invited to:

39/2014: Review the Minimum Safe Certificate issuance procedure in order to incorporate the applied IMO Assembly Res. A1047(27) adopted on 30 November 2011, by which Res. A. 955(23) was revoked.

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