



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

M/V “CAPE MED” R-071-2014-DIAM
IMO No. 9316828
DATE: 30th May 2014





**REPORT ON THE INVESTIGATION
OF THE COLLISION OF**

M.V. “CAPE MED”

IMO number 9316828

**At Algeciras, Spain
On the 30th May 2014**

In accordance to Resolution No. 106-135-DGMM of September 9th, 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

A/B	Able Seaman
ABS	American Bureau of Shipping
AIS	Automatic Identification System
ARPA	Automatic Radar Plotting Aid
BA	British Admiralty
BNWS	Bridge Navigational Watch System
BTM	Bridge Team Management
BV	Bureau Veritas
CM	Crisis Manager
COC	Certificate of Competency
COG	Course over Ground
COLREG	Convention on the International Regulations for Preventing Collisions at Sea
CPA	Closest Point of Approach
DNV	Det Norske Veritas
DOC	Document of compliance
ECR	Engine control room
ETA	Estimated time of arrival
GPS	Global Positioning System
HP	Horse Power
HRS	Hours
IMO	International Maritime Organization
ISM	International Safety Management
KG	Distance from the keel to the centre of gravity
Kts	Knots
kW	Kilowatt
LBP	Length Between Perpendiculars
LR	Lloyd’s Register
LRIT	Long Range identification and Tracking
LT	Local Time
LOA	Length overall
MARPOL	International Convention for the Prevention of Pollution from Ships
MB	Longitudinal distance of centre of buoyancy from midships
MCA	Maritime and Coastguard Agency
MCR	Maximum Continuous Rating
MF	Longitudinal distance of flotation from midships
MG	Longitudinal distance of centre of gravity from midship
MGN	Marine Guidance Note

Merchant Marine General Directorate

Department of Maritime Casualty Investigations

Report: M/V “CAPE MED” R-071-2014- DIAM



MSC	Maritime Safety Committee (of IMO)
Mt	metric tonnes
OOW	Officer of the Watch
OS	Ordinary Seaman
PA	Public Address
PMA	Panama Maritime Administrator
SMS	Safety Management System
SOG	Speed over Ground
SOLAS	International Convention for the Safety of Life at Sea
STCW	Standards of Training, Certification and Watchkeeping for Seafarers
S-VDR	Simplified Voyage Data Recorder
UTC	Universal Co-ordinated Time
VDR	Voyage Data Recorder



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.



LIST OF CONTENTS

1. SUMMARY

CASUALTY DETAILS

2. PARTICULARS OF CAPE MED

Bridge Equipment

Bridge Arrangement

Ship Certificates

Status Class Survey

3. PARTICULARS OF LE SHENG

Ship Class Status

4. CREW EXPERIENCE

MASTER

CHIEF OFFICER

5. NARRATIVE OF EVENTS

6. SEQUENCE OF EVENTS - FLOW CHART

7. DAMAGES

8. ANALISYS

9. HUMAN ERROR ANALYSIS

10. CONCLUSIONS

The incident was not caused by mechanical failures on the CAPE MED, nor environmental or organisational factors.

11. CORRECTIVE ACTIONS

12. RECOMENDATIONS

To China Administration:

To Owners of LE SHENG:



To Owners of CAPE MED:

13. ANNEXES

13.1 Bridge Log Book, 28th/29th/30th May 2014

13.2 Bell Bok, 30th May 2014

13.3VHF Log, 30th May 2014

13.4Chart

13.5 Manoeuvring Characteristics of CAPE MED

13.6 Bridge Check list Departure Gibraltar

13.7 CREW LIST

13.8 REST HOURS

13.9 Official Log Book Record

13.10 Voyage Plan

1. SUMMARY

- 1.1 The Panama registered bulk carrier CAPE MED arrived to Gibraltar on the 28th May 2014 in order to take bunkers and provisions.
- 1.2 Following completion of bunkering operations, the vessel asked for permission to sail.



Figure 1.1 – Area of accident



- 1.3 Once permission was granted, the vessel heaved up the anchor. While departing from Gibraltar heading South, another ship heading north was approaching in the middle of the Bay.
- 1.4 As both ships got closer to each other it was clear that the vessel heading north was slightly turning hence getting closer and into a collision course.
- 1.5 Master of the CAPE MED reacted and started to try to get the attention of the other vessel but without success.
- 1.6 As soon as the Master felt that the vessel was too close on the middle of the Bay the vessel maneuvered to increase the distance and avoid collision but the other ship altered course to the port side hence heading towards the CAPE MED port side hull.
- 1.7 Both ships collided on the 30th May 2014 at 04,07 hrs.
- 1.8 At the time of the collision the CAPE MED was full of bunkers but in Ballast. The other vessel, the LE SHENG was loaded but with an unknown quantities of consumables.
- 1.9 Neither pollution nor personal injuries were reported.
- 1.10 No co-operation to carry out the casualty investigation was received by neither the LE SHENG or the Chinese Administration.
- 1.11 The report will outline the importance of effective navigational watch, bridge team management and investigation co-operation.



CASUALTY DETAILS

Particulars	Details
TIME AND DATE	05:07LT, 30 May 2014
LOCATION /GEOGRAPHICAL POSITION OF INCIDENT	Bay of Gibraltar 36° 04.0N, 005° 22.9W
CREW ON BOARD	27
INJURIES / FATALITIES/ POLLUTION	Hull failure/No fatalities/No pollution



2. PARTICULARS OF CAPE MED

NAME	: CAPE MED
FLAG	: PANAMA
PORT OF REGISTRY	: PANAMA
OFFICIAL NUMBER	: 31844-06-A
CALL SIGN	: 3EFC3
IMO NUMBER	: 9316828
TYPE	: Bulk Carrier
L.O.A.	: 290.00 M
L.B.P	: 280.00 M
BREADTH	: 47.00 M
DEPTH	: 24.40 M
G.R.T	: 93,003
N.R.T	: 61,795
DEAD WEIGHT	: 185,827

- 2.1 The vessel is powered by a six (6) cylinder B&W two stroke, single acting main engine type 6S70MC which develops 16,860 kW at 91 rpm manufactured by KAWASAKI HEAVY INDUSTRIES LTD in Japan.
- 2.2 The cargo is carried in a total of nine (9) cargo holds design with a capacity of 205,722.60 m³.

2.3 The vessel was keel laid on 09th December 2004 and delivered on the 28th April 2016 in Japan, at KAWASAKI SHIPBUILDING CORP. At the time of the accident she was owned by "K" LINE BULK SHIPPING (UK) LTD. represented by the legal firm MORGAN & MORGAN of Panama and managed by FLEET MANAGEMENT EUROPE LTD. of London, UK registered with IMO id 5165802.



Figure 2.1–CAPE MED General view



2.4 The vessel was classed with Nippon Kaiji Kyokai (NKK) Classification Society with the following notation,

NS* (Bulk carrier, strengthened for heavy cargoes, Nos. 2,4,6 & 8 holds may be empty) ESP, PSCM

MNS*, CHG, MPP, LSA, RCF, M0, AFS

NS* Classification Character for a ship, the plans of which have been approved by the Society in accordance with the Rules, and which has been built under survey for classification of the Society's Surveyors.

MNS* Classification of Main Propulsion Machinery assigned to a ship having Classification Character NS*.

ESP Enhanced Survey Programme

PSCM Propeller Shaft Condition Monitoring System

CHG Installations Character for Cargo Handling Appliances

MPP Installations Character for Marine Pollution prevention Installations

LSA Installations Character for Safety Equipment

RCF Installations Character for Radio Installations

M0 Installations Character for Operating Systems for Periodically unattended Machinery Spaces

AFS Installations Character for Anti-Fouling Systems on ships complying with the relevant rule requirements.

2.5 At the time of the collision the vessel held up to date and valid statutory certificates.



2.6 The last Port State Control (USC) inspection prior the accident was carried out in Baltimore, U.S.A. on the 28th January 2011, with no deficiencies or observations recorded:

2.7 On the same day as for the collision a further Port State Control (Paris MOU) inspection was carried out in Algeciras on the 30th May 2014, with the following deficiencies recorded:

1. Other(Navigation) COLREG R.8: The vessel did not carry out the manouvers needed to avoid the collision as indicated by Harbour Master (ISM)
2. Other (Navigation) SOLAS CH.V: The vessel did not contact Tarifa Traffic before reaching the line between Europa Point and Punta Carnero according to admiralty radio signals prescribed by nautical chart 1448. The vessel was sailing before during and after the collision within spanish waters as indicated by harbour master (ISM)
3. ISM SOLAS Ch. IX: Deficiencies marked (ISM) are objective evidence of a serious failure or lack of effectiveness of the implementation of the ISM code.
4. Hull Damage Impairing Seaworthiness SOLAS Ch. II-21: Hold 7 holed in port side between frames 113 and 112 below water line 196 m draft. About 4 meters in height. Accidental damage after collision with vessel LE SHENG IMO 9177519
5. Ballast, Fuel and Other tanks SOLAS II-1: Wing Ballast Tank no. 4 port with plates and stiffeners bent in side shell and upper stool for 20 meters in length. Accidental damage after collision with vessel LE SHENG IMO 9177519
6. Fire Drills SOLAS II-1 SOLAS II-2: Performance of fire drill to be improved



7. VDR/S-VDR SOLAS V: After recording the accident properly PC card extracted and VDR cannot record info again. Error Alarm Flushing Continuously.

2.8 Records of PSC on equasis were finally inserted as follows,

PSC Organisation	Authority	Port of inspection	Type of inspection	Date of report	Detention	Duration (days)	Number of deficiencies	Details
Paris MoU	Spain	Algeciras	More detailed inspection	30/05/2014	N	0	4	
Paris MoU	Canada	Port hawkesbury	Initial inspection	04/02/2011	N	0		

Category	Deficiency	Number
Emergency Systems	Fire drills	1
Safety of Navigation	Voyage data recorder (VDR)	1
Structural Conditions	Ballast fuel and other tanks	1
Structural Conditions	Hull damage impairing seaworthiness	1



Bridge Equipment

2.9 The vessel was fitted with the following navigational equipment on the bridge

Equipment / S/N No.	MANUFACTURE	TYPE
AIS/1589	J.R.C.	JHS-182
GYRO NO. 1/22N16785	YOKOGAWA	CMZ 700S
GYRO NO. 2/54867	YOKOGAWA	CMZ 900B
MAGNETIC COMPASS	JOHN LILLY & GILLIE	OCEAN
ECHO SOUNDER/1569	FURUNO	FE-700
SPEED LOG/2219-0529	FURUNO	DS-50
ALDIS LAMP/P17359	SHANSIN ELCT. CO.	SPS-10A
RADAR 1	J.R.C.	NWZ 185
RADAR 2	J.R.C.	NWZ 158
PLOTTER	YOKOGAWA	PLOTNAVI
AUTO PILOT/2208	YOKOGAWA	PT500
CORSE RECORDER/1151	YOKOGAWA	PT 500
GPS x 2	J.R.C.	7700MKII
VDR/M841604	J.R.C.	JUE-410F
BNWAS	MARTEK	NAVGUARD

The VDR was fitted on the 27th December 2005 and was last serviced on the 11th March 2014. All the data recorded was saved and transferred to an external USB.

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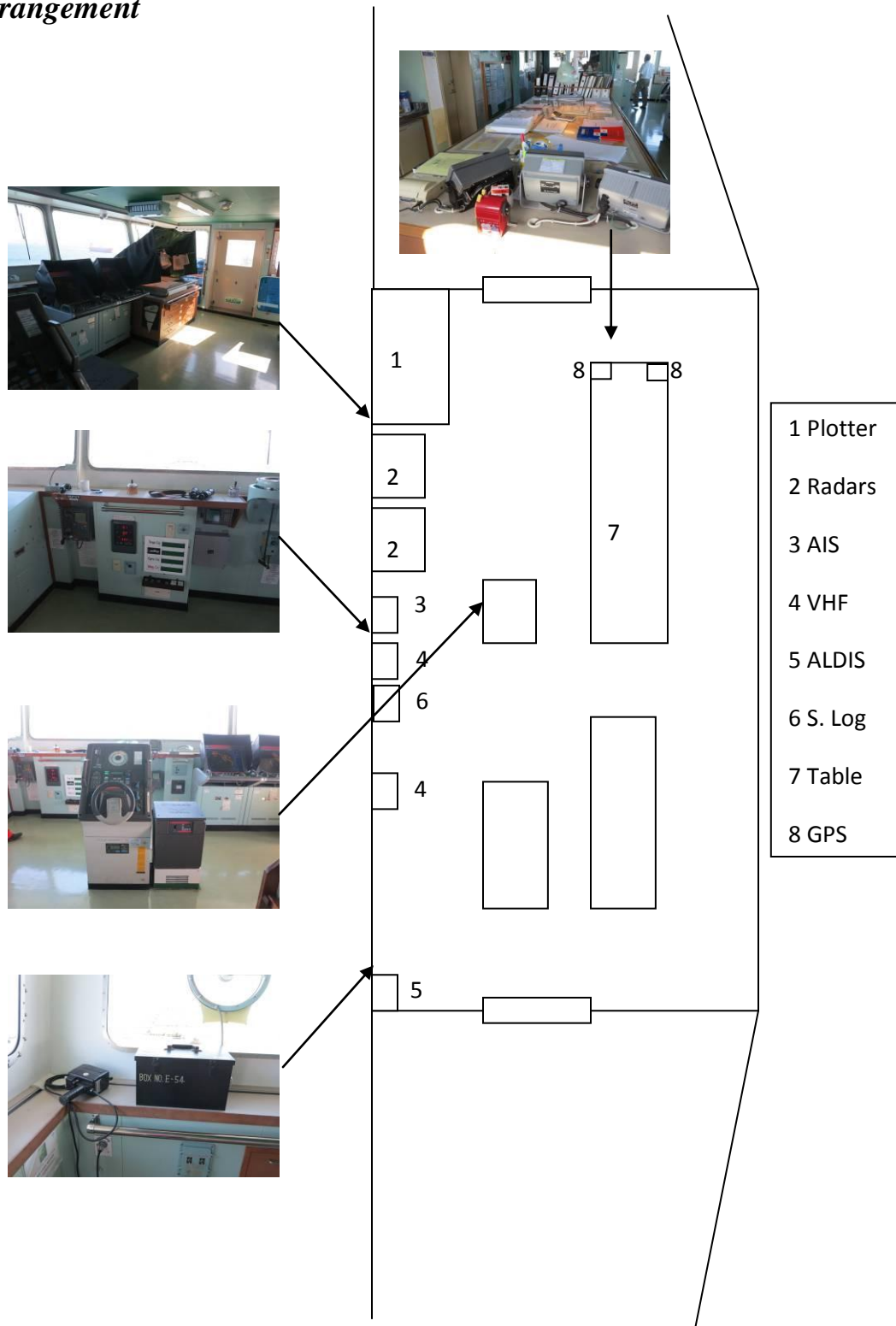
Report: M/V "CAPE MED" R-071-2014- DIAM



2.10 The vessel was fitted with the following communication equipment.

Equipment / S/N No.	MANUFACTURE	TYPE
2 x VHF	J.R.C.	JHS-32B
4 x VFH (DSC)	J.R.C.	JHS-770S
RTF	J.R.C.	JSS-596/JSB196
3 x 2-WAY VHF	J.R.C.	JHS-7
SATCOM C/EGC	J.R.C.	JUE-75C
MF/HF/DSC	J.R.C.	JSS-196GM
REC WEATHER FAX	J.R.C.	JAX-90B
MINI C	SAILOR	TT-3000LRIT
SATCOM F	J.R.C.	JUE-410F

Bridge Arrangement





Ship Certificates

CERTIFICATE NAME	ISSUED BY	ISSUED ON	EXPIRES ON
CERTIFICATE OF REGISTRY	PANAMA	12.07.2010	24.07.2015
MINIMUM SAFE MANNING DOCUMENT	PANAMA	25.11.2013	-
RADIO LICENCE	PANAMA	09.11.2011	08.11.2016
BUNKER OIL POLLUTION DAMAGE	PANAMA	20.02.2014	20.04.2015
CLASSIFICATION	NKK	16.06.2011	27.04.2016
CARGO SHIP SAFETY CONSTRUCTION	NKK	16.06.2011	27.04.2016
CARGO SHIP SAFETY EQUIPMENT	NKK	24.06.2013	27.04.2016
CARGO SHIP SAFETY RADIO	NKK	16.06.2011	27.04.2016
IMBC	NKK	28.02.2012	27.02.2017
INTERNATIONAL SEWAGE POLLUTION PREVENTION	NKK	09.12.2008	-
INTERNATIONAL AIR POLLUTION PREVENTION	NKK	16.06.2011	27.04.2016
INTERNATIONAL OIL POLLUTION PREVENTION (IOPP)	NKK	16.06.2011	27.04.2016
LOAD LINE	NKK	16.06.2011	27.04.2016
TONNAGE	NKK	28.04.2006+	-
SAFETY MANAGEMENT CERTIFICATE	NKK	27.09.2011	13.10.2015
DOCUMENT OF COMPLIANCE	NKK	15.09.2011	08.06.2016
INTERNATIONAL SHIP SECURITY	NKK	30.09.2011	14.10.2015



Status Class Survey

(Kind of Survey)	(Due Date / Range Date)	(Postponed)	(Last Date)
Special Survey	27 Apr 2016	–	04 May 2011
Intermediate Survey	–	–	11 Mar 2014
Annual Survey	27 Jan 2015 - 27 Jul 2015	–	23 May 2013
No.1 Boiler Survey	27 Apr 2016	–	29 Aug 2013
Docking Survey	27 Apr 2016	–	29 Aug 2013
No.1 Prop. Shaft Survey	27 Apr 2016	–	28 Apr 2006
Last Partial Survey Date	–	–	04 May 2011

Installation Survey

(Kind of Survey)	(Due Date / Range Date)	(Postponed)	(Last Date)
M0 Special Survey	27 Apr 2016	–	04 May 2011
M0 Annual Survey	27 Jan 2015 - 27 Jul 2015	–	11 Mar 2014



3. PARTICULARS OF LE SHENG

NAME	:	LE SHENG
FLAG	:	P.R. China
PORT OF REGISTRY	:	Guangzhou
OFFICIAL NUMBER	:	Not Known
CALL SIGN	:	BOUU
IMO NUMBER	:	9177519
TYPE	:	General Dry Cargo
L.O.A.	:	169.00 M
L.B.P	:	158.00 M
BREADTH	:	25.20 M
DEPTH	:	14.10 M
G.R.T	:	15,525
N.R.T	:	8,765
DEAD WEIGHT	:	22,271

- 3.1 The vessel is powered by a six (6) cylinder B&W two stroke, single acting main engine type 6S50MC which develops 7,550 kW at 127 rpm manufactured by DALIAN MARINE DIESEL WORKS in China.
- 3.2 The cargo is carried in a total of four (4) cargo holds design with a capacity of 31,902 m³.

- 3.3 The vessel was keel laid on 01st August 1998 and delivered on the 31st December 1998 in China, at DALIAN SHIPYARD CO. LTD. At the time of the accident she was owned and operated by COSCOL of Guangdong, China registered with IMO id 5104797.



Figure 3.1–LE SHENG General view

- 3.4 The vessel was classed with China Classification Society (CCS) with the following notation,

HCSA, HCSM (General Dry Cargo Ship, strengthened for heavy cargoes, ice classB, Loading Computer S,I,G,) AUT-0



3.5 The last Port State Control (Tokyo MoU) inspection prior the accident was carried out in Cilacap, Indonesia on the 04th January 2014, with no deficiencies or observations recorded:

3.6 On the same day as for the collision a further Port State Control (Paris MOU) inspection was carried out in Algeciras on the 30th May 2014,. The vessel remained twenty five (25) days detained with the following deficiencies recorded:

1. Other(Navigation): Other GROUND FOR DETENTION
2. Structural condition: Hull damage impairing seaworthiness
3. Safety of Navigation: Other GROUND FOR DETENTION
4. Living and working conditions: Cleanliness of engine room GROUND FOR DETENTION
5. Propulsion and auxiliary machinery: Auxiliary engine GROUND FOR DETENTION
6. Structural conditions: Stability/strength/loading information and instruments missing GROUND FOR DETENTION
7. Structural conditions: steering gear not properly maintained GROUND FOR DETENTION
8. Safety of navigation: VDR
9. ISM: GROUND FOR DETENTION
10. Life saving appliances : Operation of life saving appliances GROUND FOR DETENTION
11. Labour conditions: Entry dangerous spaces missing
12. Labour conditions: Hospital accommodation
13. Labour conditions: Sleeping room additional spaces



Ship Class Status

Survey Description	Date of Last Survey	Place of last survey	Due Date	Range Date
Class Special Survey for Hull	2014-02-16	Shanghai	2019-01-14	2018-10-15~2019-01-14
Class Special Survey for Machinery	2014-02-16	Shanghai	2019-01-14	2018-10-15~2019-01-14
Class Annual Survey			2015-01-14	2014-10-15~2015-04-13
Class Intermediate Survey			2016-01-14	2015-10-15~2017-04-13
Docking Survey	2014-02-05	Shanghai	2017-01-14	
Boiler Survey (Oil-fired Aux. and Exh. Gas Composite Boiler)	2014-02-16	Cilacap, Java	2017-01-14	
Boiler Survey (Steam Pipe)	2012-01-06	Nantong	2017-01-05	
Screwshaft Survey	2014-02-05	Shanghai	2018-12-13	



4. CREW EXPERIENCE

MASTER

- 4.1 Master of Indian Nationality signed onboard the vessel on the 14th May 2014. He had completed 16 days onboard prior the collision. He had been sailing as a Captain since 1990 on different type and sizes of ships. He had been at sea since the year 1979. Additionally to his career at sea he had been working as a lead auditor and inspector carrying annual safety inspections on behalf of the flags of Panama and Marshall Islands. He held a valid Panama endorsement valid to 08th August 2014 edosing his national Master’s CoC issued in India. He holds a valid GMDSS certificate issued in United Kingdom.

CHIEF OFFICER

- 4.2 Chief Officer of Indian nationality signed onboard the vessel on the 29th May 2014. He had signed on the day before the collision although at that time he was not forming part of the bridge team. He had been sailing as a chief officer for the last 2 years and with a total experience sailing since 14 years ago. He held a valid Panama endorsement.

2nd OFFICER

- 4.3 Second Officer of Filipino nationality signed onboard the vessel on the 04th January 2014. He had completed 4 months and 14 days onboard prior the collision. He had been sailing as a second officer for the last 23 months being this one his third contract. He had been at sea since 2004. He held a valid Panama endorsement valid to 08th September 2014 edorsing his national OOW CoC issued in Philipines. He holds a valid GMDSS certificate issued in Philipines.

3rd OFFICER

- 4.3 Third Officer of Filipino nationality signed onboard the vessel on the 18th May 2014. He had completed 2 days onboard prior the collision. He had been sailing as a third officer for the last 18 years. He had been at sea since 20 years ago. He held a valid Panama endorsement valid to 31st December 2014 edorsing his national OOW CoC issued in Philipines. He holds a valid GMDSS certificate issued in Philipines.

5. NARRATIVE OF EVENTS

- 5.1 All times noted in this report are given in the style of the standard 24-hour clock without additional annotations. Ship times used onboard were local times in Gibraltar, i.e. UTC +2.
- 5.2 Narrative of events is taken herewith based on crew statements from the CAPE MED gathered during the investigation.
- 5.3 The CAPE MED arrived to the East side of Gibraltar on the 28th May 2014 at 22.48 hrs and drifted as per instructions received from traffic control.



Figure 5.1–CAPE MED track on the 29th May 2014

- 5.4 On the 29th May 2014 the CAPE MED entered into the Bay of Algeciras and dropped anchor in Gibraltar at 11.48 hrs.
- 5.5 Bunker operations on the CAPE MED started on the 29th May 2014 at 15.18 hrs
- 5.6 Meantime the LE SHENG was loading in the port of Huelva, Spain.

- 5.7 Upon completion of loading operations of bulk cargo the LE SHENG sailed at 17.10 hrs from the port of Huelva destined to Algeciras for bunkering.



Figure 5.2–LE SHENG track on the 29th May 2014

- 5.8 The CAPE MED completed bunkering operations on the 30th May 2014 at 01.50 hrs.
- 5.9 Upon completion of bunker operations and while waiting for timings and documents, the 2nd officer was preparing and testing all equipment to sail from Gibraltar.
- 5.10 On the 30th May 2014 at 02.30 hrs the bunker barge casted off from the CAPE MED and got away.
- 5.11 At 03.06 hrs the CAPE MED tested the main engine ahead and astern with satisfactory results.

- 5.12 At 03.11 hrs the CAPE MED called Gibraltar VTS to take permission to heave up the anchor.
- 5.13 Gibraltar VTS called back at 03.12 hrs and told the CAPE MED to hold on for further instructions and immediately replied with permission to sail and informing when the anchor was heaved up and in position.
- 5.14 At 03.40 hrs the anchor was away and at 03.43 hrs the CAPE MED informed Gibraltar VTS that the anchor was away.
- 5.15 Gibraltar VTS acknowledged the confirmation and replied the CAPE MED to go red to red with inbound vessels through the middle of the bay.



Figure 5.3 – Bay of Algeciras

5.16 At 03.48 hrs the CAPE MED was heading south at a speed of 11.5 knots.

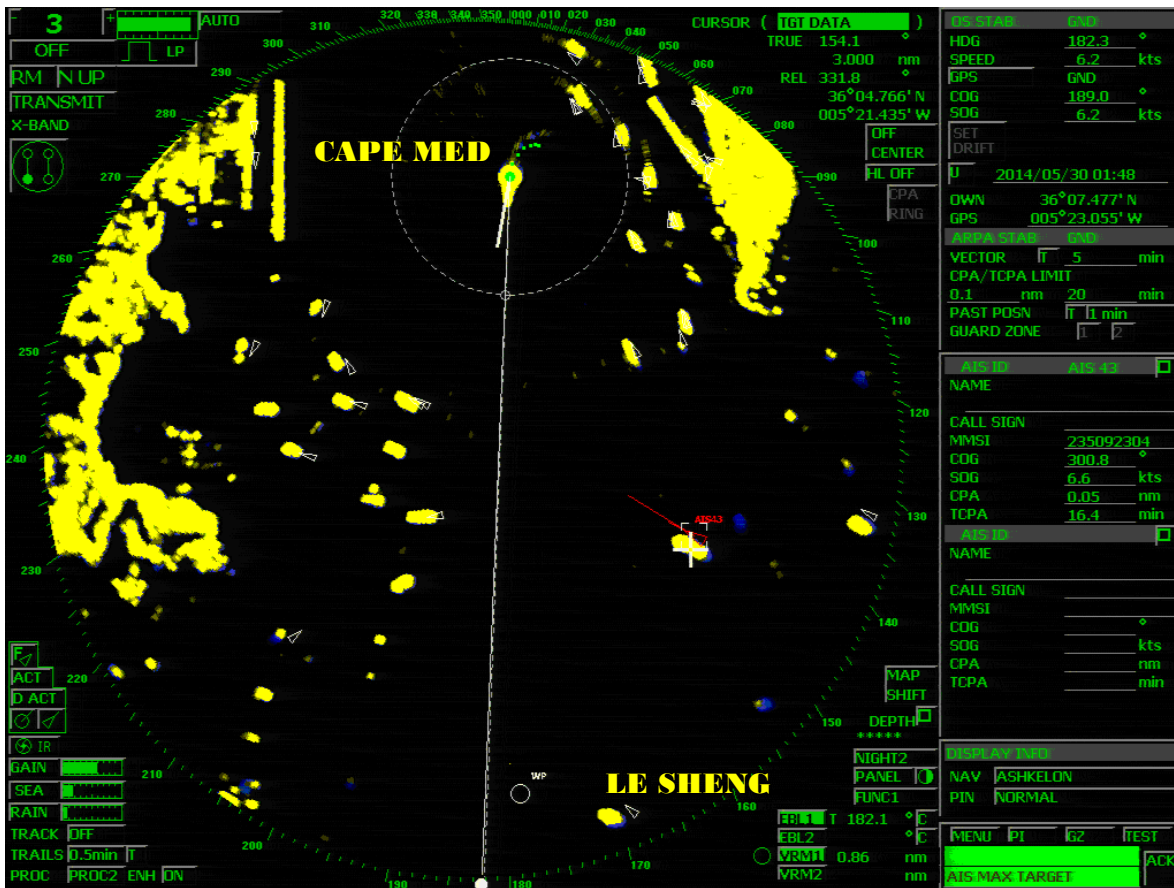


Figure 5.4 – LE SHENG on the radar at 03.48 hrs

5.17 At that time the LE SHENG was forward port of the CAPE MED but well clear heading north east towards Algeciras, Spain.

5.18 While heading south the CAPE MED maneuvered to avoid collision with a number of small boats.

5.19 Meantime the LE SHENG continued approaching the CAPE MED

5.20 While heading South the Master observed one green light and tried to find out to whom such light belonged to.

5.21 Master asked 2nd Officer about the green light on the port quarter and the vessel was targeted on the AIS and the ARPA

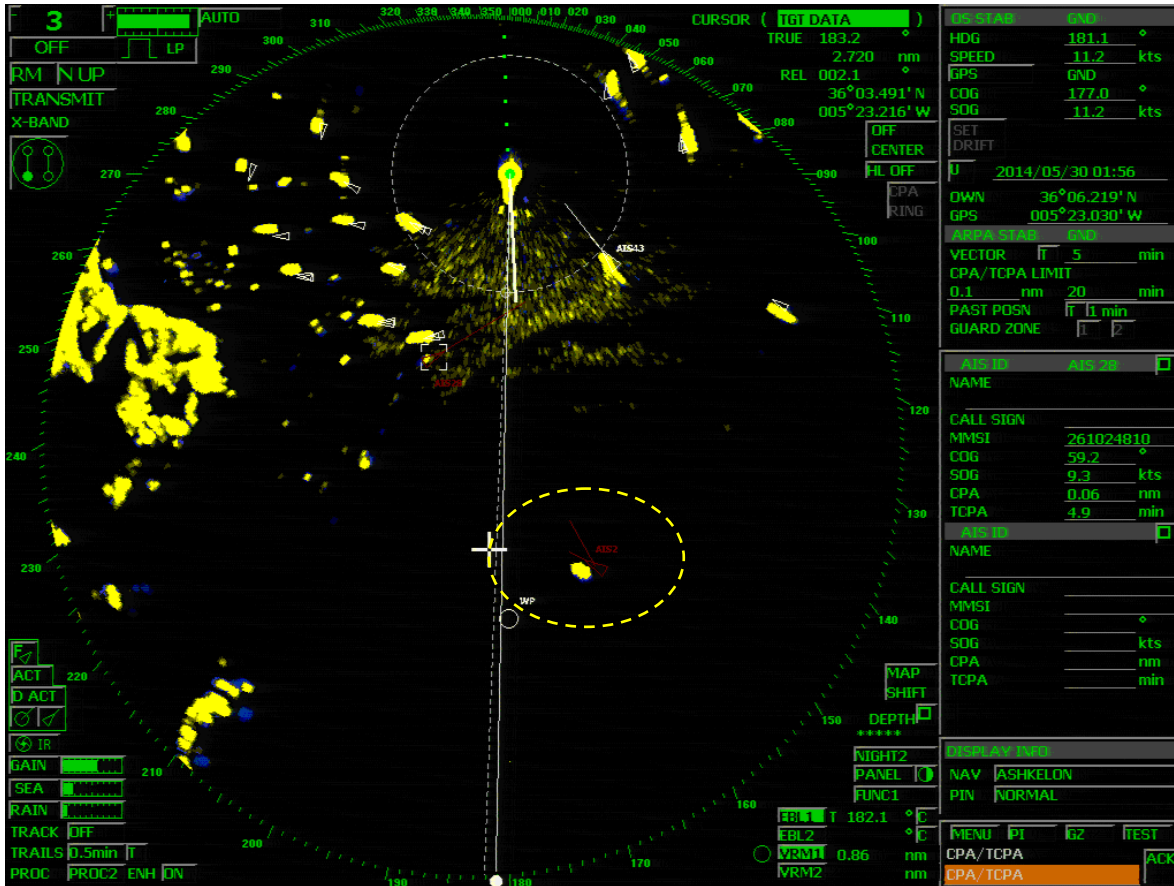


Figure 5.5 – LE SHENG on the radar at 03,56 hrs

5.22 The LE SHENG continued approaching on the forward port quarter on a collision course at a speed of 9.3 knots.

5.23 Master tried to call the vessel targeted but no information was found on the AIS.

5.24 Master called immediately Gibraltar VTS requesting ship’s name and asked VTS to call the other vessel to alter course since she was getting too close.

5.25 VTS confirmed the name of the vessel on VHF and Master tried to call.

Merchant Marine General Directorate

Department of Maritime Casualty Investigations

Report: M/V "CAPE MED" R-071-2014- DIAM



- 5.26 There was no reply from LE SHENG and vessel remained getting closer up to a point that the Master decided to alter course to starboard to get away from the LE SHENG.
- 5.27 ALDIS lamp was used and horn sounded nevertheless no response from the LE SHENG was received.
- 5.28 At that time the LE SHENG also altered course to port.
- 5.29 Master saw that the LE SHENG altered to port and they were on a clear collision
- 5.30 LE SHENG continued altering course to her port and Master of CAPE MED ordered hard to port.
- 5.31 In view that the LE SHENG was not changing course and speed the Master of the CAPE MED could foresee that collision was imminent hence ordered the 2nd Officer to ring the general alarm for everybody to Muster.
- 5.32 At 04,07 hrs. the fore end of the LE SHENG collided with the port side hull of the CAPE MED in way of cargo hold no. 7.

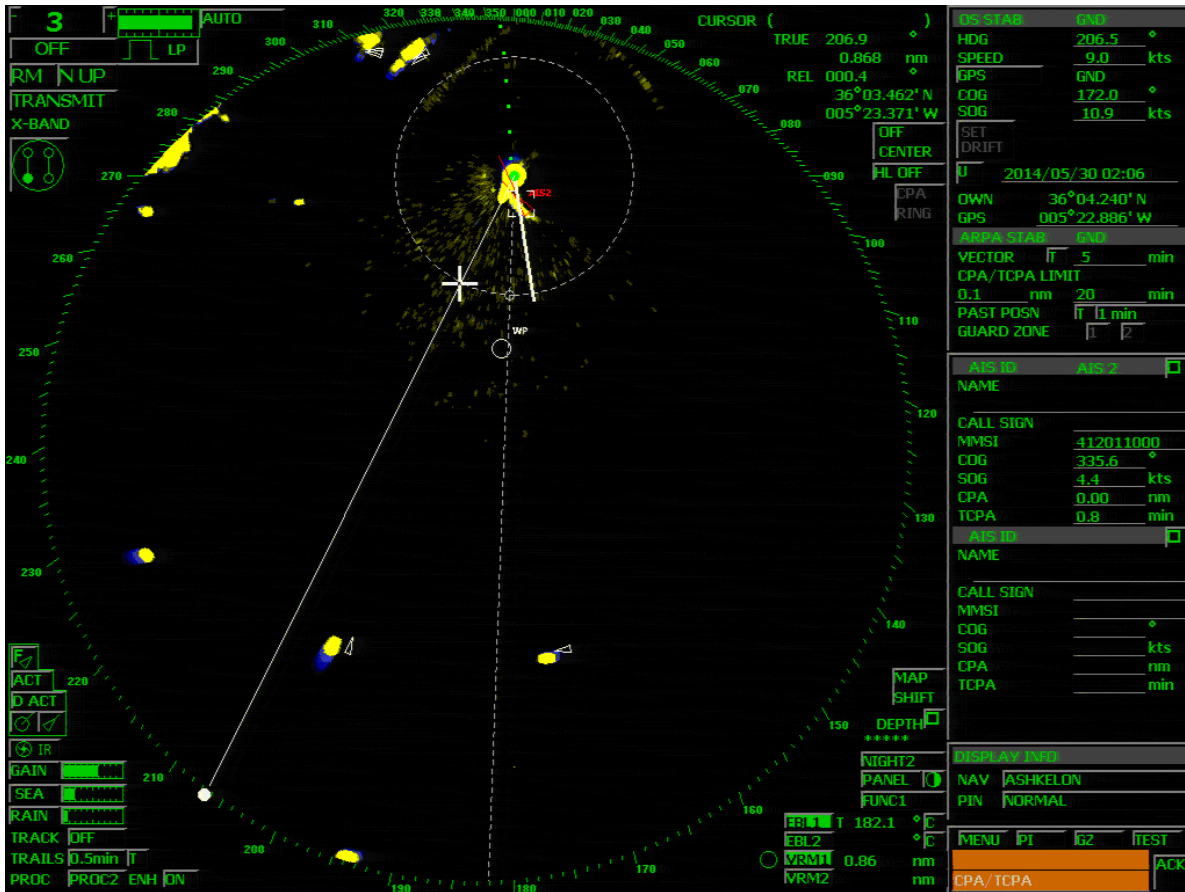


Figure 5.6 – LE SHENG on the radar at 04,06 hrs

5.33 At the time of the collision the CAPE MED was loaded with the following consumables,

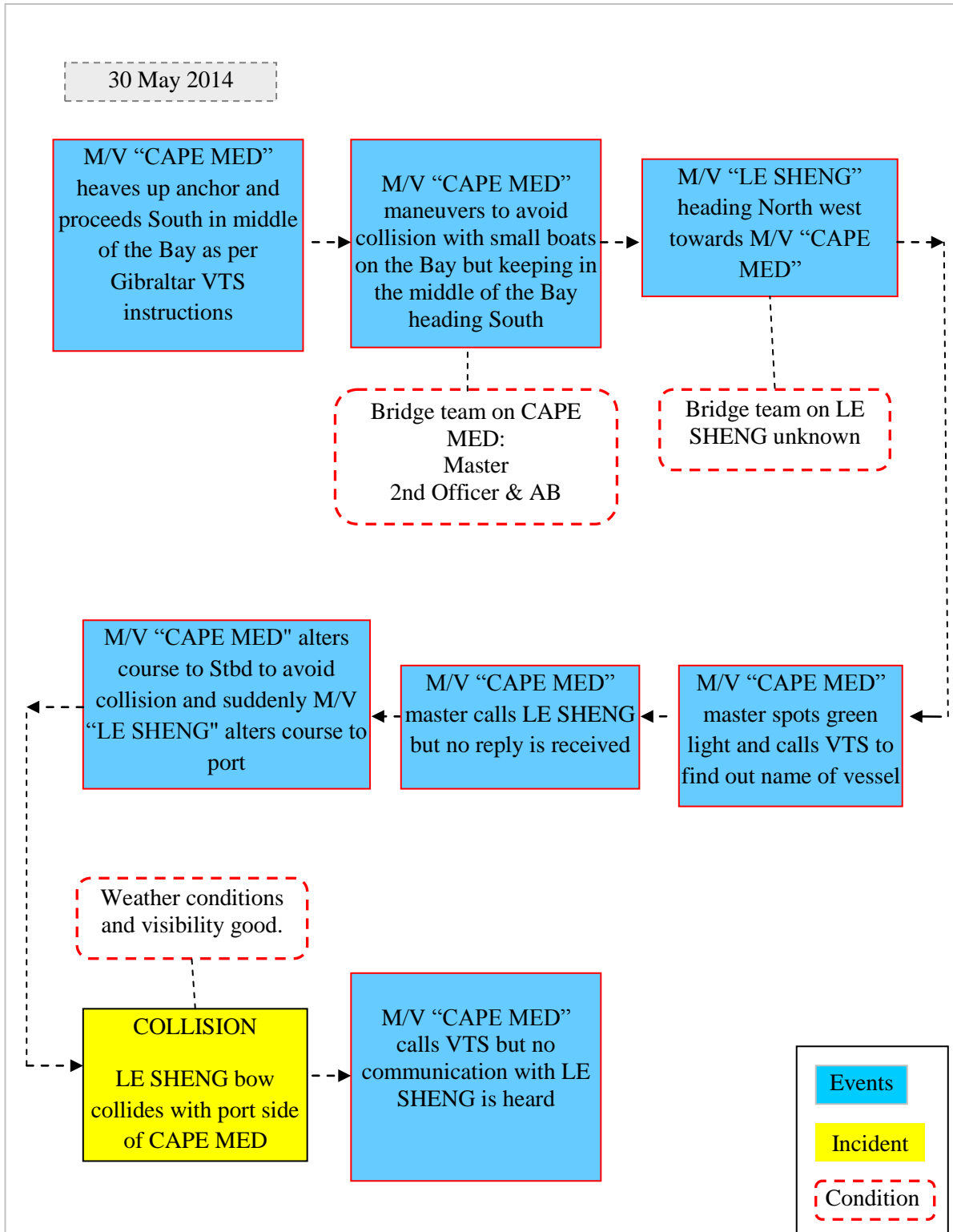
Fuel Oil	1,991.00 mt
Diesel Oil	117.00 mt

5.34 The CAPE MED was in Ballast at the time of the collision.

5.35 The quantities of consumables and cargo onboard the LE SHENG is unknown since no co-operation was received at all from the vessel.



6. SEQUENCE OF EVENTS - FLOW CHART



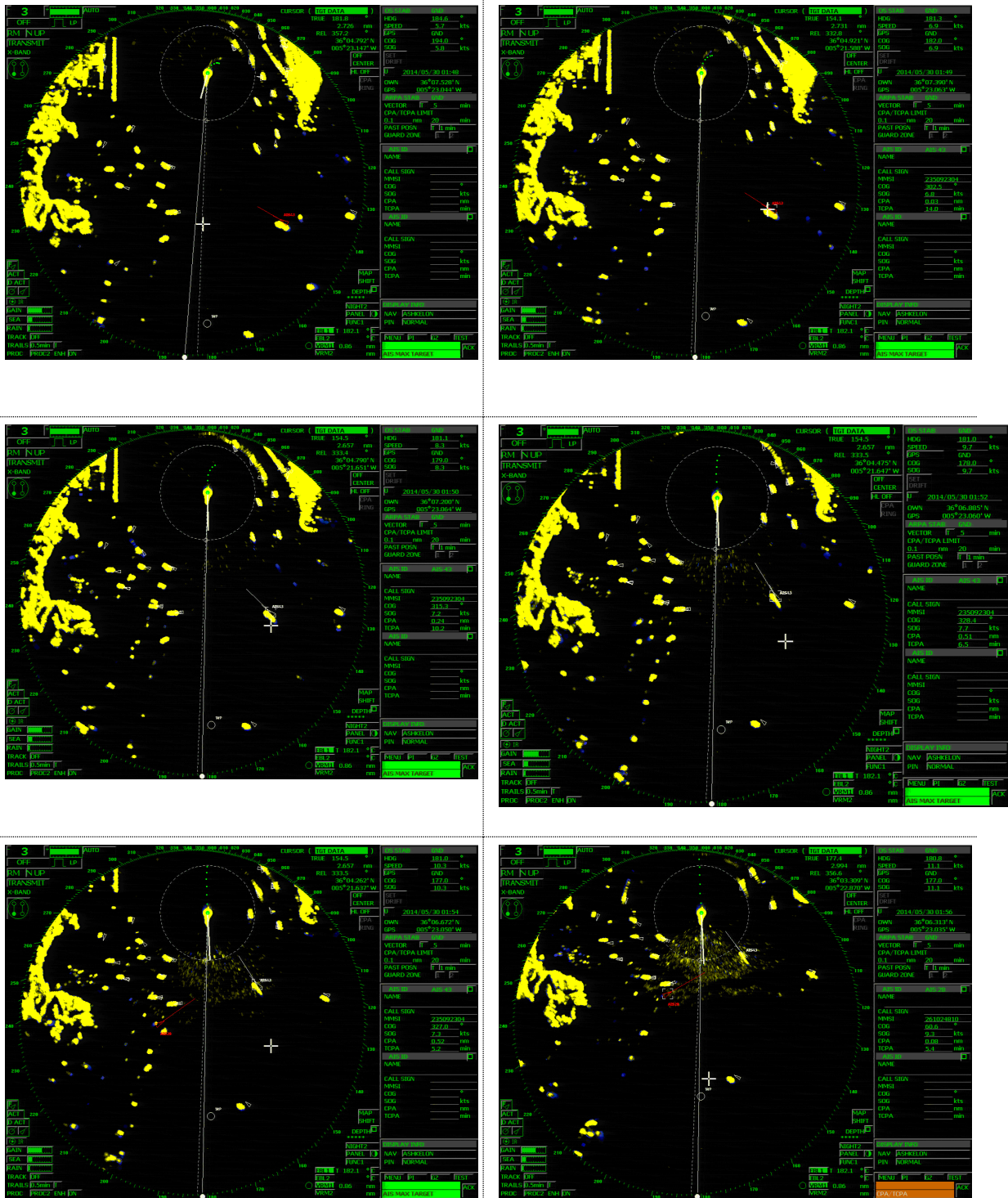


Figure 6.1 – Sequence of events as seen on radar from CAPE MED

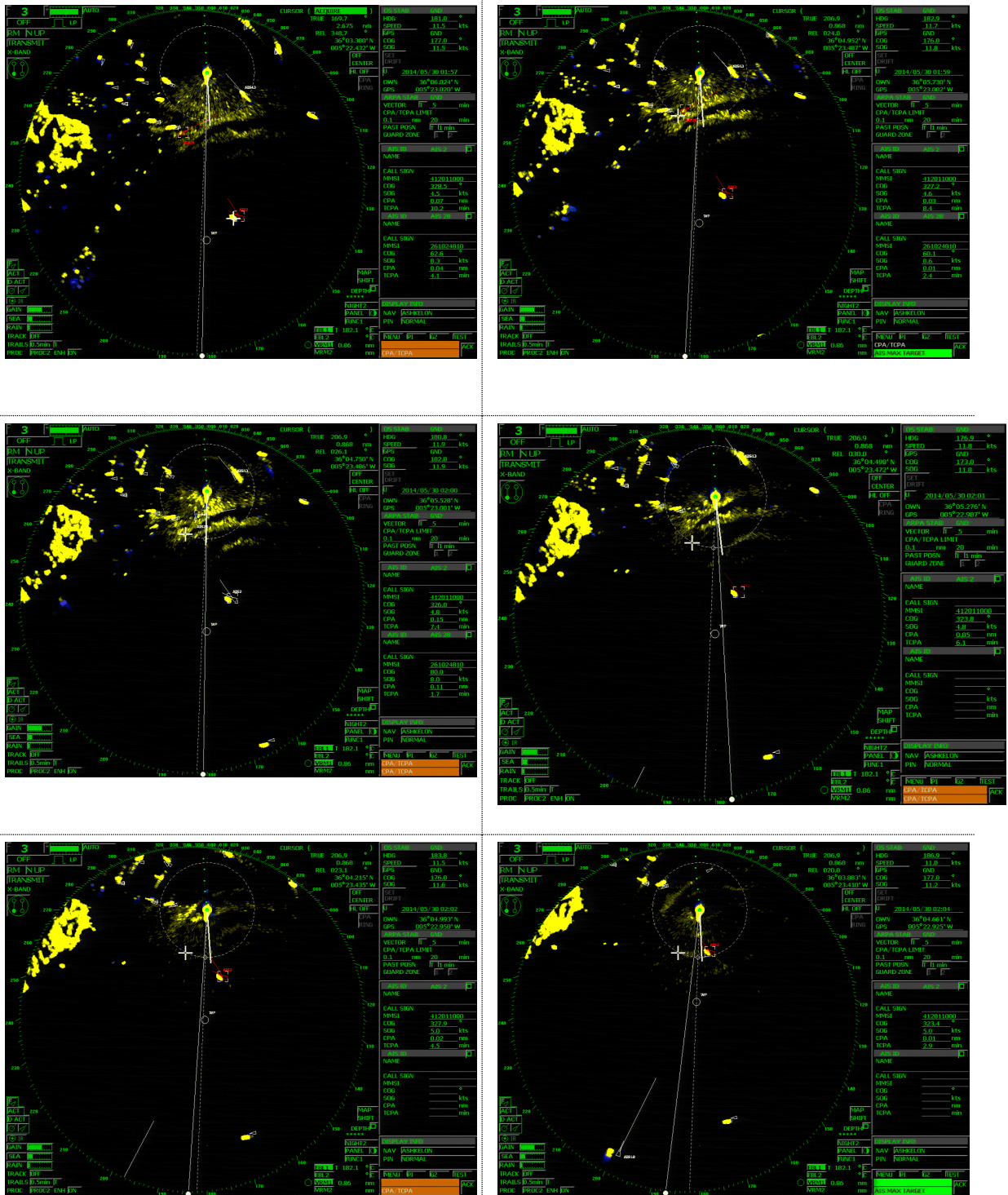


Figure 6.2 – Sequence of events as seen on radar from CAPE MED

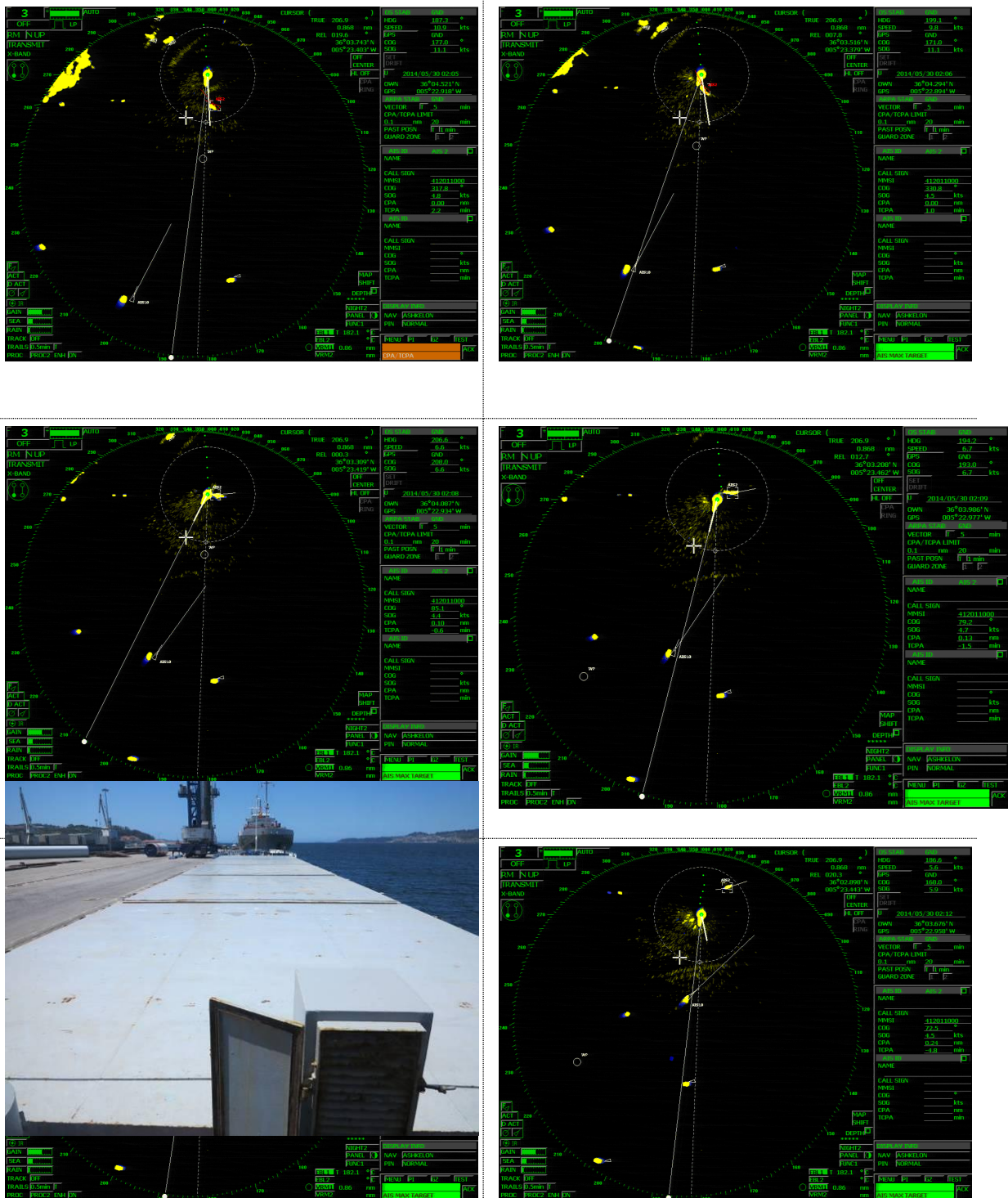


Figure 6.3 – Sequence of events as seen on radar from CAPE MED

7. DAMAGES

- 7.1 The CAPE MED sustained damages on her hull in way of hold number 7 between frames 107 and 113 affecting the parallel hull structure and the top side tank no. 4 port.



Figure 7.1/7.2
General view of the CAPE
MED damage on the port side
hull



Figure 7.3/7.4 – CAPE MED damage on the port side





Figure 7.5/7.6/7.7 – CAPE MED damage on the port side



- 7.2 The LE SHENG sustained damages to the complete fore end including the bulbous bow. But no further details were gathered due to the lack of co-operation with the vessel.



Figure 7.8/7.9 – LE SHENG damages on fore end





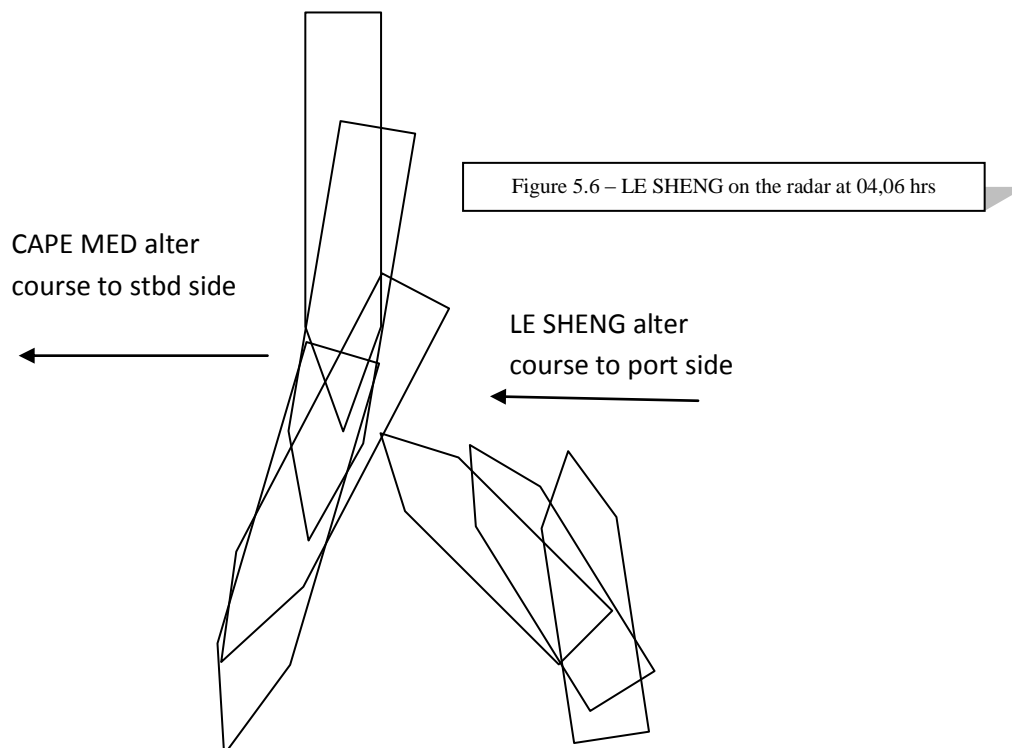
Figure 7.10/7.11 – LE SHENG damages on fore end





8. ANALISYS

- 8.1 At the time of the collision the bridge team on the CAPE MED was composed of the Master, 2nd Officer and one helmsman.
- 8.2 Gibraltar VTS gave clear instructions to proceed South in the middle of the bay passing red to red with inbound vessels.
- 8.3 The LE SHENG was contacted on VHF but no reply was received.
- 8.4 Signals to attract the attention of the LE SHENG were used as per COLREG Rule 36 but no reaction was observed on the LE SHENG.
- 8.5 The CAPE MED altered course to starboard to increase the distance to the LE SHENG.



Merchant Marine General Directorate

Department of Maritime Casualty Investigations

Report: M/V "CAPE MED" R-071-2014- DIAM

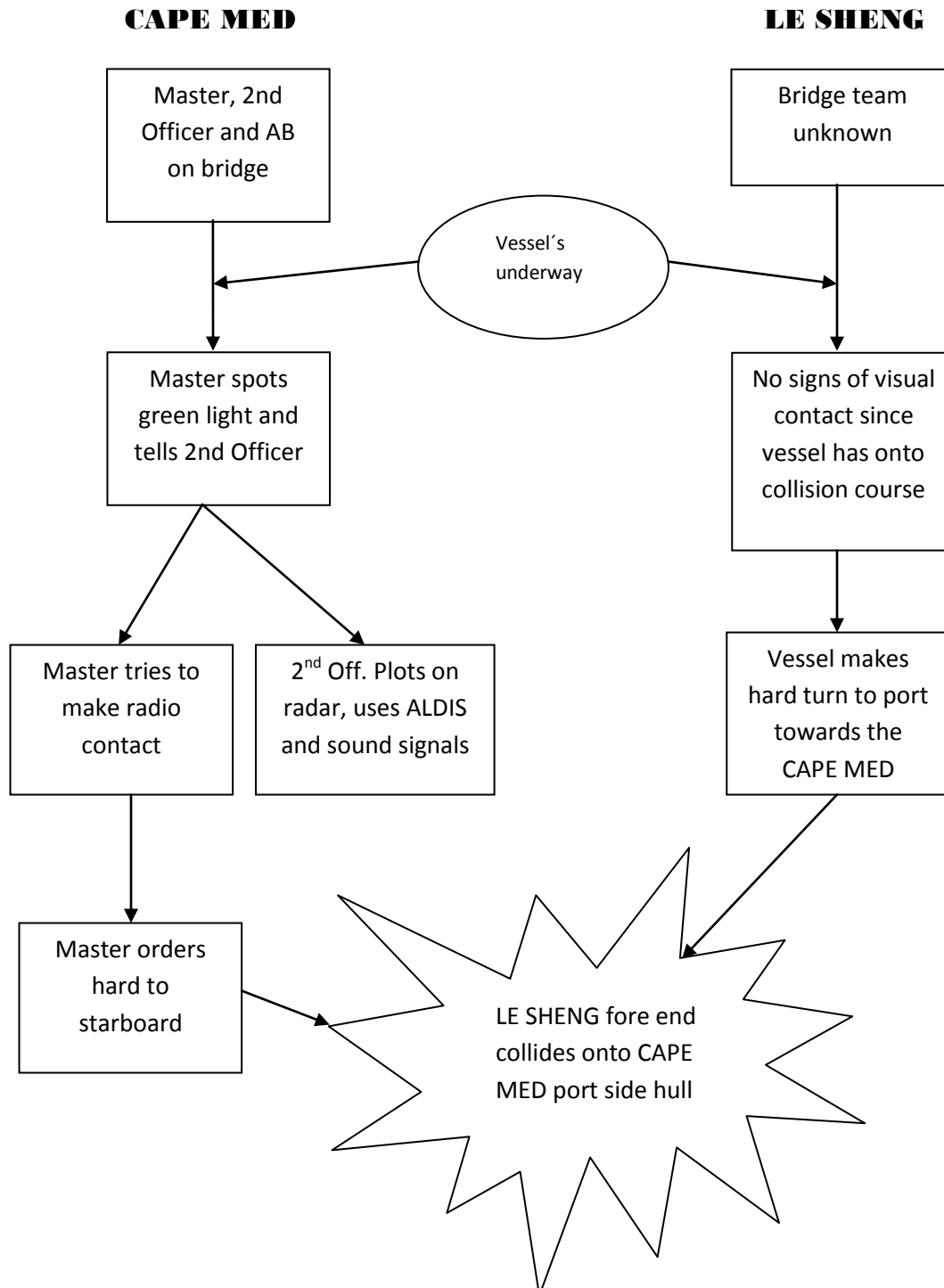


- 8.6 No information gathering was permitted onboard the LE SHENG and no communication with the accident investigation department of the Chinese maritime administration was possible.
- 8.7 While the CAPE MED was altering course to starboard, the LE SHENG altered course to port hence with collision not avoidable.
- 8.8 The LE SHENG for some reason altered course towards the port side of the CAPE MED and there are reasons to believe that the lookout on the bridge was not efficient.
- 8.9 The collision occurred during dark hours at 04.07 hrs which might have been in line with a presumed watch hand over onboard the LE SHENG
- 8.10 Rest hours were correctly set onboard the CAPE MED.



9. HUMAN ERROR ANALYSIS

9.1 No sufficient information was gathered to be able to draw a conclusion and determine the level of human error on this collision. However based on the maneuvering characteristics of the accident it is to assume that human error on the LE SHENG was the primary cause of the collision.





10. CONCLUSIONS

- 10.1 No co-operation from LE SHENG crew and operators was received.
- 10.2 No communication reply from China maritime administration was received hence not able to carry out the investigation effectively.
- 10.3 The collision occurred during dark hours and presumably during watch change over in congested waters.
- 10.4 The reason why the LE SHENG did not reply to radio contact and to light and sound signals is unknown due to lack of co-operation to carry out the investigation effectively
- 10.5 The vessel's name did not appear properly on AIS when the 2nd Officer of the CAPE MED tried to get the name to contact via VHF
- 10.6 As soon as the green light was spotted, the Master tried to get the attention of the LE SHENG by radio, with lights and sound signals with no success.
- 10.7 As soon as the Master ordered the alteration to starboard, the LE SHENG followed by turning to the port side towards the CAPE MED's hull instead of turning to starboard to increase the distance and hence avoid collision.

It was evident that the collision of the fore end of the LE SHENG was due to violation of COLREG regulations.

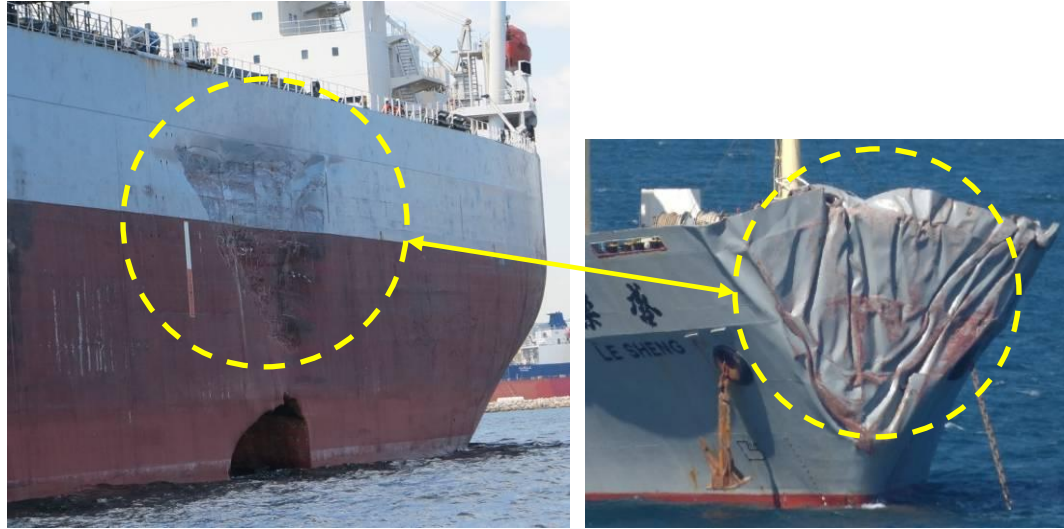


Figure 10.1 – Fore end mark left on the port side hull of CAPE MED

- 10.8 The incident was not caused by mechanical failures on the CAPE MED, nor environmental or organisational factors.



11. CORRECTIVE ACTIONS

- 11.1 Operators of the CAPE MED immediately opened an enquiry on the accident and carried out their own investigation.
- 11.2 The incident was published internally and distributed all the in house fleet.
- 11.3 It is unknown what corrective actions took place by the LE SHENG



12. RECOMENDATIONS

To China Administration:

- 12.1 Improve co-operation level as per IMO resolutions on Marine Casualty Investigations.
- 12.2 Improve communication flow among investigators.

To Owners of LE SHENG:

- 12.3 Review IMO resolutions on Marine Casualty Investigations and co-operate with administrations on future occasions.
- 12.4 Allow investigators to access all the necessary data necessary to carry out a proper marine casualty investigation as per IMO resolutions.
- 12.5 Carry out internal investigation on the accident
- 12.6 Carry out an exhaustive internal audit focusing on navigation watch and bridge team management.

To Owners of CAPE MED:

- 12.7 Carry out an exhaustive internal audit focusing on navigation watch and bridge team management.



13. ANNEXES

- 13.1 Bridge Log Book, 28th/29th/30th May 2014**
- 13.2 Bell Book, 30th May 2014**
- 13.3 VHF Log, 30th May 2014**
- 13.4 Chart**
- 13.5 Police Statement**
- 13.6 Manoeuvring Characteristics of CAPE MED**
- 13.7 Bridge Check list Departure Gibraltar**
- 13.8 Crew List**
- 13.9 Rest Hours**
- 13.10 Official Log Book Record**
- 13.11 Voyage Plan**
- 13.12 Stability Calculation departure of Gibraltar**

Merchant Marine General Directorate
 Department of Maritime Casualty Investigations
 Report: M/V "CAPE MED" R-071-2014- DIAM



Fleet Management Europe Limited
 Deck Log Book
 M/V "CAPE MED"

Voy No. SP 07 (MS)
 1. Ship's Name: Monday day of May 2014 SMT = 0714

2. Log: 1. Ship's Time
 01 01 01 01
 02 02 02 02
 03 03 03 03
 04 04 04 04
 05 05 05 05
 06 06 06 06
 07 07 07 07
 08 08 08 08
 09 09 09 09
 10 10 10 10
 11 11 11 11
 12 12 12 12

3. Courses: 1. Ship's Time
 01 01 01 01
 02 02 02 02
 03 03 03 03
 04 04 04 04
 05 05 05 05
 06 06 06 06
 07 07 07 07
 08 08 08 08
 09 09 09 09
 10 10 10 10
 11 11 11 11
 12 12 12 12

4. Error: 1. Ship's Time
 01 01 01 01
 02 02 02 02
 03 03 03 03
 04 04 04 04
 05 05 05 05
 06 06 06 06
 07 07 07 07
 08 08 08 08
 09 09 09 09
 10 10 10 10
 11 11 11 11
 12 12 12 12

5. Winds: 1. Ship's Time
 01 01 01 01
 02 02 02 02
 03 03 03 03
 04 04 04 04
 05 05 05 05
 06 06 06 06
 07 07 07 07
 08 08 08 08
 09 09 09 09
 10 10 10 10
 11 11 11 11
 12 12 12 12

6. Swell: 1. Ship's Time
 01 01 01 01
 02 02 02 02
 03 03 03 03
 04 04 04 04
 05 05 05 05
 06 06 06 06
 07 07 07 07
 08 08 08 08
 09 09 09 09
 10 10 10 10
 11 11 11 11
 12 12 12 12

7. Weather/Visibility: 1. Ship's Time
 01 01 01 01
 02 02 02 02
 03 03 03 03
 04 04 04 04
 05 05 05 05
 06 06 06 06
 07 07 07 07
 08 08 08 08
 09 09 09 09
 10 10 10 10
 11 11 11 11
 12 12 12 12

8. Barometer Pressure: 1. Ship's Time
 01 01 01 01
 02 02 02 02
 03 03 03 03
 04 04 04 04
 05 05 05 05
 06 06 06 06
 07 07 07 07
 08 08 08 08
 09 09 09 09
 10 10 10 10
 11 11 11 11
 12 12 12 12

9. Temp: 1. Ship's Time
 01 01 01 01
 02 02 02 02
 03 03 03 03
 04 04 04 04
 05 05 05 05
 06 06 06 06
 07 07 07 07
 08 08 08 08
 09 09 09 09
 10 10 10 10
 11 11 11 11
 12 12 12 12

10. Watch Keeping Level: 1. Ship's Time
 01 01 01 01
 02 02 02 02
 03 03 03 03
 04 04 04 04
 05 05 05 05
 06 06 06 06
 07 07 07 07
 08 08 08 08
 09 09 09 09
 10 10 10 10
 11 11 11 11
 12 12 12 12

11. Remarks: 1. Ship's Time
 01 01 01 01
 02 02 02 02
 03 03 03 03
 04 04 04 04
 05 05 05 05
 06 06 06 06
 07 07 07 07
 08 08 08 08
 09 09 09 09
 10 10 10 10
 11 11 11 11
 12 12 12 12

12. Distance (nautical miles): 1. Ship's Time
 01 01 01 01
 02 02 02 02
 03 03 03 03
 04 04 04 04
 05 05 05 05
 06 06 06 06
 07 07 07 07
 08 08 08 08
 09 09 09 09
 10 10 10 10
 11 11 11 11
 12 12 12 12

13. Latitude: 1. Ship's Time
 01 01 01 01
 02 02 02 02
 03 03 03 03
 04 04 04 04
 05 05 05 05
 06 06 06 06
 07 07 07 07
 08 08 08 08
 09 09 09 09
 10 10 10 10
 11 11 11 11
 12 12 12 12

14. Longitude: 1. Ship's Time
 01 01 01 01
 02 02 02 02
 03 03 03 03
 04 04 04 04
 05 05 05 05
 06 06 06 06
 07 07 07 07
 08 08 08 08
 09 09 09 09
 10 10 10 10
 11 11 11 11
 12 12 12 12

15. Steaming Time: 1. Ship's Time
 01 01 01 01
 02 02 02 02
 03 03 03 03
 04 04 04 04
 05 05 05 05
 06 06 06 06
 07 07 07 07
 08 08 08 08
 09 09 09 09
 10 10 10 10
 11 11 11 11
 12 12 12 12

16. Speed (knots): 1. Ship's Time
 01 01 01 01
 02 02 02 02
 03 03 03 03
 04 04 04 04
 05 05 05 05
 06 06 06 06
 07 07 07 07
 08 08 08 08
 09 09 09 09
 10 10 10 10
 11 11 11 11
 12 12 12 12

17. PM 801: 1. Ship's Time
 01 01 01 01
 02 02 02 02
 03 03 03 03
 04 04 04 04
 05 05 05 05
 06 06 06 06
 07 07 07 07
 08 08 08 08
 09 09 09 09
 10 10 10 10
 11 11 11 11
 12 12 12 12

18. Soundings of Tanks: 1. Ship's Time
 01 01 01 01
 02 02 02 02
 03 03 03 03
 04 04 04 04
 05 05 05 05
 06 06 06 06
 07 07 07 07
 08 08 08 08
 09 09 09 09
 10 10 10 10
 11 11 11 11
 12 12 12 12

19. Master's Inspection Results: 1. Ship's Time
 01 01 01 01
 02 02 02 02
 03 03 03 03
 04 04 04 04
 05 05 05 05
 06 06 06 06
 07 07 07 07
 08 08 08 08
 09 09 09 09
 10 10 10 10
 11 11 11 11
 12 12 12 12

20. Ch. Officer's Inspection Results: 1. Ship's Time
 01 01 01 01
 02 02 02 02
 03 03 03 03
 04 04 04 04
 05 05 05 05
 06 06 06 06
 07 07 07 07
 08 08 08 08
 09 09 09 09
 10 10 10 10
 11 11 11 11
 12 12 12 12

21. 16 Pres: 1. Ship's Time
 01 01 01 01
 02 02 02 02
 03 03 03 03
 04 04 04 04
 05 05 05 05
 06 06 06 06
 07 07 07 07
 08 08 08 08
 09 09 09 09
 10 10 10 10
 11 11 11 11
 12 12 12 12

22. AM Drafts: 1. Ship's Time
 01 01 01 01
 02 02 02 02
 03 03 03 03
 04 04 04 04
 05 05 05 05
 06 06 06 06
 07 07 07 07
 08 08 08 08
 09 09 09 09
 10 10 10 10
 11 11 11 11
 12 12 12 12

23. Details of Ballast Water Management: 1. Ship's Time
 01 01 01 01
 02 02 02 02
 03 03 03 03
 04 04 04 04
 05 05 05 05
 06 06 06 06
 07 07 07 07
 08 08 08 08
 09 09 09 09
 10 10 10 10
 11 11 11 11
 12 12 12 12

24. Fire Safety Patrols: 1. Ship's Time
 01 01 01 01
 02 02 02 02
 03 03 03 03
 04 04 04 04
 05 05 05 05
 06 06 06 06
 07 07 07 07
 08 08 08 08
 09 09 09 09
 10 10 10 10
 11 11 11 11
 12 12 12 12

25. Lookouts Dismissed in accordance with BPM Section 3.7: 1. Ship's Time
 01 01 01 01
 02 02 02 02
 03 03 03 03
 04 04 04 04
 05 05 05 05
 06 06 06 06
 07 07 07 07
 08 08 08 08
 09 09 09 09
 10 10 10 10
 11 11 11 11
 12 12 12 12

26. Details of Ballast Water Management: 1. Ship's Time
 01 01 01 01
 02 02 02 02
 03 03 03 03
 04 04 04 04
 05 05 05 05
 06 06 06 06
 07 07 07 07
 08 08 08 08
 09 09 09 09
 10 10 10 10
 11 11 11 11
 12 12 12 12

27. Details/Checks of Loadline Items, Anchor Lashing: 1. Ship's Time
 01 01 01 01
 02 02 02 02
 03 03 03 03
 04 04 04 04
 05 05 05 05
 06 06 06 06
 07 07 07 07
 08 08 08 08
 09 09 09 09
 10 10 10 10
 11 11 11 11
 12 12 12 12

13. Remarks: 1. Ship's Time
 01 01 01 01
 02 02 02 02
 03 03 03 03
 04 04 04 04
 05 05 05 05
 06 06 06 06
 07 07 07 07
 08 08 08 08
 09 09 09 09
 10 10 10 10
 11 11 11 11
 12 12 12 12

14. Remarks: 1. Ship's Time
 01 01 01 01
 02 02 02 02
 03 03 03 03
 04 04 04 04
 05 05 05 05
 06 06 06 06
 07 07 07 07
 08 08 08 08
 09 09 09 09
 10 10 10 10
 11 11 11 11
 12 12 12 12

15. Remarks: 1. Ship's Time
 01 01 01 01
 02 02 02 02
 03 03 03 03
 04 04 04 04
 05 05 05 05
 06 06 06 06
 07 07 07 07
 08 08 08 08
 09 09 09 09
 10 10 10 10
 11 11 11 11
 12 12 12 12

16. Remarks: 1. Ship's Time
 01 01 01 01
 02 02 02 02
 03 03 03 03
 04 04 04 04
 05 05 05 05
 06 06 06 06
 07 07 07 07
 08 08 08 08
 09 09 09 09
 10 10 10 10
 11 11 11 11
 12 12 12 12

17. Remarks: 1. Ship's Time
 01 01 01 01
 02 02 02 02
 03 03 03 03
 04 04 04 04
 05 05 05 05
 06 06 06 06
 07 07 07 07
 08 08 08 08<

Merchant Marine General Directorate

Department of Maritime Casualty Investigations

Report: M/V "CAPE MED" R-071-2014- DIAM



13.2 Bell Bok, 30th May 2014

CONT.

Manoeuvring Order Book

Arrival/ Departure	Port	Date	Voyage No.
Tested telegraph at Steering engines at			Clocks at
Stand by/ EOP	at	hrs	COP/ FWE at
Time	Movements and Events		
1148	- S. ASTERN		
1140	- STOP T.		
(1154)	- PILOT OFF		
1206	- P. ANCHOR BROUGHT UP TO 9 @ ON W/P		
	F.W.E		
1250	- HSFO BUNKER BARGE ALONGSIDE @		
	PORT SIDE		
1255	- HSFO BUNKER BARGE MADE FAST ON		
	PORT SIDE		
1400	- HSFO BUNKER BARGE HOSE CONNECTED		
1518	- HSFO COMMENCE PUMPING IN		
1705	- FINISHED PUMPING IN HSFO		
1735	- HSFO HOSE DISCONNECTED.		
1848	- HSFO BUNKER BARGE CASTED OFF / AWAY		
1906	- LSFO BUNKER BARGE ALONGSIDE @ PORT SIDE		
1912	- LSFO BUNKER BARGE MADE FAST PORT SIDE		
2000	- LSFO BUNKER BARGE HOSE CONNECTED (DIESEL)		
2154	- DIESEL OIL COMMENCE PUMPING IN		

Master/Chief Engineer _____

Officer on watch _____

Merchant Marine General Directorate

Department of Maritime Casualty Investigations

Report: M/V "CAPE MED" R-071-2014- DIAM



- Copi
ONS off

7.96
9.23
10.44

Δ-100674
GM-12.47
Fus-188

7249 hrs
21 44

Manoeuvring Order Book

Arrival/Port: GENERAL PANAMA Date: 30th May 2014 Voyage No.: 48 B (FMEL)

Departure: General Pan

Tested telegraph at Steering engines at 0304 Clocks at 0306 hrs

Stand by/ at 0318 hrs COP/ FWE at hrs

Time	Movements and Events
2250	- FINISHED PUMPING IN DIESEL OIL
2300	- DIESEL OIL HOSE DISCONNECTED
2315	- LSFO BUNKER HOSE CONNECTED
2326	- LSFO COMMENCE PUMPING IN
30 th May 2014	
0150	- FINISH PUMPING IN LSFO
0205	- LSFO BUNKER HOSE DISCONNECTED.
0250	- LSFO/DO BUNKER BARGE CASTRO OFF/away
0330	- all nav. EQUIPMENTS CHECKED & TESTED, SATISFACTORY.
0306	- MIP TRIP OUT AREA/WESTERN SATISFACTORY.
0318	- Commence HEAVING UP PORT ANCHOR / JIB
0340	- ANCHOR AWEIGHT
0341	- D. S. AHEAD
0344	- S. AHEAD
0345	- H. AHEAD
0347	- F. AHEAD 0410 = V/L COLLISION w/ M.V. LE STANG.

Master/Chief Engineer:

Officer on watch:

Merchant Marine General Directorate

Department of Maritime Casualty Investigations

Report: M/V "CAPE MED" R-071-2014- DIAM



13.3 VHF Log, 30th May 2014

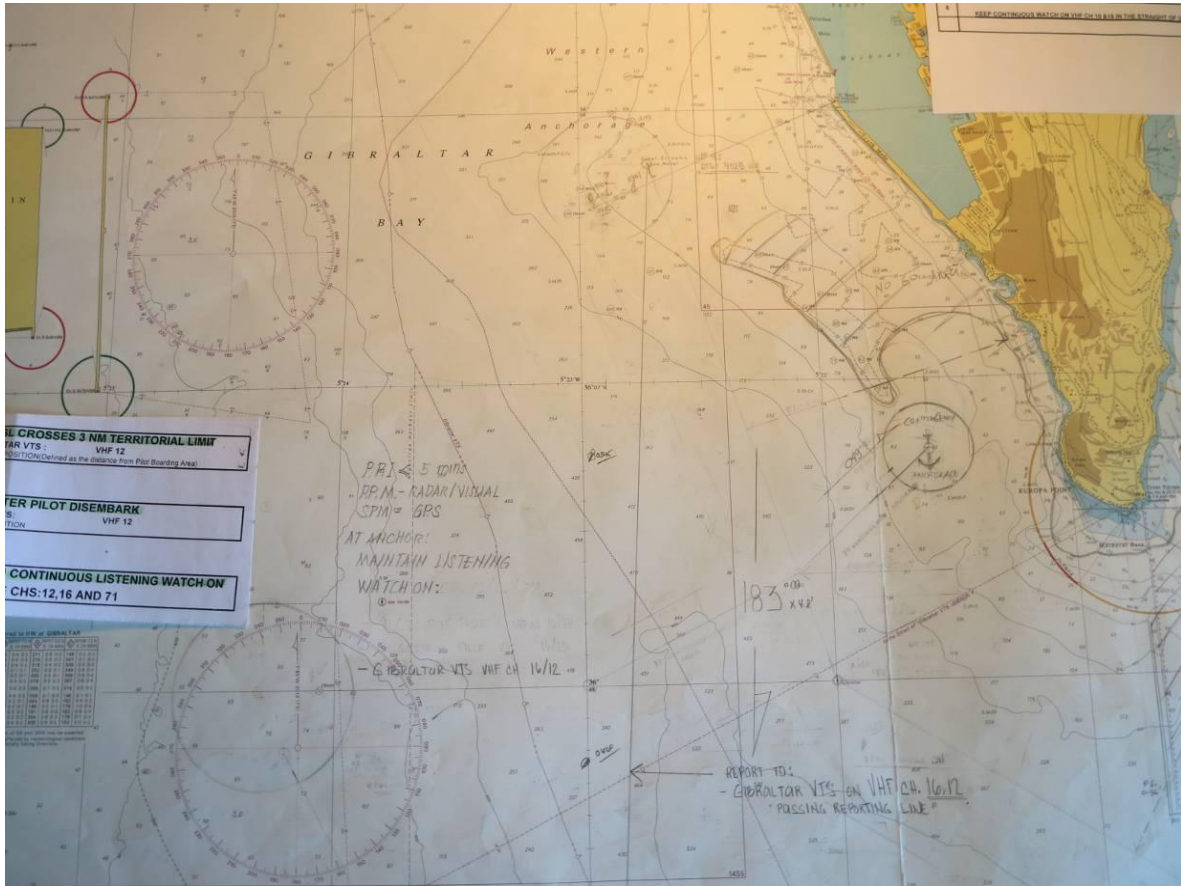
Voyage No: _____ From: _____ To: _____

VHF Log		Vessel's Position	Station From	Station To	Channel	Summary of Communication	Rank	Initials
29 MAY 2014	0842	36° 07.7' N 005° 01.8' W	3EFC3	GIBRALTAR VTS	12	ASK FOR PILOT/ANCHORING INSTRUCTION VTS REPLIED THAT GO 5' OF EUROPA PT.	3/0	[Signature]
29 MAY 2014	1020	36° 05.3' N 005° 15.0' W	3EFC3	GIBRALTAR VTS	12	REPORTED 5' OFF EUROPA PT.	3/0	[Signature]
29 MAY 2014	1026	36° 05.1' N 005° 15.9' W	3EFC3	TRIPAL TRAFFIC	10	REPORTED ENTERING/PASSING IN N. 005° 15' W	3/0	[Signature]
= GIBRALTAR → P. DRUMMOND =								
30 MAY 2014	0312	36-07.7N 005-22-83W	3EFC3	GIBRALTAR VR	12	V/L INFORMED VTS THAT NEED TO HEAVE UP ANCHOR. VTS REPLIED TO CALL THEM BACK AGAIN WHEN ANCHOR AWAY.	2/0	[Signature]
	0343	36-07.72N 005-22.80W	3EFC3	GIBRALTAR VT	12	V/L INFORMED VTS THAT ANCHOR AWAY WITH PROCEEDING. VTS REPLIED TO GO AHEAD HEAD TO HEAD V/L.	2/0	[Signature]
	0348	36-05.6N 005-23.1W	3EFC3	M/V LE STENH	12/16	V/L CALLED M.V. LE STENH LO REPLIED.	2/0	[Signature]
	0349	36-05.62N 005-22.98W	3EFC3	GIBRALTAR VR	12	V/L INFORMED VTS THAT V/L LE STENH NOT REPLYING ON VHF CH 16/12, VTS REPLIED THAT THEY WILL ALSO CALL M/V LE STENH.	2/0	[Signature]
	0350	36-05.61P 005-22.99W	3EFC3	M/V LE STENH	12/16	V/L CALL M/V LE STENH TO ASK AGAIN WHAT THEIR INTENTION, BUT NO REPLIED.	2/0	[Signature]
	0412	36-05.42N 005-22.51W	3EFC3	GIBRALTAR VT	12	V/L INFORMED GIB. VTS THAT V/L COLLIDED W/ M/V LE STENH.	2/0	[Signature]
	0414	36-05.39N 005-22.48W	3EFC3	ALL STATIONS	16	GIVE EMERGENCY MSG TO ALL STATIONS	2/0	[Signature]

Master [Signature]



13.4 Chart





13.5 Manoeuvring Characteristics of CAPE MED

WHEELHOUSE POSTER

Ship's name: CAPE MED Call sign: 3EFC3 Gross tonnage: 93003 Net tonnage: 61795
 Max displacement: 222952 tonnes, and Deadweight: 185827 tonnes, and Block coefficient: 0.82 at summer full load draught

STEERING PARTICULARS

Type of rudder(s): SEMI-BALANCED
 Maximum rudder angle: 35°
 Time hard-over to hard-over with one power unit: 23 s
 with two power units: 23 s
 Minimum speed to maintain course propeller stopped: 4 knots
 Rudder angle for neutral effect: 2.60°

ANCHOR CHAIN

	No. of shackles	Max. rate of heaving (min/shackle)
Port	13	2
Starboard	14	2
Stern	N/A	N/A

(1 shackle = 22.5 m / 12 fathoms)

PROPULSION PARTICULARS

Engine order	Type of engine (No./Cyl., kW (HP))	Type of propeller (Fixed/Fine)	Speed (knots)	
			Loaded	Ballast
Full sea speed	36	12.8	12.8	12.8
Full ahead	58	12.2	12.2	12.2
Half ahead	58	10.4	10.4	10.4
Slow ahead	41	7.4	7.4	7.4
Dead slow ahead	28	5.0	5.0	5.0
Dead slow astern	28	5	5	5
Slow astern	41	10	10	10
Half astern	58	30.3	30.3	30.3
Full astern	68	15	15	15

Critical revolutions: 40 rpm
 Minimum rpm: 5 knots
 Time limit astern: 10 rpm
 Time limit at min. rev.: 10 rpm
 Emergency full ahead to full astern: 30.3
 Stop to full astern: 30.3
 Astern power: 112 % ahead
 Max. no. of consecutive starts: 15

THRUSTER EFFECT at trial conditions

Thruster	kW (HP)	Time delay for full thrust	Turning rate at zero speed	Time delay to reverse full thrust	Not effective above speed
Bow	N/A	-	% min	- min	- knots
Stern	N/A	-	% min	- min	- knots
Combined	N/A	-	% min	- min	- knots

DRAUGHT INCREASE (LOADED)

Under keel clearance	Estimated Squat Effect		Heel Effect	
	Ship's speed (knots)	Max. bow squat estimated (m)	Heel angle (degree)	Draught increase (m)
2.0 m	5	0.41	2	0.22
	6	0.55	4	1.24
	8	1.06	8	3.28
2.0 m	10	1.65	12	4.32
	12	2.38	16	6.54

TURNING CIRCLES AT MAX. RUDDER ANGLE

LOADED Water depth/draught ratio = 1.2

BALLAST

EMERGENCY MANOEUVRES

EMERGENCY MANOEUVRES

STOPPING CHARACTERISTICS

MAN OVERBOARD RESCUE MANOEUVRE

SEQUENCE OF ACTIONS TO BE TAKEN

- TO CAST A LIFEBOAT
- TO GIVE THE HELM ORDER
- TO SOUND THE ALARM
- TO KEEP THE LOOK-OUT

WILKINSON TURN
 PLS SEE BELOW
 ↓
 Insert a recommended turn

PERFORMANCE MAY DIFFER FROM THIS RECORD DUE TO ENVIRONMENTAL, HULL AND LOADING CONDITIONS

Reference: IMO Resolution A.601 (15) Provision and display of manoeuvring information on board ships

Nav 02(P)
Rev. 0 / Nov 11

57



Bridge Checklist - 2
Preparation for Getting Underway / Arrival in Port

Steering Gear Checks

Confirm that the steering gear including as applicable, the operation of the following:

- 1) Main steering gear
- 2) Auxiliary steering gear
- 3) Remote steering gear control systems
- 4) The steering positions located on the navigation bridge.
- 5) The emergency power supply
- 6) The rudder angle indicators in relation to the actual position of the rudder
- 7) The remote steering gear control system power failure alarms
- 8) The steering gear power unit failure alarms
- 9) Automatic isolating arrangements and other automatic equipment

Note: The checks and tests shall include the following:

- 1) The full rudder movement to the required capabilities of the steering gear
- 2) A visual inspection of the steering gear and its connecting linkage
- 3) The operation of the means of communication between the bridge and steering gear compartment
- 4) Normal and Non follow up operation from bridge steering stand.
- 5) Compare W/H rudder angle indicator with actual rudder angle (Steering gear)

I confirm that the above checks have been carried out, as applicable.

Signature of Duty Officer: [Signature] Date: 30 May 2014 Time: 0306 Hrs LT

PART D - Main Engine Tests

1) Main engines have been tested ahead and astern (In case of preparation for getting underway, the Duty officer must confirm propeller clearance, Mooring tightness and Gangway clearance)

I confirm that the above checks have been carried out, as applicable.

Signature of Duty Officer: [Signature] Date: 30 May 2014 Time: 0306 Hrs LT

PART E - 33 CFR 164.25 Checks

1) If the vessel is in US waters ensure that tests have been carried out as per 33 CFR 164.25 and an entry has been made in the Deck Log book: "Tests carried out as per 33 CFR 164.25"

Note: For details refer to the 33 CFR 164.25 poster on the bridge / 33CFR publication

I confirm that the above checks have been carried out, as applicable.

Signature of Duty Officer: _____ Date: _____ Time: _____

PART F - Preparation for Sea

If the vessel is heading to sea:

- 1) The Chief Officer has confirmed that the ship is secure for sea. (Including cargo, cargo handling equipment and hull openings)
- 2) That all the crew are on board and all shore personnel and equipment ashore.
- 3) That required security and stowaway searches have been carried out.

I confirm that the above checks have been carried out, as applicable.

Signature of Duty Officer: _____ Date: 30 May 2014 Time: 0340

Name of Master: CAPT. PIYUSH SRIVASTAVA Signature: [Signature]

BCL - 2
Rev 6/Apr 2013

Page 2 of 2

Merchant Marine General Directorate

Department of Maritime Casualty Investigations

Report: M/V "CAPE MED" R-071-2014- DIAM



Bridge Checklist - 10
Anchoring

The following must be completed every time the vessel proceeds to anchor
All signers of this checklist are attesting to having reviewed it for accuracy and may be held accountable for the accuracy of its content.

Port: ALGECIRAS

RT A - Anchoring:

Engine room & Anchor Party have been informed of the time of "stand-by" for anchoring.

Following equipment is ready for use

a) Anchor(s) lashing removed and anchors cleared

b) Lights/Shapes and sound signaling appliances

If anchoring in an Open Anchorage check that written permission has been obtained from the Office

That the following have been taken into account:

a) The composition of the Anchor Team

b) Anchor(s) being used including number of shackles

c) Speed reduction in ample time

d) Direction/strength of wind

e) Prevailing Tidal stream and currents when maneuvering at low speeds

f) Need for adequate sea room particularly to seaward

g) Depth of water, type of seabed

h) Traffic density in vicinity

That the method of anchoring to be used has been decided after due consideration to the depth of water and has been discussed with the Anchor Party.

Where appropriate port authorities or agents have been consulted prior to deciding the vessel's planned anchor position consultation

I confirm that the above checks have been carried out, as applicable.

Signature of Master: [Signature] Date: 30 MAY 2014 Time: 0800

RT B - Establishing an Anchor watch

Appropriate shapes /lights are being displayed

The ship's position has been determined and plotted on the chart and a Radar watch established.

The vessel's swinging circle has been determined and plotted on the chart

VHF watch is being maintained on the designated Channels.

A high visibility marker has been placed on the anchor chain cable which can be readily seen from the bridge

Hawse pipe covers are in place as a security measure

Operation of windlass and anchors should only be carried out under the supervision of a responsible officer after informing the Bridge.

I confirm that the above checks have been carried out, as applicable.

Signature of Duty Officer: [Signature] Date: 30 MAY 2014 Time: 0806 LT

Name of Master: CAPT. PIYUCH SRIVASTAVA Signature: [Signature]

BCL - 11
Rev 4/Apr 2011



13.7 Crew List

CREW LIST										
Fleet Management Europe Limited										
M.V. "CAPE MED"										
Name of ship : CAPE MED			Port : ALGECIRAS, SPAIN					Date : 30 MAY 2014		
Nationality of Ship : PANAMA										
No.	Surname , Given name , Middle name	Rank/ Rating	Nationality	Date and Place of birth		Seaman's Book No.	Seaman's Book Expiry	Nature Document (Passport)	Passport Expiry	Sex
1	PIYUSH SRIVASTAVA	MASTER	Indian	01/12/1960	AGRA	BY57566	16/06/2015	Z1891714	03/11/2018	M
2	KUMAR, DEEPAK	CH OFF	Indian	02/10/1972	RAUNA, BIHAR	CL46901	01/09/2015	Z2759494	18/03/2024	M
3	FLORES , FERDINAND , ORARIO	2ND OFF	Filipino	22/09/1980	MANILA	C0073276	02/06/2018	EB9805421	11/12/2018	M
4	PAGUNTALAN, MARLON, TONATO	3RD OFF	Filipino	04/03/1981	HIMAMAYLAN, NEG OC	C0186487	19/01/2019	EB1742822	17/01/2016	M
5	JOJI JOY	DK.CDT	Indian	27/11/1992	KOTHAMANGALAM, KERALA	MUM196684	26/01/2022	J4052504	23/03/2021	M
6	ALAGARSAMY VASUDEV	CH ENG	Indian	23/01/1975	BODINAYAKANUR	CL73752	14/02/2015	H6213096	21/07/2019	M
7	CHANDA , ABHISEK	2ND ENG	Indian	18/01/1984	CHAKRADHARPUR , JHARKHAND	MUM126419	06/07/2024	L1954021	23/06/2023	M
8	DAGALEA , ALEX , GUEVARA	3RD ENG	Filipino	27/06/1972	ZAMBOANGA CITY	B1034640	21/06/2016	EB3011665	11/07/2016	M
9	MCNULTY, STEVEN CHARLES	ENG. CDT	British	28/04/1993	BELLSHILL	DB00093069	NO EXPIRATION	516473075	19/04/2023	M
10	LASCUNA, RAPPHY, DAPITON	EL.OFF.	Filipino	20/08/1975	PONTEVEDRA, CAPIZ	B1095142	08/11/2016	EB4047764	10/11/2016	M
11	GARCIA, ERNESTO JR., GALLA	BSN	Filipino	31/10/1977	BOTOLAN , ZAMBALES	B1004415	23/03/2016	EB5972281	18/07/2017	M
12	BALAGTAS, DANIEBOY, MESINA	AB1	Filipino	31/05/1981	CABIAO, N. ECUA	C0184224	12/01/2019	EB9809058	11/12/2018	M
13	GUZMAN, MATEO JR., MARQUEZ	AB2	Filipino	29/05/1968	PILAR CAPIZ	B0962258	12/01/2016	EC0559456	13/03/2019	M
14	BALASABAS, JOEL, HERRERO	AB3	Filipino	17/11/1980	NAVOTAS MM	B0896899	18/07/2015	EB6880759	04/12/2017	M
15	TAYTAY, KRISTIANSEN, TIBIO	OS	Filipino	07/02/1991	MANILA	B0925752	22/09/2015	EC1105678	15/05/2019	M
16	CACHUELA, MELVIN, LARUAN	FTR	Filipino	18/10/1960	CALINOG, ILOILO	C0201159	14/05/2019	EB6312789	10/09/2017	M
17	AWIT , ROEL , CABATINGAN	MTM 1	Filipino	21/10/1966	TAGUM DAVAO	B0937691	06/12/2015	EB1455576	24/11/2015	M
18	FERNANDEZ, REX, BEGONA	MTM 2	Filipino	14/02/1973	ROXAS CITY	C0020159	20/02/2018	EB4966986	15/03/2017	M
19	FERNANDES , DOMINGOS ISABEL	POCT	Indian	08/07/1965	VELIM GOA	MUM128887	25/07/2016	J9745439	27/11/2021	M
20	PELMOKA, JEFFREY , AMANSEC	OS	Filipino	19/10/1978	CABANATUAN NE	B1110712	12/12/2016	EB3885296	16/10/2016	M

Date and signature by master, authorized agent or officer

MASTER

M.V. CAPE MED

Merchant Marine General Directorate

Department of Maritime Casualty Investigations

Report: M/V "CAPE MED" R-071-2014- DIAM



13.8 Rest Hours

RECORD OF HOURS OF REST
May 2014
IMO STCW 2010(+Manila)

Seafarer (Full Name): Capt. Piyush Srivastava
Position (Rank): MASTER
Watchkeeper: NO

Vessel: MV CAPE MED
IMO No: 9316828
Flag: PANAMA

NOT TO BE COMPLETED BY THE SEAFARER

Date	Periods of work are shaded																								NOT TO BE COMPLETED BY THE SEAFARER			
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Hours of rest in any 24h period	Hours of rest in any 7 day period	
5/14/2014																										N/A	N/A	
5/15/2014																											15.0	N/A
5/16/2014																											15.5	N/A
5/17/2014																											15.5	N/A
5/18/2014																											15.5	N/A
5/19/2014																											15.5	N/A
5/20/2014																											115.5	N/A
5/21/2014																											108.5	108.5
5/22/2014																											108.5	108.5
5/23/2014																											108.5	108.5
5/24/2014																											108.5	108.5
5/25/2014																											108.5	108.5
5/26/2014																											108.5	108.5
5/27/2014																											108.5	108.5
5/28/2014																											109.0	109.0
5/29/2014																											110.5	110.5
5/30/2014																											105.0	105.0
5/31/2014																											24.0	113.5

The following national laws, regulations and/or collective agreements governing limitations on working hours or minimum rest periods apply to this ship:

I AGREE THAT THIS RECORD IS AN ACCURATE REFLECTION OF THE HOURS OF WORK OR REST OF THE SEAFARER CONCERNED.

Name of master or person authorized by master to sign this record: _____ Signature of master or authorized person: _____

A copy of this record is to be given to the seafarer. This form is subject to examination and endorsement under procedures established by: _____ Signature of seafarer: _____

Signature of competent authority: PANAMA (name of competent authority)

Report generated on: 31/05/2014 at 05:56

Page 1 of 1

Merchant Marine General Directorate

Department of Maritime Casualty Investigations

Report: M/V "CAPE MED" R-071-2014- DIAM



Seafarer (Full Name): DEEPAK KUMAR
 Position (Rank): Chief Officer
 Watchkeeper: YES

Vessel: MV CAPE MED
 IMO No: 9316828
 Flag: PANAMA

RECORD OF HOURS OF REST
 May 2014
 IMO STCW 2010(+Manila)

Date	Periods of work are shaded																								Hours of rest in any 24h period	Hours of work in period	Comments	NOT TO BE COMPLETED BY THE SEAFARER	
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23				24	Hours of rest in any 7 day period
29-May-14																											5.5	18.5	N/A
30-May-14																											13.0	11.0	10.5
31-May-14																											0.0	24.0	N/A
																											18.5	53.5	24.0

The following national laws, regulations and/or collective agreements governing limitations on working hours or minimum rest periods apply to this ship:

I AGREE THAT THIS RECORD IS AN ACCURATE REFLECTION OF THE HOURS OF WORK OR REST OF THE SEAFARER CONCERNED.

Name of master or person authorized by master to sign this record: Deepak Kumar Signature of master or authorized person: Deepak Kumar

A copy of this record is to be given to the seafarer. This form is subject to examination and endorsement under procedures established by: PANAMA Signature of seafarer: Deepak Kumar

(name of competent authority)

Merchant Marine General Directorate

Department of Maritime Casualty Investigations

Report: M/V "CAPE MED" R-071-2014- DIAM



RECORD OF HOURS OF REST

May 2014

IMO STCW 2010(+Manila)

Seafarer (Full Name): Ferdinand O Flores

Position (Rank): 2nd Officer

Watchkeeper: YES

Vessel: M/V CAPE MED

IMO No: 9316828

Flag: PANAMA

Date	Periods of work are shaded																								Hours of rest in 24h period	Comments	NOT TO BE COMPLETED BY THE SEAFARER	
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23			24	Hours of rest in any 24h period
5/1/2014	[Shaded]																								8.0	At sea.	14.0	102.0
5/2/2014	[Shaded]																								10.0	At sea.	14.0	102.0
5/3/2014	[Shaded]																								10.0	At sea.	14.0	102.0
5/4/2014	[Shaded]																								8.0	At sea.	14.0	102.0
5/5/2014	[Shaded]																								9.5	Ashkelon anchor.	14.5	104.5
5/6/2014	[Shaded]																								8.0	Ashkelon anchor.	15.0	105.5
5/7/2014	[Shaded]																								9.0	Ashkelon anchor.	15.0	105.5
5/8/2014	[Shaded]																								9.0	Ashkelon anchor.	15.0	105.5
5/9/2014	[Shaded]																								8.0	Ashkelon anchor.	15.0	107.5
5/10/2014	[Shaded]																								8.0	Ashkelon anchor.	16.0	107.5
5/11/2014	[Shaded]																								9.0	Ashkelon anchor.	15.0	108.0
5/12/2014	[Shaded]																								10.0	Ashkelon anchor.	14.0	108.0
5/13/2014	[Shaded]																								12.0	Berthing at Ashkelon.	11.0	103.0
5/14/2014	[Shaded]																								12.0	At Ashkelon.	10.0	100.0
5/15/2014	[Shaded]																								12.0	At Ashkelon.	12.0	97.0
5/16/2014	[Shaded]																								12.0	At Ashkelon.	12.0	93.0
5/17/2014	[Shaded]																								12.0	At Ashkelon.	12.0	89.0
5/18/2014	[Shaded]																								12.0	At Ashkelon.	12.0	86.0
5/19/2014	[Shaded]																								12.0	At Ashkelon.	12.0	84.0
5/20/2014	[Shaded]																								12.0	At Ashkelon.	12.0	84.0
5/21/2014	[Shaded]																								14.0	Dep-Ashkelon.	10.0	82.0
5/22/2014	[Shaded]																								10.0	At sea.	10.0	84.0
5/23/2014	[Shaded]																								10.0	At sea.	14.0	86.0
5/24/2014	[Shaded]																								9.5	At sea.	12.5	88.5
5/25/2014	[Shaded]																								10.0	At sea.	14.0	90.5
5/26/2014	[Shaded]																								10.0	At sea.	14.0	92.5
5/27/2014	[Shaded]																								10.0	At sea.	14.0	94.5
5/28/2014	[Shaded]																								10.0	At sea.	14.0	96.5
5/29/2014	[Shaded]																								12.0	AT ALGECIRAS	12.0	96.5
5/30/2014	[Shaded]																								4.0		12.0	102.5
5/31/2014	[Shaded]																								20.0		12.0	102.5

The following national laws, regulations and/or collective agreements governing limitations on working hours or minimum rest periods apply to this ship:

I AGREE THAT THIS RECORD IS AN ACCURATE REFLECTION OF THE HOURS OF WORK OR REST OF THE SEAFARER CONCERNED.

Name of master or person authorized by master to sign this record: _____

Signature of master or authorized person: *[Signature]*

Signature of seafarer: *[Signature]*

A copy of this record is to be given to the seafarer. This form is subject to examination and endorsement under procedures established by:

PANAMA

(name of competent authority)

Report generated on: 31/05/2014 at 05:59

Merchant Marine General Directorate

Department of Maritime Casualty Investigations

Report: M/V "CAPE MED" R-071-2014- DIAM



Seafarer (Full Name): PAGUNTALAN, MARLON
TONATO

Position (Rank): 3rd Officer

Watchkeeper: YES

Vessel: M/V CAPE MED
IMO No: 9316828
Flag: PANAMA

RECORD OF HOURS OF REST
May 2014
IMO STCW 2010(→Mamila)



Date	Periods of work are shaded																								Hours of rest in 24h period	Comments	NOT TO BE COMPLETED BY THE SEAFARER			
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23			24	Hours of rest in any 24h period	Hours of rest in any 7 day period	
5/18/2014																										4.0	20.0	Signed on	N/A	N/A
5/19/2014																										12.0	12.0	At Ashkelon.	12.0	N/A
5/20/2014																										12.0	12.0	At Ashkelon.	12.0	N/A
5/21/2014																										12.0	12.0	At Ashkelon.	10.5	N/A
5/22/2014																										11.5	12.5	Dep.Ashkelon.	13.5	N/A
5/23/2014																										10.0	14.0	At sea	14.0	96.5
5/24/2014																										10.0	14.0	At sea	14.0	96.5
5/25/2014																										8.0	16.0	At sea	14.0	94.5
5/26/2014																										10.0	14.0	At sea	14.0	96.5
5/27/2014																										10.0	14.0		14.0	98.5
5/28/2014																										10.0	14.0		14.0	100.0
5/29/2014																										10.0	14.0		14.0	100.0
5/30/2014																										0.0	24.0	AT ALGERAS	14.0	110.0
5/31/2014																										129.5	206.5		24.0	

The following national laws, regulations and/or collective agreements governing limitations on working hours or minimum rest periods apply to this ship:

I AGREE THAT THIS RECORD IS AN ACCURATE REFLECTION OF THE HOURS OF WORK OR REST OF THE SEAFARER CONCERNED.

Name of master or person authorized by master to sign this record: _____

Signature of master or authorized person: *[Signature]*

Signature of seafarer: _____

PANAMA
(name of competent authority)

A copy of this record is to be given to the seafarer. This form is subject to examination and endorsement under procedures established by:

Merchant Marine General Directorate

Department of Maritime Casualty Investigations

Report: M/V "CAPE MED" R-071-2014- DIAM



RECORD OF HOURS OF REST

May 2014
IMO STCW 2010 (+ Manila)

Vessel: M/V CAPE MED
IMO No: 9316828
Flag: PANAMA

Seafarer (Full Name): GUZMAN, MATEO JR. MARQUEZ
Position (Rank): AB 2
Watchkeeper: YES

Date	Periods of work are shaded																								Hours of work in 24h period	Comments	NOT TO BE COMPLETED BY THE SEAFARER			
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23			24	Hours of rest in any 24h period	Hours of rest in any 7 day period	
5/18/2014																										4.0	20.0	Signed on at Ashkelon.	N/A	N/A
5/19/2014																										10.0	14.0	At Ashkelon.	14.0	14.0
5/20/2014																										10.0	14.0	At Ashkelon.	14.0	14.0
5/21/2014																										10.0	14.0	At Ashkelon.	14.0	14.0
5/22/2014																										9.0	15.0	Dep Ashkelon.	12.0	12.0
5/23/2014																										9.0	15.0	At sea	15.0	15.0
5/24/2014																										4.0	20.0	At sea	15.0	106.0
5/25/2014																										4.0	20.0	At sea	14.0	106.0
5/26/2014																										10.0	14.0	At sea	14.0	106.0
5/27/2014																										10.0	14.0	At sea	14.0	106.0
5/28/2014																										8.0	16.0		14.0	108.0
5/29/2014																										8.0	16.0		12.0	110.0
5/30/2014																										8.0	16.0	AT ALGECIRAS	16.0	111.0
5/31/2014																										0.0	24.0		24.0	120.0

The following national laws, regulations and/or collective agreements governing limitations on working hours or minimum rest periods apply to this ship:

I AGREE THAT THIS RECORD IS AN ACCURATE REFLECTION OF THE HOURS OF WORK OR REST OF THE SEAFARER CONCERNED.

Name of master or person authorized by master to sign this record: _____

Signature of master or authorized person: *[Signature]*

Signature of seafarer: *[Signature]*

A copy of this record is to be given to the seafarer. This form is subject to examination and endorsement under procedures established by:

PANAMA
(name of competent authority)

Merchant Marine General Directorate

Department of Maritime Casualty Investigations

Report: M/V "CAPE MED" R-071-2014- DIAM



13.9 Official Log Book Record

Sección 6a: INFORMES GENERALES
Section 6a: GENERAL REPORTING 6a

Fecha y Hora del Suceso Date and Hour of the Occurrence	Lugar del suceso (Latitud y Longitud si se estuviere navegando) Place of the occurrence or situation by latitude and longitude at sea	Fecha del Asiento Date of Entry	Naturaleza del suceso o hecho Nature of event or incident	Declare multa impuesta, si la hubiere State fine imposed if Any
0407 0410 HRS LT 30/5/14	36 04 00N 005 22.9W	30/5/14	After weighing anchor at Gibraltar bay the vessel was proceeding south under guidance from Gibraltar VTS. At 0410 HRS LT at the position mentioned the M.V. Le sheng on the port side, altered course towards this vessel and collided with this vessel. The vessel was notified as being responsible for the incident, and owners, managers, port authorities notified as per the detailed report. This vessel suffered damage in No. 7 Hold and No. 4P TST, and proceeded under pilotage to anchor at Algeciras anchorage 'A' at 0740 HRS LT, and is undergoing surveys and investigations at the time of writing this.	
			 MASTER PIYUSH SRIVASTAVA	 CHIEF ENGINEER

NOTA: Asientos sobre infracciones disciplinarias. Se llama la atención del Capitán sobre los requisitos del Código Marítimo de la República de Panamá.
NOTE: Entries about disciplinary offenses. The masters attention is called to the requirements of the Maritime Code of the Republic of Panama.

61

Merchant Marine General Directorate

Department of Maritime Casualty Investigations

Report: M/V "CAPE MED" R-071-2014- DIAM



13.10 Voyage Plan

Fleet Management Europe Limited

Passage Plan

Section 1: General information

Vessel's Name	m/v CAPE MED		
Voyage Number	48 B (FMEL)		
Vessel's Condition			
Target Speed		12.5	
Target RPM		74	
Total Steaming Time	13D-10H-19M		
Total distance to go		4029	
Max height above Keel (in Meters)		54	
Max Summer Draft		17.973	

Departure Port Information	
Name of the Port	GIBRALTAR, U.K.
ETD	29th MAY 2014/PM
Time Zone	2
Estimated ROB's on Departure	
HFO	
MDO/MGO	
FW	128
MECYL	

Departure Draft (mtrs)	
Fore	7.96
Aft	10.44
Max Air Draft	43.56
Density	1.025
Arrival Draft (mtrs)	
Fore	8.05
Aft	10.16
Max Air Draft	43.84
Density	1.025

Arrival Port Information	
Name of the Port	P. DRUMMOND, COLOMBIA
ETA	12th JUNE 2014/AM
Time Zone	-5
Estimated ROB's on Arrival	
HFO	
MDO/MGO	
FW	
MECYL	

Consumptions / Day in MT	
HFO	44
MDO/MGO	0.1
L.O.- ME CYL Ltrs/day	450
Fresh Water Data	
FW Consumption/ day in MT	10
FW Production / day in MT	18
Net Gain / Loss / day in MT	10

Block Coefficient	0.85
Clock to be advanced/Retarded during voyage	
Clocks	TO BE RETARDED BY
Duration	7 HRS
If the vessel is Crossing International Date line	
Date of Crossing	N/A
Day Advance/Retard	Not Applicable



Fleet Management Europe Limited

Section 2A: Voyage Appraisal on Paper Charts

A. CHECKLIST FOR VOYAGE PLANNING ON PAPER CHARTS

a) Does vessel have largest scale charts for all sea areas of the proposed voyage?
(If answer is "No", carry out Risk Assessment to identify hazards and control measures)

b) Check that all voyage charts are corrected to the latest Notices to Mariners

c) Check that all voyage charts are corrected for T&P corrections from latest NTM

d) All course lines plotted on charts and way-points co-ordinates written alongside

e) Check all way-points entered in GPS and route created using these waypoints.

Yes No

Last NTM (Week/Year): 22 / M

B. LIST OF VOYAGE CHARTS

BA 144	BA - 1966
BA 144	BA - 2195
BA 142	BA - 2267
BA 21	BA - 1776
BA 3132	
BA 4104	
BA 4115	
BA 4407	
BA 485	
BA 625	
BA 2600	

C. BELOW INFORMATION TO BE MARKED ON CHARTS AS APPLICABLE

a) Locations for: SPEED REDUCTION / UNLASHING ANCHORS / ECHO SOUNDER "ON"

b) Areas where 2 Steering motors to be switched "on" *(if applicable)*

c) Landfall targets & Lights / Prominent Navigation & Radar conspicuous marks

d) Abort Point *(refer BPM Sec-3.3)*

e) Areas of significant Tides & Currents / Minimum UKC / Possibility of banking effect

f) Position plotting interval & position plotting method for each leg (primary & secondary)

g) Change-over position for next chart alongwith the chart number

h) Parallel Indexing while in pilotage areas and during coastal navigation if applicable

i) Clearing Lines & Bearings / Heading Marks / Leading Lines

j) No-go Areas *(Mainly for dangers to navigation close to the charted track)*

k) Wheel-over Position

l) Contingency Anchorage

m) VTS / Port Control / Pilot Station Reporting Points

n) Cautionary Areas / Areas where heavy traffic or crossing traffic expected

o) Boundary of Special Areas *(eg. SECA Area, ECA Area, Right Whale Area, Great Barrier Reef, etc.)*

p) Nav warnings transmitted by satellite, Navtex, coast stations on VHF, etc.

"CARRY OUT A THOROUGH APPRAISAL FOR EACH LEG OF THE VOYAGE WITH OFFICERS OF BRIDGE TEAM"

NAV 001

Rev 1, Jan 2014

Merchant Marine General Directorate

Department of Maritime Casualty Investigations

Report: M/V "CAPE MED" R-071-2014- DIAM



No
 Yes
 Last NM: 22/14
 (week/year): 22/14

Fleet Management Europe Limited
 Section 3: Publications
 M.V / M.T. m/v CAPE MED Voyage No: 48 B (FMEL)

Voyage Charts corrected upto: 22/14 NTM Number

Applicable Admiralty List of Radio Signals			
List of Radio Signals	Latest Edition	Edition on board	Corrected to NTM No.
NP281(1) Volume 1 - Part 1, Maritime Radio Stations (Europe, Africa and Asia excluding the Far East)	2013/14	2013/14	22/14
NP281(2) Volume 1 - Part 2, Maritime Radio Stations (Oceania, the Americas and the Far East)	2013/14	2013/14	22/14
NP282 Volume 2, Radio Aids to Navigation, Satellite Navigation Systems, Legal Time, Radio Time Signals and Electronic Position Fixing Systems	2014/15	2014/15	22/14
NP283(1) Volume 3 - Part 1, Maritime Safety Information Services (Europe, Africa and Asia, excluding the Far East)	2013/14	2013/14	22/14
NP283(2) Volume 3 - Part 2, Maritime Safety Information Services (Oceania and the Americas and the Far East)	2013/14	2013/14	22/14
NP284 Volume 4, Meteorological Observation Stations	2013/14	2013/14	22/14
NP285 Volume 5, Vessel Warning Systems	2013/14	2013/14	22/14
NP286 Volume 6, Maritime Communication Systems	2013/14	2013/14	ADP 18/14
NP287 Volume 7, Maritime Communication Systems	2013/14	2013/14	ADP 18/14

Applicable List of Sailing Directions			
Sailing Directions	Latest Edition	Edition on board	Corrected to NTM No.
NP1 Africa Pilot Vol 1	15	15	22/14
NP7A South America Pilot Vol 4	5	5	22/14
NP67 West Coast of Spain and Portugal Pilot	11	11	22/14
NP71 West Indies Pilot Vol 2	16	16	22/14

Applicable Admiralty List of Lights and fog signals			
List of Lights	Latest Edition	Edition on board	Corrected to NTM No.
NP77 Volume D: Eastern Atlantic Ocean, Western Indian Ocean and Arabian Sea; from Goulet de Brest Southward, including off-lying Islands, to longitude 68° East	2013/14	2013/14	ADP 18/14
NP82 Volume J: Western Side of North Atlantic Ocean; from Maine to Cabo Orange, including Gulf of Mexico and Caribbean Sea	2013/14	2013/14	ADP 18/14

Applicable Admiralty Tide tables			
Tide tables	Latest Edition	Edition on board	Corrected to NTM No.
NP202 Volume 2, Europe (excluding United Kingdom and Ireland), Mediterranean Sea and Atlantic Ocean	2014	2014	ADP 18/14

Details of latest Radio/ Electronic Broadcasts (Add any other information in the blank spaces provided)		
Details	Latest warning available	Applied on charts
Navareas/ Hydrolants/ Hydropac warnings	YES	YES
Vessel's present Navarea	III	YES
Navareas to be transited	III,IV	YES
Navtex /local area warnings?	YES	YES
Navtex Areas selected	G,H,F	YES
Weather Facsimile broadcasts (List the Chart station)	NORTH WOOD, BOSTON, N	
Ocean routing services	WNI(ONLY TRACKING)	YES
Radio Weather Broadcasts?	YES	YES
Inmarsat Broadcasts (EGC warnings)	IV	YES
Special area warnings	3	YES

Applicable Miscellaneous publications (Add any other publication in use in the blank spaces provided)			
Publication	Latest Edition	Edition on board	Remarks
NP 131 Chart Catalogue	2014	2014	
NP 136 Ocean Passages of the world	5/2004	5/2004	
NP 100 Mariners hand book	9/2009	9/2009	
Guide to port entry	2014	2014	
Admiralty Co-Tidal Atlas	N.A	N.A	
Tidal Stream Atlas	N.A	N.A	
Load line Chart	2010	2010	
Routing charts & Guidance for Laden tanker routes off Dutch coast and South Africa	2012	2012	5124 (06)
NP 735 IALA Buoyage System	Arrival port	Dep. Port	
	Region B	Region A	

NAV-001 Rev 1, Jan 2014



Fleet Management Europe Limited

Section 4: Tides and current

M.V./M.T.: m/v CAPE MED Voyage No: 48 B (FMEL)

Departure Port

1) Departure Date: GIBRALTAR

2) Departure Time: 29th MAY 2014 / PM

3) **Tides**

	TIME	HEIGHT
i. High water	SEE ATTACHMENT	SEE ATTACHMENT
ii. Low water	SEE ATTACHMENT	SEE ATTACHMENT

4) **Tidal Stream**

i. Rate: [Redacted]

ii. Direction: [Redacted]

Arrival Port

1) Arrival Date: PORTO DRUMMOND, COLOMBIA

2) Arrival Time: 12th June 2014 / AM

3) **Tides**

	TIME	HEIGHT
i. High water	SEE ATTACHMENT	SEE ATTACHMENT
ii. Low water	SEE ATTACHMENT	SEE ATTACHMENT

4) **Tidal Stream**

i. Rate: N/A

ii. Direction: N/A

During The Passage(Straits, channels, Ocean Currents etc)

1) Position: GIBRALTAR STRAIT

2) Arrival Date: 29th May 2014

3) Arrival Time: PM

4) **Tides**

	TIME	HEIGHT
i. High water	SEE ATTACHMENT	SEE ATTACHMENT
ii. Low water	SEE ATTACHMENT	SEE ATTACHMENT

5) **Tidal Stream**

i. Rate: SEE ATTACHMENT

ii. Direction: SEE ATTACHMENT

6) **Currents**

	NE Current	Guana Current	Carrebian Current
i. Name			
ii. Rate	0.5	1.5	1.25
iii. Direction	SW	W	NE

NAV-001 Rev 1, Jan 2014



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Section 5: Weather conditions

M.V./M.T.: m/v CAPE MED Voyage No: 48 B (FMEL)

Navtex Station	Weather Fax Station
TARIFA(G)	NORTH WOOD
LAS PALMAS(I)	BOSTON
SAN JUAN @	NEW ORLEANS
CURACAO(H)	

1) Are Weather Routing Services being provided ? Yes

Which organization is providing these services ? WNI

Is the routine weather routing format/report available? YES

2) What are the expected weather conditions on during the passage ?

Less chance of getting rest. Visibility or fog. Westerlies can be up to B.F-6. Swell is generally short or avg. (NE). No change of getting ice, wind force expecting >=4 throughout the psg. Frequency of heavy rain and thunderstorm are more in the Caribbean.

3) What is the max height of swell expected at Departure/ Arrival port & during Sea passage ?

DEP: 1.0M, ARR: 1~1.5M, PASSAGE: UPTO 3.5~4.50M

4) What is the max wind speed expected at Departure/ Arrival port & during Sea passage ?

Dep 4 sea psg-5-6, arr-4

5) What is the max / minimum temperature likely to encounter during voyage ?

30 / 15

6) Is the vessel expected to experience areas with restricted visibility during the passage, if yes, please list the way point no's where restricted visibility may be encountered.

NO

7) Is the vessel expected to encounter ice during passage, if yes please advise precautions taken ?

NO

8) Is the vessel expected to encounter any Tropical Cyclones / Typhoons / Tropical Depression / Hurricanes during voyage ?

NO, THAT WE ARE AWARE OF

9) What is the GM of the vessel on Departure, Arrival & expected minimum GM during Sea passage ?

Departure	12.475	Arrival	12.59	Passage	12.49
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NAV-001 Rev 1 / Jan 2014



Fleet Management Europe Limited

Section 6: Reporting Details

M.V./M.T.: m/v CAPE MED Voyage No: 48 B (FMEL)

A) ENOA / D

1. ENOA/D to send (For US Calling vessels only)
If Yes, Expected Date of submission ENOA/D to NVMC/ SANS

2. Expected Date of submission ENOA/D to OFFICE REVIEW

Reminder:

- Vessel to send ENOA for office review prior sending same to NVMC and ENOA has to be forwarded to NVMC at least 96 hrs prior entering US Waters (Voyage type = Foreign to US).
- Vessels calling US Waters are required to send completed passage plan copies duly signed by the Master and other Navigating Officers to Office on email ID fleet-ccmnav@fleetship.com prior entering US Waters.
- Vessels calling US to US port (different COTP zone) are required to send 'E-NOA with voyage type US to US'.
- Vessels departing US ports are required to send completed passage plan copies duly signed by the Master and other Navigating Officers to Office on email ID fleet-ccmnav@fleetship.com prior vessel's departure.
- Vessel to send ENOD for office review prior sending same to NVMC and ENOD has to be forwarded to NVMC at least 6 hours prior departing the berth (Voyage type = US to Foreign).

Remarks (If any)

None

B) PILOTS

1. How many days pre arrival notice to be given to Pilot station at arrival port.

Days BY AGENT Hrs 2HRS

2. Means of Communication with pilot station (Email, VHF etc)

VHF Channels 16 & 11 Email address bauprespilots@bauprespilots.com

Any other means

Remarks (If any)

On Dep santa martha pilot stn and before entering port area contact port control on VHF ch-71 for further instructions

C) VTS (Vessel traffic system)/ Ship's position reports during the voyage :

VTS Sector	Reporting Position	VTS Callsign	VHF Channel	Remarks
Gibraltar VTS	While underway	Gib VTS	12	ALRS286(1)
TARIFA TRAFFIC	GIBALTAR STRAIT	tarifa traffic	10,16	ALRS286(1)
Santa Marta Pilot	when entering VHF range	S.Marta PLT	16	ALRS286(7)

Is Vessel participating in any SRS Ship reporting system (eg AMVER/ AUSREP/ JASREP etc)

Remarks (If any)

AMVER

D) CHARTERERS/ Agents

1. Is any notice required to be given to Charterers/agents prior departure / Arrival and by what means

Yes

2. Means of Communication with Charterers/agents

Email address PLS. SEE ON MASTER FILE

Email address

Any other means

3. Interval of notices to Charterers/agents, Please state days/ hrs

Days DAILY Hrs

Remarks (If any)

NOON REPORTS TO CHARTERERS HAS TO BE SEND ON DAILY BASIS.

NAV-001

Rev 1 / Jan 2014



Ship Management Europe Limited

Section 7: BRIDGE MANAGEMENT TEAM

M.V./M.T.: m/v CAPE MED Voyage No: 48 B (FMEL)

Note: Cadets and any other ratings without appropriate certification should not be part of the bridge team.

1. AT SEA

RESPONSIBILITY	0000 - 0400 & 1200 - 1600	0400-0800 & 1600- 2000	0800 - 1200 & 2000 - 2400
OOW	2/O F. FLORES	C/O K.DEEPAK	3/O PAGUNTALAN
Lookout	AB GUZMAN	AB BALAGTAS	AB BALASABAS

2. AT SEA, IN RESTRICTED VISIBILITY

RESPONSIBILITY	0000 - 0400 & 1200 - 1600	0400-0800 & 1600- 2000	0800 - 1200 & 2000 - 2400
Master should be present on bridge in case of high traffic density or any other time deemed necessary by him.			
OOW	2/O F. FLORES	C/O K.DEEPAK	3/O PAGUNTALAN
Lookout	OS TAYTAY	BSN	DK.CDT/BSN
Helmsman (If required)	AB GUZMAN	AB BALAGTAS	AB BALASABAS

NOTE:

- Master should be notified if visibility deteriorates below 5 nautical miles or greater distance at Master's discretion.
- Helmsman should be posted in addition to lookout if considered necessary.

3. ARRIVAL/ DEPARTURE PORTS, and/ or IN CONGESTED WATERS

RESPONSIBILITY	0000 - 0400 & 1200 - 1600	0400-0800 & 1600- 2000	0800 - 1200 & 2000 - 2400
Master should be present on bridge during the time of arrival/ departure port.			
OOW	2/O F. FLORES	C/O K.DEEPAK	3/O PAGUNTALAN
Helmsman	AB GUZMAN	AB BALAGTAS	AB BALASABAS
Lookout	OS TAYTAY	BSN	DK.CDT/BSN

4. PILOTAGE WATERS

RESPONSIBILITY	0000 - 0400 & 1200 - 1600	0400-0800 & 1600- 2000	0800 - 1200 & 2000 - 2400
Master should be present on bridge during the pilotage.			
OOW	2/O F. FLORES	C/O K.DEEPAK	3/O PAGUNTALAN
Helmsman	AB GUZMAN	AB BALAGTAS	AB BALASABAS
Lookout	OS TAYTAY	BSN	DK.CDT/BSN

Note: Under prolonged pilotage or similar circumstances, or if he is tired, the Master may at his discretion, be relieved by the Chief Officer.

5. HIGHEST LEVEL OF BRIDGE MANNING (AT MASTER'S DISCRETION)

RESPONSIBILITY	0000 - 0400 & 1200 - 1600	0400-0800 & 1600- 2000	0800 - 1200 & 2000 - 2400
Master should be present on bridge during this Manning Level.			
OOW	2/O F. FLORES	C/O K.DEEPAK	3/O PAGUNTALAN
Additional Officer	3/O PAGUNTALAN	2/O F. FLORES	C/O K.DEEPAK
Helmsman	AB GUZMAN	AB BALAGTAS	AB BALASABAS
Lookout	OS TAYTAY	BSN	DK.CDT/BSN

Note: Some examples of the situations requiring the Highest level of Bridge Manning are Arrival / Departure Ports, Congested Waters, Heavy Traffic, Restricted Visibility, Malfunction of Navigation Equipments etc.

NAV-001 Rev 1 / Jan 14



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Section 15: Master's review of passage plan

M.V/M.T m/v CAPE MED Voyage No: 48 B (FMEL)

Dep Port: GIBRALTAR, U.K. Arr. Port: P. DRUMMOND, COLOMBIA

	YES	NO	N/A
Section - 1 General information			
Has all relevant information filled up in the Set up Page ?	✓		
Section - 2 Nautical Charts			
Are all charts on board for the passage and are the largest scale charts in use ?	✓		
Has all relevant information including below been filled in for each chart being used?			
Areas where speed reduction is required.	✓		
Areas where two steering motors are required to be switched ON	✓		
Areas where echo sounder should be activated	✓		
Crossing and high density traffic areas	✓		
Call Points' for Master	✓		
Notices to Engine Room	✓		
Manning of Engine Room (UMS Vessels)	✓		
Has a proper 'Abort Point' been marked ? Indicate position: <u>Ø 11-10.0</u> <u>> 074-20 W</u>	✓		
Has the 'Shallow Water Effect' and 'Banking Effect' been considered ?	✓		
Voyage Charts corrected to NTM no. <u>22/14</u>			
Has the designated Pilot Boarding Ground been assessed and found suitable for the manoeuvring characteristics of the vessel ?	✓		
If NO, has an alternate location been identified? Indicate posn: _____			✓
Section - 3 Publications			
Have all required Publications been identified and relevant information filled in section 3 ? Voyage Publications corrected to NTM no. <u>22/14</u>	✓		
Has relevant information been extracted from required publications ?	✓		
Section - 4 Tides & current			
Has all relevant information regarding tides & current filled in section 4 ?	✓		
Section - 5 Weather conditions			
Has the advice from Weather routing agencies been applied ?	✓		
Section - 6 Reporting details			
Has all relevant reporting requirements as listed in section 6 kept ready for use. ?	✓		
Vessels calling/ Departing US ports, duly signed copies of completed passage will be send to office on email ID fleet-ccmnav@fleetship.com ?			✓
Section - 7 Bridge team management			
Has watch schedule/ manning requirements as per Bridge Team Management discussed with all Navigating officers and Understood ?	✓		
Section - 8 ISPS requirements			
Has the ISPS Section fully filled in and required precautions taken ?	✓		
Section - 9 Environment requirements			
Have all relevant answers been filled up regarding environmental aspect during the voyage ?	✓		

NAV-001 Rev 1. Jan 2014

Merchant Marine General Directorate

Department of Maritime Casualty Investigations

Report: M/V "CAPE MED" R-071-2014- DIAM



Mon Jun 2 2014 20:15
Report
Page 1 of 1

LOADOMETER by HZS v.3.186 h.23 Jan 06
CAPE MED
Report Window: DEPARTURE GIBRALTAR V-42B.STB

Voyage No.	V 42B	Voyage Description :	
Port	GIBRALTER	DEP.GIBRALTER	
Terminal			
Date	30.05.14		
Seawater Density:	1.025 t/m3		
WATER BALLAST	52127 mt	Draught F.	7.96 m
FUEL OIL	1997 mt	Draught M.	9.23 m
DIESEL OIL	117 mt	Draught A.	10.44 m
FRESH WATER	200 mt	Trim	2.59 m
		GM corrected	12.47 m
		GM Limit	0.20 m
		GM Reserve	12.27 m
		max. B.M.	-66 %
		max. S.F.	-82 %
			SEA
Stores / Misc.	510 mt	Lever Balance	OK
Holds	23610 mt	Load Limit Calculation	OK
		Total Dwt	78561 mt
		Light Ship	22125 mt
		Displacement	100686 mt

Item	Weight	LC	LC	LC	LC	LC
WATER BALLAST	52127	0.00	0.00	0.00	0.00	0.00
FUEL OIL	1997	0.00	0.00	0.00	0.00	0.00
DIESEL OIL	117	0.00	0.00	0.00	0.00	0.00
FRESH WATER	200	0.00	0.00	0.00	0.00	0.00
Stores / Misc.	510	0.00	0.00	0.00	0.00	0.00
Holds	23610	0.00	0.00	0.00	0.00	0.00
Total	78561	0.00	0.00	0.00	0.00	0.00

Merchant Marine General Directorate

Department of Maritime Casualty Investigations

Report: M/V "CAPE MED" R-071-2014- DIAM



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 CAPE MED (MFG:S2631514)
 Loading Condition: DEPARTURE GIBRALTAR V-42B STB

Mon Jun 2 2014 20:16
 Results
 Page 1 of 5

Tanks						
Tank	Weight(t)	LCG(m)	Snd(m)	FS(m³)	Dens.	%
FPT FORE PEAK TANK	3966.8	273.28	20.11	0	1.0250	98
WBT1P NO.1 TS DB WBT P	2602.5	252.87	24.71	0	1.0250	98
WBT1S NO.1 TS DB WBT S	2602.5	252.87	24.71	0	1.0250	98
WBT2P NO.2 TS DB WBT P	6018.2	213.25	24.67	0	1.0250	98
WBT2S NO.2 TS DB WBT S	6028.9	213.26	24.67	2946	1.0250	98
WBT3P NO.3 TS DB WBT P	6153.1	162.02	24.66	0	1.0250	98
WBT3S NO.3 TS DB WBT S	6153.1	162.02	24.66	0	1.0250	98
WBT4P NO.4 TS DB WBT P	6104.1	110.55	24.66	0	1.0250	98
WBT4S NO.4 TS DB WBT S	6104.1	110.55	24.66	0	1.0250	98
WBT5P NO.5 TS DB WBT P	3189.8	60.12	20.70	452	1.0250	60
WBT5S NO.5 TS DB WBT S	3204.3	60.02	20.67	432	1.0250	60
APT AFT PEAK TANK	0.0	9.32	0.00	0	1.0250	0
SLOP NO.5 TSWBT/SLOP P	0.0	69.82	0.00	0	1.0250	0
DBT5P NO.5 DB WBT P	0.0	67.00	0.00	0	1.0250	0
Total WATER BALLAST :	52127.3	166.84		3831		81
FOT1P NO.1 FOT P	500.0	28.46	10.91	726	0.9700	33
FOT1S NO.1 FOT S	450.0	28.57	10.83	573	0.9700	43
FOT2P NO.2 FOT P	567.6	14.73	8.90	933	0.9700	55
FOT2S NO.2 FOT S	479.0	14.84	8.06	933	0.9700	46
Total FUEL OIL :	1996.6	21.31		3165		43
DOT1S NO.1 DOT S	105.2	32.44	5.07	166	0.8500	81
DOT2S NO.2 DOT S	11.5	28.97	0.41	201	0.8500	7
Total DIESEL OIL :	116.7	32.10		366		40
FRESH FRESH WATER	100.0	6.52	2.46	220	1.0000	37
DRINK DRINK. WATER T	100.0	6.52	2.46	220	1.0000	37
Total FRESH WATER :	200.0	6.52		440		37
Total sum of all tanks :	54440.6	160.62		7802		

Holds						
Hold	Weight(t)	LCG(m)	Snd(m)	Mgr/FS(m³)	Dens.	%
NO.1 CARGO HOLD (coal)	0.0	253.91	0.00	0	0.8408	0
NO.2 CARGO HOLD (coal)	0.0	227.99	0.00	0	0.8408	0
NO.3 CARGO HOLD (coal)	0.0	201.96	0.00	0	0.8408	0
NO.4 CARGO HOLD (coal)	0.0	176.16	0.00	0	0.8408	0
NO.5 CARGO HOLD (coal)	0.0	150.36	0.00	0	0.8408	0
NO.6 CARGO HOLD (Tankhold)	23610.0	125.47	24.91	0	1.0250	99
NO.7 CARGO HOLD (coal)	0.0	98.95	0.00	0	0.8408	0
NO.8 CARGO HOLD (coal)	0.0	73.07	0.00	0	0.8408	0
NO.9 CARGO HOLD (coal)	0.0	48.66	0.00	0	0.8408	0
Total OTHER:	0.0	0.00	0.00	0		0
Total ore:	0.0	0.00	0.00	0		0
Total coal:	0.0	0.00	0.00	0		0
Total Cargo Grade - A:	0.0	0.00	0.00	0		0
Total Cargo Grade - B:	0.0	0.00	0.00	0		0
Total Cargo Grade - C:	0.0	0.00	0.00	0		0
Total Cargo Grade - D:	0.0	0.00	0.00	0		0
Total Cargo Grade - E:	0.0	0.00	0.00	0		0
Total Tankhold:	23610.0	125.47	0.00	0		99
Total	23610.0	125.47		0		11

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Department of Maritime Casualty Investigations

Report: M/V "CAPE MED" R-071-2014- DIAM



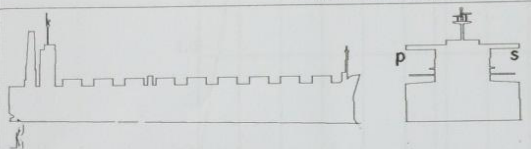
LOADOMETER by HZS v.3.186 h.23.Jan.06
 CAPE MED (MFG:S2631514)
 Loading Condition: DEPARTURE GIBRALTAR V-42B.STB

Mon Jun 2 2014 20:16
 Results
 Page 2 of 5

Break Bulk						
Item	Weight(t)	LCG(m)	VCG(m)	TCG(m)	WDA(m)	WDF(m)
Constant Fore	45.0	273.00	21.50	0.00	268.53	280.53
Constant Mid	120.0	134.02	3.25	0.00	33.75	268.53
Constant Aft	60.0	5.69	9.57	0.00	-2.25	9.75
Constant Eng	285.0	27.31	16.28	0.00	15.35	33.75
Total Break Bulk	510.0	71.55	12.89	0.00		

Loading Condition total					
	Weight(t)	LCG(m)	VCG(m)	TCG(m)	
Break Bulk	510.0	71.55	12.89	0.00	add. Fr.Surf.: 0.0 m ²
Tanks	54440.6	160.62	9.65	0.01	Fr.Surf.: 7802.4 m ²
Holds	23610.0	125.47	13.44	0.00	
DeadWeight	78560.6	149.48	10.81	0.00	Fr.Surf.: 7802.4 m ²
Light Ship	22125.0	132.74	13.65	0.00	
Displacement	100685.6	145.80	11.43	0.00	
Deadw. Reserve	107266.4				Summer(1)

Draughts at Marks, Trim and List



	m.a.bok
Draught corr	9.15
Draught max	17.973
Draught aft.	10.44
Draught mid.	9.23
Draught fore.	7.96

Trim by stern: 0.53 degree (2.59 m)
 List due to transverse moment (degree): 0.01 (starboard)
 Density of Seawater: 1.025 t/m³
 Propeller Immersion Ratio 80.9 %
 Visibility Line: 554 m

AirDraft:

R.M.: 43.66 m	HC9: 17.46 m	HC8: 17.70 m	HC7: 17.94 m	HC6: 18.18 m
HC5: 18.41 m	HC4: 18.65 m	HC3: 18.89 m	HC2: 19.13 m	HC1: 19.37 m

Stability Results / IMO749			
	actual	Limit	
Lever Balance OK			
GM' (corrected)	12.475	0.202	m
Angle due to transverse Moment	0.013	3.000	degr.
Angle due to Wind + transverse Moment	0.013	16.000	degr.
Max. lever GZ at angle >=30 degrees	7.607	0.200	m
Angle of max righting lever GZ	43.020	25.000	degr.
Area up to 30 Degrees	1.775	0.055	m * rad
Area up to 40 Degrees	3.026	0.090	m * rad
Area between 30 and 40 Degrees	1.251	0.030	m * rad
Amplitude of rolling	23.21		degr.
Period of rolling	9.76		sec
Weather Criterion	4.00	1.000	

Merchant Marine General Directorate

Department of Maritime Casualty Investigations

Report: M/V "CAPE MED" R-071-2014- DIAM

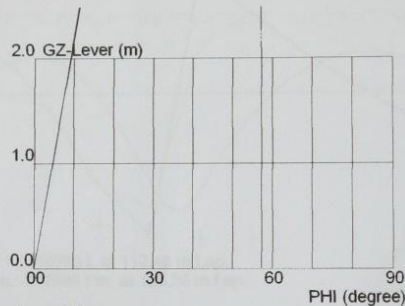


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 CAPE MED (MFG:S2631514)
 Loading Condition: DEPARTURE GIBRALTAR V-42B.STB

Mon Jun 2 2014 20:16
 Results
 Page 3 of 5

Hydrostatic Particulars

Displacement	100685.6 t	Transv. metacenter ab. baseline KM	23.99 m
Corresponding mean draught	9.15 m	Vertical centre of gravity KG (solid)	11.43 m
Longitudinal centre of flotation	148.75 m	Transverse metacentric height GM	12.55 m
Longitudinal centre of buoyancy	151.07 m	Free surface correction GG'	0.08 m
Longitudinal centre of gravity	145.80 m	Corr. vert. centre of gravity KG'	11.51 m
Trimming lever	5.27 m	Corr. transv. metacentric height GM'	12.47 m
Trim coefficient	0.4922	Transverse moment	292.85 m ⁴ t
Total trim over perpendiculars	2.59 m	List due to transverse moment	0.013 degr.
Trim at forward perpendicular	-1.22 m	Area "a" for Weather Criterion	1.072 m ² rad
Trim at aft perpendicular	1.38 m	Area "b" for Weather Criterion	4.293 m ² rad
Draught at fore perpendicular	7.94 m	Moment to change trim MCT	2045.72 (t ² m)/cm
Draught at midship	9.23 m	Weight to change Draft TPC	115.56 t/cm
Draught at aft perpendicular	10.53 m		



Trans. Mom. _____
 Tr.+Wi. Mom. _____
 Moment due to wind: 0 m⁴t

Leverarm Results

Angle p (degree)	KN-Ord. (m)	KG*sin(p) (m)	FS Corr. (m)	GZ Corr. (m)	Trans.M. (m)	Tr+Wi M. (m)
5.0	2.098	0.996	0.007	1.095	0.003	0.003
10.0	4.214	1.985	0.013	2.216	0.003	0.003
15.0	6.369	2.959	0.020	3.389	0.003	0.003
20.0	8.560	3.910	0.027	4.623	0.003	0.003
30.0	12.359	5.717	0.039	6.604	0.003	0.003
40.0	14.960	7.349	0.050	7.561	0.002	0.002
50.0	16.201	8.759	0.059	7.383	0.002	0.002
60.0	16.425	9.902	0.067	6.456	0.001	0.001
70.0	15.872	10.744	0.073	5.055	0.001	0.001

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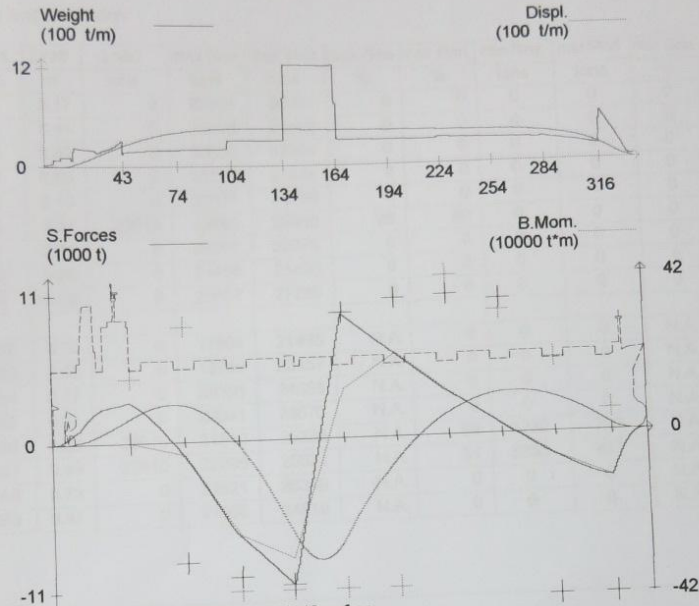
Department of Maritime Casualty Investigations

Report: M/V "CAPE MED" R-071-2014- DIAM



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 CAPE MED (MFG:S2631514)
 Loading Condition: DEPARTURE GIBRALTAR V-42B.STB

Mon Jun 2 2014 20:16
 Results
 Page 4 of 5



Max.Shear F.: -10763 t at 112.48 m.f.ap.
 Max.B.Mom.: -317580 t*m at 126.26 m.f.ap.

Longitudinal Strength Results for Sea Condition									
Frame No.	Shear Forces						Bending Moments		
			SF Correction						
	existing (t)	Limit rel. (t) (%)	AFT		FORE		existing (t*m)	Limit rel. (t*m) (%)	
			existing (t)	Limit rel. (t) (%)	existing (t)	Limit rel. (t) (%)			
43	3066	8792 35			3066	8792 35	64435	169885 38	
74	-995	-8950 11	-995	-8950 11	-995	-8950 11	96193	304181 32	
104	-7058	-10121 70	-7058	-10121 70	-7058	-10121 70	-13561	-394324 3	
134	-10678	-10747 * 99	-8834	-10747 * 82	-5369	-10747 50	-240612	-394324 * 61	
164	8985	9380 96	3676	9380 39	7414	9380 79	-259557	-394324 * 66	
194	6253	10406 60	6253	10406 60	6253	10406 60	-53462	-394324 16	
224	3255	10554 31	3255	10554 31	3255	10554 31	58606	422876 14	
254	716	10129 7	716	10129 7	716	10129 7	108011	326207 33	
284	-1755	-11982 15	-1755	-11982 15	-1755	-11982 15	92209	196193 47	
316	-3466	-11941 29	-3466	-11941 29			16644	57818 29	

* marks max. percentage

Merchant Marine General Directorate

Department of Maritime Casualty Investigations

Report: M/V "CAPE MED" R-071-2014- DIAM

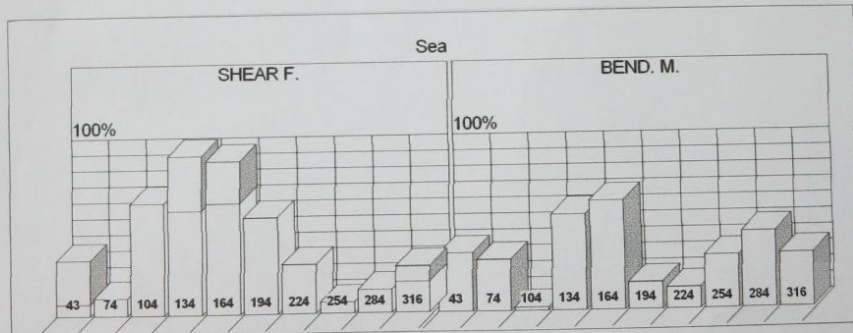


LOADOMETER by HZS v.3.186 h.23.Jan.06
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 Loading Condition: DEPARTURE GIBRALTAR V-42B.STB

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 Results
 Page 5 of 5

Load limit calculation

Hold No.	Draft m	Load tons	max Sea tons	max Port tons	max Sea %	max Port %	min Sea tons	min Port tons	min Sea %	min Port %
1	8.17	0	22331	24001	0	0	0	0	0	0
2	8.41	0	21468	21468	0	0	0	0	0	0
3	8.65	0	30659	32304	0	0	0	0	0	0
4	8.89	0	21544	21544	0	0	0	0	0	0
5	9.13	0	33174	34746	0	0	0	0	0	0
6	9.37	23610	23860	23860	99	99	0	0	0	0
7	9.61	0	31708	33276	0	0	0	0	0	0
8	9.85	0	21456	21456	0	0	0	0	0	0
9	10.09	0	25607	27288	0	0	0	0	0	0
1&2	8.30	0	17964	21493	N.A.	0	0	0	N.A.	0
2&3	8.53	0	19739	23457	N.A.	0	0	0	N.A.	0
3&4	8.77	0	20356	24085	N.A.	0	0	0	N.A.	0
4&5	9.01	0	20941	24670	N.A.	0	0	0	N.A.	0
5&6	9.25	23610	21510	25236	N.A.	94	3262	780	N.A.	7
6&7	9.49	23610	22095	25821	N.A.	91	3333	837	N.A.	9
7&8	9.73	0	22621	26349	N.A.	0	0	0	N.A.	0
8&9	9.97	0	21058	24819	N.A.	0	0	0	N.A.	0





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