L-14182

# Panama Maritime Authority

Directorate General of Merchant Marine

Marine Accident investigation Department

## REPORT: M/V "SAGE SAGITTARIUS" R- 020-13- DIAM

| | |
|---|---|
| August 30 2012 | Missing of Chief Cook |
| September 14 2012 | Death of Chief Engr |
| October 06 2012 | Death of Superintendent |

# CASUALTY INVESTIGATION REPORT

## For

## Several Deaths

## On board

# M/V "SAGE SAGITTARIUS"

In accordance to Resolution No. 106-12-DGMM of February 17 of 2009 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)"

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## DEFINITION OF TERMS

| | |
|---|---|
| CAPT | MASTER |
| C/E | CHIEF ENGINEER |
| C/O | CHIEF OFFICER |
| O/S | ORDINARY SEAMAN |
| A/B | ABLE BODY SEAMAN |
| C/COOK | CHIEF COOK |
| OLR | OILER |
| ELECT | ELECTRICIAN |
| ECR | ENGINE CONTROL ROOM |
| L.T | LOCAL TIME |
| MSMC | MINIMUM SAFE MANNING CERTIFICATE |
| N.R.T | NET REGISTERED TONNAGE |
| G.R.T | GROSS REGISTERED TONNAGE |
| PMA | PANAMA MARITIME AUTHORITY |
| SMC | SAFETY MANAGEMENT CERTIFICATE |
| STCW | INTERNATIONAL CONVENTION ON STANDARDS OF TRAINING, CERTIFICATION AND WATCHKEEPING FOR SEAFARERS |
| AFP | AUSTRALIAN FEDERAL POLICE |
| SUL | SELF UN-LOADER |
| NSW | NEW SOUTH WALES |
| ILO | INTERNATIONAL LABOUR ORGANIZATION |
| JPIA | JAPAN P&I ASSOCIATION |

## FOREWORD

The focus of the Investigation is to determine the Root Cause of allege casualty on board of M/V "SAGE SAGITTARIUS" which reported a death on board of 3 personnel in different occasion, which detailed as follows:

**Case-1- Missing Chief Cook**
30th August 2012, Chief Cook was found missing while the vessel was underway to New Castle for Loading. Efforts was all made to locate the missing C/Cook which involves some vessels in the vicinity, RCC likewise dispatched Aircraft to assist the Search and Rescue Operation.

**Case-2- Chief Engineers Death in E/R**
14th Sep 2012, Chief Engr was found dead in 4th floor of Engine Room owing from fall while the vessel was manoeuvring for berthing port of New Castle Australia.

**Case-3- Superintendent Death**
6th Oct 2012, Superintendent was found dead entangle with the conveyor belt and rollers of the Self Unloader

The Principal Surveyor liaise the following personnel to carry out the casualty investigation for the vessel M/V SAGE SAGITTARIUS:

- Ship's Master
- Chief Engineer
- Company Manager of Personnel Department

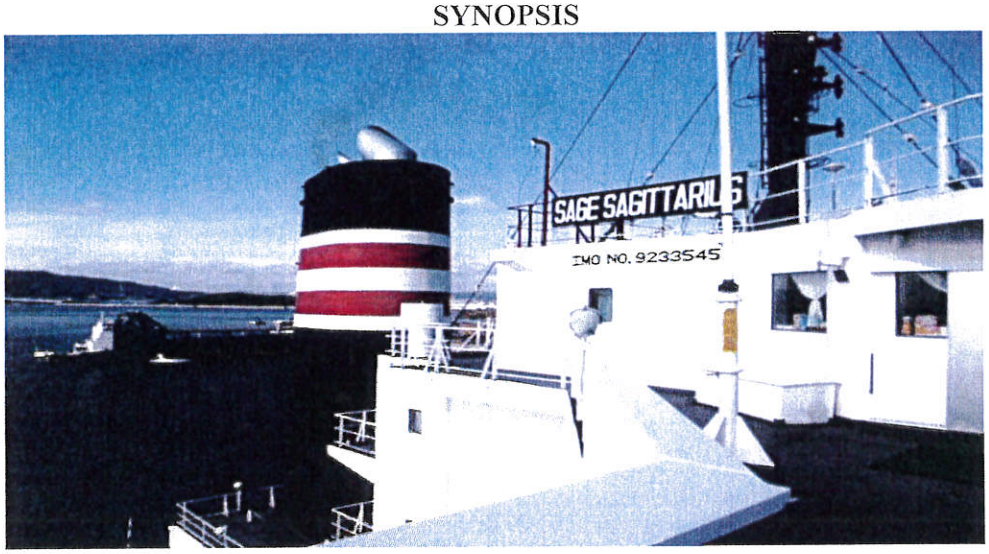
Initial meeting was conducted among Master/Officers of explained the purpose of Investigation to which required their utmost cooperation. Interviews were conducted to Main personnel who have knowledge in the Accident and gathered required documentation and photographs.

At the Hachiuma Office the Principal Surveyor liaise the following personnel for further investigation:

- Company Superintendents

- Company Manager of Personnel Department
- Senior Managing Director /DPA

## SYNOPSIS




**M/V "SAGE SAGITTARIUS" at KODAMATSU PORT**

M/V "SAGE SAGITTARIUS" Call Sign:H9AV, IMO No:9233545, Bulk Carrier with Deadweight of 105,708T, a registered Panamanian Flag under the management of Hachiuma Steamship Corporation (Japan) Ltd.

**Summary:**

**Case-1**

Chief Cook, CESAR P. LLANTO, was found missing after his last seen around 0800LT on 30th August 2012

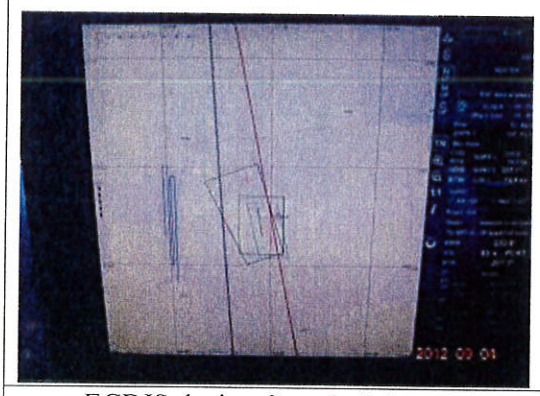
M/V SAGE SAGITTARIUS was bound for New Castle to load Cargoes. At 0830H (LT) the Master of MV SAGE SAGITTARIUS was about to have his breakfast with the chief officer but Chief Cook was not around.

At 0840H (LT) Master told C/Officer to look for the Chief Cook and was confirmed later that Chief Cook was not in his cabin.

Captain suspected that the Chief Cook was missing so he requested to 3rd officer to put the vessel into reciprocal course. Master mustered all crew to the Bridge to further instruction to initiate searching of Missing Chief Cook.

All areas in accommodation, engine room, steering gear room and CO2 room, poop deck/SUL areas and upper deck to boson's store, including all store rooms but can't find the Chief Cook. Master presumed that Chief cook went missing around 0810H (LT) on 30th of August 2012.

A wide search and rescue operation was done with the help of vessels in the area, which involves Aircraft which was dispatched by RCC.

| | |
|---|---|
|  |  |
| ECDIS during Search & Rescue | AFP conducting Investigation O/B |

**Case-2**

The C/E Hector COLLADO was scheduled to disembark from the vessel at Newcastle since the replacing C/E Robert L. GATTOC had embarked at her previous port, Port Kembla.

On 14th of September 2012 at 0400H/LT, MV SAGE SAGITTARIUS commenced preparing her engine stand-by for berthing at New Castle. She was under command by 2 Pilots on-board. At around 0750LT, a hard noise was noticed in the Engine Room and was

evealed the body of C/E Hector COLLADO lying unconscious in the 4th floor bleeding from his nose and mouth.
Matters were reported to the Bridge and Pilots decided to bring the vessel to Emergency dock to Dyke No.1 at New Castle Australia.

Medical Crew embarked around 0827LT and attempted to rescue the Chief Engineer, however he was declared DEAD around 0855LT by MEDICS.

Blood Stain on the Railing

Paramedics try to Survive the CE

**Case-3**
Whilst the vessel, M/V SAGE SAGITTARIUS was discharging its Cargoes at Kudamatsu, Japan, a ship superintendent Mr Monji died after his body crushed in the cargo belt conveyor during his maintenance works on October 6 2012.

A superintendent was put on there apparently to care for the welfare and safety of the crew last 17th of September 2012 as he was sailing with the vessel from New Castle to Kudamatsu Japan.

# SECTION 1 - FACTUAL INFORMATION

## 1.1 Ship's Main Particulars

| | | |
|---|---|---|
| NAME | : | M/V "SAGE SAGITTARIUS" |
| FLAG | : | PANAMANIAN |
| PORT OF REGISTRY | : | PANAMA |
| OFFICIAL NUMBER | : | 27903-01-c |
| CALL SIGN | : | H9AV |
| IMO NUMBER | : | 9233545 |
| TYPE | : | BULK CARRIER |
| REGISTERED OWNER | : | HESPERUS MARITIMA S.A |
| ADDRESS OF OWNER | : | 50, ESPLANADE L-9227 DIEKIRCH LUXEMBOURG |
| OPERATOR | : | HACHIUMA STEAMSHIP CO., LTD. |
| NUMBER OF CREW | : | 26 |
| BUILDER | : | IMABARI SHIPBLG, LTD JAPAN |
| YEAR BUILT | : | 30/MAR/2001 |
| CLASS | : | NIPPON KAIJI KYOKAI |
| L.O.A. | : | 234.93 M |
| L.B.P | : | 226.00 M |
| BREADTH | : | 43.0 M |
| DEPTH | : | 25.4 M |
| G.R.T | : | 73, 427 T |
| N.R.T | : | 24,641 T |
| DEAD WEIGHT | : | 105,708 MT |
| FULL LOADED DRAFT MLD. | : | 25.4 M |
| MAIN ENGINE TYPE | : | MITSUBISHI :8UEC60LS II x 1SET |
| MAXIMUM RATING | : | 15,300 KW x 104 RPM |
| NORMAL RATING | : | 13,005 KW x 104 RPM |
| SERVICE SPEED | : | 15.0K (B/L) |

| | | | |
|---|---|---|---|
| INTERNATIONAL SEWAGE POLLUTION PREVENTION (I.S.P.P) CERTIFICATE [16] (11-HO2097-OPP) | NKK | 23/04/2011 | 29/03/2016 |
| INTERNATIONAL LOADLINE CERTIFICATE [17] (11-HO2097-LLC) | NKK | 31/03/2011 | 29/03/2016 |
| SAFETY MANAGEMENT CERTIFICATE [18] (SMS 0047044 ) | NKK | 08/08/2011 | 27/08/2016 |
| DOCUMENT OF COMPLIANCE (D.O.C) [19] (11-0610PANDOC) | NKK | 14/04/2011 | 22/02/2016 |
| ANTI FOULING CERTIFCATE [20] (09-KB0013-AFS) | NKK | 05/02/2009 | ---- |
| INTERNATIONAL SHIP SECURITY CERTIFICATE [21] (200900612) | NKK | 23/03/2009 | 07/05/2014 |
| IMSBC CERTIFICATE [22] (KC11HS-150) | PMA | 13/06/2011 | 12/06/2016 |
| EXEPTION CERTIFICATE [23] (E 18365) | PMA | 07/03/2011 | 29/03/2016 |

## 1.2 Ship's Certificates

| CERTIFICATE NAME/ ID No. | ISSUE BY | ISSUED ON DD/MM/YYYY | EXPIRES ON DD/MM/YYYY |
|---|---|---|---|
| REGISTRY CERTIFICATE[1] (27903-01-C) | PMA | 22/12/2011 | 21/02/2017 |
| RADIO STATION LICENSE[2] (3022-C) | PMA | 25/01/2012 | 24/01/2017 |
| TAX ANNUAL RECEIPT[3] (103149) | PMA | 01/01/2012 | 31/12/2012 |
| MINIMUM MANNING CERTFICATE[4] (M15706) | PMA | 03/03/2008 | --- |
| INTERNATIONAL TONNAGE CERTIFICATE-ITC69 [5] (IHO-013TM) | PMA | 30/03/2001 | --- |
| CREW ACCOMMODATION CERTIFICATE[6] (IBSCA-00756) | PMA | 14/01/2014 | 12/04/2013 |
| CONTINUOUS SYNOPSIS RECORD[7] (9233545) | PMA | 26/01/2004 | --- |
| CERTIFICATE OF CLASS[8] (101795) | NKK | 25/01/2012 | 29/03/2016 |
| CARGO SHIP SAFETY EQUIPMENT CERTIFICATE[9] (11-HO2097-SEC) | NKK | 31/03/2011 | 29/03/2016 |
| RECORD OF EQUIPMENT FOR THE CARGO SHIP SAFETY EQUIPMENT CERTIFICATE (FORM E) [10] (11-HO2097-SER) | NKK | 31/03/2011 | 29/03/2016 |
| CARGO SHIP SAFETY CONSTRUCTION[11] (11-HO2097SCC) | NKK | 31/03/2011 | 29/03/2016 |
| CARGO SHIP SAFETY RADIO CERTIFICATE[12] (11-HO2097-SRC) | NKK | 31/03/2011 | 29/03/2016 |
| RECORD OF EQUIPMENT FOR THE CARGO SHIP SAFETY RADIO CERTIFICATE (FORM R)[13] (11-HO2097-SRR) | NKK | 31/04/2011 | 29/03/2016 |
| INTERNATIONAL AIR POLLUTION PREVENTION (I.A.P.P) CERTIFICATE[14] (11-HO2097-APP) | NKK | 23/04/2012 | 29/03/2016 |
| INTERNATIONAL OIL POLLUTION PREVENTION CERTIFICATE [15] (11-HO2097-OPP) | NKK | 23/04/2011 | 29/03/2016 |

### 1.3 Ship's Manning & Crew

- ✓ The Minimum Safe Manning Certificate was issued by Panama Maritime Authority on the 03.March.2008, permanently.
- ✓ A copy of the MSMC[4] is attached in this report.

| | | |
|---|---|---|
| **MSMC Number** | : | **M17416** |
| **No. of Deck Officers** | : | ▪ (1) Master<br>▪ (1) Chief Officer<br>▪ (1) Deck Officer |
| **No. of Deck Ratings** | : | ▪ (3) A/B SEAMAN;<br>▪ (2) O.SEAMAN |
| **No. of Engine Officers** | : | ▪ (1) Chief Engineer<br>▪ (1) Second Engineer<br>▪ (1) Eng. Off. |
| **No. of Engine Ratings** | : | ▪ (3) Oilers / Motormen |
| **Special Requirements or Conditions** | : | ▪ While the vessel holds UMS-Unattended machinery Spaces Certificate issued by a recognized organization, the Engineer Officer and one Oiler / Motorman may be dispensed with.<br><br>▪ A minimum of two (2) watch keeping Deck Officers or one (1) Dedicated Radio Officer are required to have the appropriate GMDSS Radio Operator Certificate general or Restricted, depending upon the ship's intended sea area of operation (Refer to MMC.118). |
| **Service Area** | | ▪ World Wide Trade |

Basis on the attaché CREWLIST on each Incident and MSMC requirements, the following were concluded,

- ✓ Vessel is complying with minimum safe- manning mentioned in the MSMC.
- ✓ Although Chief Cook was declared missing on 30th Aug 2012, there was still enough Crew to cover his work and MSMC still complied basis C1Crew List[78].

- ✓ On the 2nd Incident where the C/E was dead relieving Chief Engr was already on board at last Port, Sept 8 2012 as per C2Crew List[80].
- ✓ Per records there are two (2) ARM GUARD were on board after the 1st Incident and off at next Port (Port Kembla-New Castle) as per arrangement by the Management Company since case is under Investigation.

**1.4 Ships' Navigational & Radio Equipment**

M/V SAGE SAGITTARIUS is equipped with the following Navigational and Radio equipment as per the attached Record of Equipment for the Cargo Safety Equipment (Form E)[10] & Record of Equipment for the Cargo Ship Safety Radio

**Certificate (Form R)** [13.]

| No. | LIST OF EQUIPMENT |
|---|---|
| 1 | VHF RADIO INSTALLATION |
| 2 | MF RADIO INSTALLATION |
| 3 | MF/HF RADIO INSTALLATION |
| 4 | INMARSAT SHIP EARTH STATION |
| 5 | NAVTEX RECEIVER |
| 6 | EGC RECEIVER |
| 7 | HF DIRECT-PRINTING RADIOTELEGRAPHY RECEIVER |
| 8 | SATELLITE EPIRB |
| 9 | SART |
| 10 | STANDARD MAGNETIC COMPASS |
| 11 | SPARE MAGNETIC COMPASS |
| 12 | GYRO COMPASS |
| 13 | GYRO COMPASS HEADING REPEATER |
| 14 | GYRO COMPASS BEARING REPEATER |
| 15 | PELORUS OR COMPASS BEARING DEVICE |
| 16 | MEANS OF CORRECTING HEADING AND BEARINGS |
| 17 | NAUTICAL CHARTS |

| | |
|---|---|
| 18 | NAUTICAL PUBLICATIONS |
| 19 | GPS RECEIVER |
| 20 | 9GHZ RADAR |
| 21 | 3GHZ RADAR |
| 22 | AUTOMATIC RADAR PLOTTING AID (ARPA) |
| 23 | AIS (AUTOMATIC IDENTIFICATION SYSTEM (AIS) |
| 24 | LONG RANGE IDENTIFICATION AND TRACKING SYSTEM |
| 25 | S-VDR |
| 26 | SPEED LOG |
| 27 | DOOPLER LOG |
| 28 | RUDDER, PROPELLER, THRUST PITCH INDICATOR |
| 29 | TALK BACK SYSTEM |
| 30 | RATE OF TURN INDICATOR |
| 31 | DAYLIGHT SIGNALLING LAMP |
| 32 | BNWAS |

## 1.5 Ship's Cargo Information

The vessel was loaded cargoes of COAL at New Castle to abt 82,788 MT and discharged at Kodamatsu Japan.

Below the Stowage Plan on each Incident.

| Cargo Hold | CAPACITY | | CARGO CONDITION ON EACH INCIDENT | | |
|---|---|---|---|---|---|
| | (M3) | CF | At 1st Incident | At 2nd Incident | At 3rd Incident |
| NO.1 | 19,692.75 | 695,449.47 | | | 5,655 |
| NO.2 | 22,041.87 | 778,408.64 | | | 17,894 |
| NO.3 | 22,041.87 | 778,408.64 | | | 18.352 |
| NO.4 | 22,041.87 | 778,408.64 | | | 16.469 |
| NO.5 | 22,041.87 | 778,408.64 | | | 18.853 |
| NO.6 | 18,328.34 | 664,265.33 | | | 5,565 |
| G.Total | 126,188.57 | 4,456,349.36 | NIL | NIL | 82,788 |
| Total Ballast | | 89,088 | 56,047 | 55,168 | 16,476 |
| Fuel Oil | | 4363.85 $M^3$ | 1183 $M^3$ | 840 $M^3$ | 144 $M^3$ |
| Diesel Oil | | 341.55 M | 163 $M^3$ | 62 $M^3$ | 52 $M^3$ |
| Displacement | | 105,708 MT | 78,000 MT | 78,642 MT | 120,088 MT |

Equivalent: 1$M^3$ = 35.315 CF

## SECTION (2): DEATH CASUALTY

### 2.1 Case-1: Chief Cook CESAR P. LLANTO

#### 2.1.1 Personal Information of Casualty

| | | |
|---|---|---|
| Full Name | **CESAR P. LLANTO** | |
| Date of Birth / Age | Nov 01 1969 / 42 | |
| Details of Injury | N/A | |
| Description of accident | The Master noticed that C/Cook was missing due he had not appeared when Master had a breakfast | |
| Person supervising activity | C/O Solomon Layson | |
| First aid or other action O/B | Conducted searching on-board and vessels surrounding for 48hrs under supervision by RCC Australia | |
| Capacity on board | Chief Cook | |
| Certificate of Competency | N/A | |
| Grade | N/A | |
| Date/Place issued | N/A | |
| Time spent on vessel concerned | 13 days | |
| Experience on similar vessels | 6 vessels ,WCC, PCC, Container | |
| Experience in current capacity | 3 years/ 6 Months | |
| Experience in other ranks | 15 years since 1987 | |
| | | |

### 2.1.2 Voyage Information

On 30th of August 2012 the vessel MV SAGE SAGITTARIUS was inbound to New Castle to load cargoes of COAL.

- ✓ Her draft was about 9.12M at forward and 10.53 at Aft. Speed was abt 12.8K steering to 170deg.

- ✓ At 0930H/LT Master declared Chief Cook was missing as later is nowhere to found. The vessel turn around to reciprocal course to search the Chief Cook and same was reported to the Management Company.

- ✓ The Weather condition was very good with the visibility of over 5-miles. Wind was moderate to fresh and sea condition was moderate.

- ✓ The situation was reported immediately to AMSA, AFP (Australian Federal Police) via AMSA.

### 2.1.3 Events Leading to Incident

Chief Cook was just boarded the vessel in Kodamatsu Japan to which he had total of 13 days on-board prior to the Incident.

The Chief Cook was seen in the Galley on 30 August 2012 at 0800H/LT discussing with C/Engr Collado regarding the condition of the Ice Maker.

Chief Cook went to the Bridge to look for the Mess man which apparently with Chief Officer discussing the poor Performance of the Mess man.

### 2.1.4 Events and Consequences

30 th August 2012

| TIME | EVENTS |
|---|---|
| 07:52H/LT | • AB Anghag saw C/Cook at A deck going up to the bridge to look for mess man |
| 07:55H/LT | • C/C went to bridge to check for mess man C/O 3/Off, mess man and AB Moralde was on the Bridge and saw C/Cook. |
| 08:00H/LT | • C/C went down after knowing that mess man was talking to C/O On the bridge. **This was last time C/Cook was seen Pos lat - 13-44.4 S, Long.152- 32.2 E.** |
| 08:10H/LT | • Capt was about to have breakfast with chief officer and looking for chief cook at the galley |
| 08:30H/LT | • Capt ask C/O to call C/Cook from his cabin. No one was answering C/Cook phone from cabin so Capt ask C/Officer and mess man to look for C/Cook in his cabin and provision Store. C/officer found that C/Cook cabin was locked and C/officer used his Master key to open C/Cook's cabin and found no one. Mess man did not find C/Cook in the provision store |
| 08:40H/LT | • Capt ask C/O to page C/Cook to proceed to galley but C/Cook did not show-up |
| 09:00H/LT | • Capt went to cabin and call the bride to ask for C/Cook as Capt need the final list for private orders |
| 09:35H/LT | • All hands was assembled in the bridge for and given briefing by the Capt. All crew was divided into 2 search party with C/officer and C/Engr as the team leaders |
| 09:40H/LT | • All hands except Capt, 3/0fficer and AB Anghag search for C/Cook all around the ship Accommodation, engine room, steering gear room and C02 room, poop deck, SUL areas and upper deck to bosons store, including all stores |
| 09:53H/LT | • C/Officer reported completed search inside and outside the accommodation and cannot found C/Cook. |
| 09:53H/LT | • Capt. made a call to Hachiuma/Capt. Serrano to report the situation. |
| 10:05H/LT | • C/Engr called completed search in engine room and cannot find C/Cook |
| 10:20H/LT | • C/Officer called completed search on deck and no sign of C/Cook. |
| 10:20H/LT | • Call made to RCCAustralia |
| 10:30H/LT | • Send Urgency Signal Via VHF and made a local broadcast. |
| 10:41H/LT | • Send Distress Signal via VHF |
| 11:02H/LT | • Vessel in the vicinity start searching in the position where C/Cook last seen on-board |
| 11:39H/LT | • Received call from M/V Golden Crown, sharp lookout has been carried out to area and found nothing |

| | |
|---|---|
| 11:46H/LT | • Received call from M/V Pedhoulas Builder, Negative result. |
| 12:32H/LT | • Received call from Aircraft Rescue 471 that they will be arriving in the area within 20 minutes |
| 13:02H/LT | • Aircraft Rescue 471 starts searching South, 11 nm off of vessel present position Lat. 13-9-39.9N I Long. IS2-33.8E. |
| 14:02H/LT | • Received call from Rescue 471 that they will be leaving the area and rescue VH-ZZA ( custom 11 ) will continue the search. |
| 14:35H/LT | • 2nd Aircraft rescue VH-ZZA ( custom 11 ) arrived the area and start the search. |
| 15:18H/LT | • Received call from M/V ANL That they are carried lookout in the area and found nothing |
| 16:00H/LT<br>17:20H/LT | • C/O, C/E, BSN, App/Engr and OS-B start carried out and thorough search for C/Cook inside the accommodation, steering gear room, Co2 room, engine room, around upper deck, poop deck and SUL area and found no trace or sighting of C/Cook. |
| 18:02H/LT | • Commenced drifting in position. Lat. 13-42.75 I Long. I52-24.0E while keeping look outs on port and stbd wings and in the wheelhouse |
| 20:12H/LT | • Received call from M/V Ruben Oak, no sighted during her transit in the vicinity. |

31st August 2012

| TIME | EVENTS |
|---|---|
| 05:55H/LT | • Received call from M/V Pos Tuerkis that they carried out sharp look outs in the area. |
| 06:30H/LT | • Resume search and rescue operation by the vessel. |
| 07:50H/LT | • Received call from rescue 471 that they will be arriving within 10 minutes. |
| 07:53H/LT | • Received call from M/V Universal Ace that they will be arriving around 0900H |
| 07:57H/LT | • Received call from M/V Euro Carrier that they carried out sharp look out In the vicinity |
| 08:00H/LT | • Received call from Aircraft rescue 471 that they start search and rescue with Aircraft rescue Zulu, India |
| 08:20H/LT | • Received call from M/V Pos Tuerkis, no sightings of Man overboard |
| 08:25H/LT | • Received call from Universal Ace, they joined the search and rescue. |
| 09:30H/LT | • Received call from rescue 471 no sightings and left the area, and rescue Zulu, India will continue the search |
| 09:35H/LT | • Received call from Global Explorer they carried out sharp look out. |
| 14:30H/LT | • M/V JSW Salem called and joined the search and rescue |
| 14:25H/LT | • M/V KM Nagoya called and joined the search and rescue. |
| 15:28H/LT | • M/V JSW Salem left the scene |
| 15:37H/LT | • M/V Coral Sapphire called and joined the search and rescue |
| 16:00H/LT | • M/V Spring Pride called and joined the search and rescue |
| 16:07H/LT | • M/V KM Nagoya left the scene. |
| 16:48H/LT | • M/V K Pride called and joined the search and rescue |
| 17:48H/LT | • M/V Spring Pride left the scene. |
| 17:42H/LT | • Received message from RCC Australia" There is no requirement for your vessel to remain on the search area |
| 18:00H/LT | • M/V Universal Ace and Coral Sapphire left the scene. And search and rescue suspended |

| | |
|---|---|
| 16:22H/LT | • Received call from S.I Monji, to remain drifting in the area for whole night. |
| 18:22H/LT | • Received message from RCC Australia that search and rescue was suspended. |

01 st September 2012

| TIME | EVENTS |
|---|---|
| 06:15H/LT | • Completed drifting and resumed search for C/Cook in position. Lat. 13-50.95 I Long. L51-59.SE |
| 10:40H/LT | • Completed from search and rescue operation and proceed to Newcastle as per company instruction posn lat 13-55.1S long 152-00.9E |

### 2.1.5 Post Accident Events and Actions

M/V SAGE SAGITTARIUS carried out a wide search and rescue operation assisted by the Vessels in the vicinity. The RCCA likewise dispatch Rescue Aircraft dispatched to support the search and rescue operation.

The company deployed two (2) representatives to Brisbane on 1st September 2012 in order to embark the vessel, on her way to Newcastle, with private security guards, Corporate Protection Australia, to soothe the remaining crew on-board, and, to have an investigation that was strongly required by the family of missing crew.

On 7th September 2012, four (4) AFP Officers embarked with a pilot around 0900H/LT. The vessel berthed at Grain Berth at 1040H/LT and consequently the AFP embarked the vessel for investigation.

The federal investigation was knocked-off around 2200H/LT provided that it would be continued at Newcastle, the vessel's loading port. Thus the AFP official told the company representatives and P&I lawyer verbally that there was no reason found to detain the vessel and/or crew, of which was confirmed later by email from the AFP.

It was reported by JPIA representative verbally who attended the AFP investigation at Newcastle for missing Chief Cook that "the active part of the AFP investigation is now concluded and crew members are no longer required".

### 2.2 Case-2: Chief Engineer HECTOR COLLADO
### 2.2.1 Personal Information of Casualty

| | | |
|---|---|---|
| Full Name | **HECTOR B. COLLADO** | |
| Date of Birth / Age | March 24 1957 / 55 | |
| Details of Injury | Multi Chest Injury | |
| Description of accident | The Duty Engr heard loud sound in the Engine Room and found C/E lying in the 4th Floors with full of blood in mouth and nose | |
| Person supervising activity | Relieving C/E Roberto Gattoc | |
| First aid or other action O/B | Immediately berthed and call ambulance. The 2nd Pilot administers CPR until Paramedics arrive at scene. | |
| Capacity on board | Chief Engineer | |
| Certificate of Competency | E1-0011459 | |
| Grade | Chief Engineer | |
| Date/Place issued | Philippines | |
| Time spent on vessel concerned | 9 Months | |
| Experience on similar vessels | 5 vessels ,VLCC, Container, WCC | |
| Experience in current capacity | 9 Months | |
| Experience in other ranks | 19 years since 1983 | |
| | | |

### 2.2.2 Voyage Information

On 14th of September 2012 the vessel MV SAGE SAGITTARIUS commenced preparing her engine stand-by for berthing. The anchor was picked up at 0450H/LT to approach the pilot station. The first pilot boarded by helicopter at 0700H/LT and the second by pilot board at 0717H/LT. Passing breakwater at 0745H/LT.

- ✓ She was intended to load Cargoes of COAL in New Castle to be discharge to Kodamatsu Japan.

- ✓ The vessel is expecting further Investigation owing to the Missing Chief Cook on her to New Castle, last 30th August 2012.

- ✓ Around 0750H/LT, 2/E investigating loud noise in Engine Room which later found at 4th floor bleeding from his nose and mouth.

- ✓ After discovered that C/E Collado was fall from E/R, Emergency berthing was arrange at nearby wharf, Dyke No.1.

### 2.2.3 Events Leading to Incident

C/E COLLADO was scheduled to disembark from the vessel MV SAGE SAGITTARIUS at Newcastle since the replacing C/E Robert L. GATTOC, had embarked at her previous port, Port Kembla Australia.

Both C/Engr are in the preparation of Turn Over to which it will takes place at 1200H on the same date the Accident happened.

C/E Collado was believed working in the Spare/Electrical Store room.

There was no witness on the said Accident as everyone is in preparation for Berthing at Port New Castle Australia.

### 2.2.4 Events and Consequences

**13th September 2012**

| TIME | EVENTS |
|---|---|
| 23:20H/LT | • M/V Sage Sagittarius anchored at Newcastle in position at. 33-09.65, long. 151-42.3E |

**14th September 2012**

| TIME | EVENTS |
|---|---|
| 03:30H/LT | • One hour Notice to Engine Room |
| 03:30H/LT | • Stand By Engine and 0430H - Started heaving up port anchor |
| 04:50H/LT | • Anchor Aweigh and vessel underway proceeding to Newcastle |
| 07:00H/LT | • First Pilot Capt. Lyndon Clark boarded by helicopter |
| 07:17H/LT | • Second Pilot Capt. Craig Duthie boarded by helicopter |
| 07:25H/LT | • Four Tugs Lines made fast on board 2 forward and 2 aft. |
| 07:52H/LT | • Relieving C/E Robert L. Gattuc reported that C/e Collado was fell down in Engine room. |
| 07:55H/LT | • Relieving Master Capt. Purdigo C. Salaguste asked permission from Capt Salas to go down to Engine and check the situation |
| 07:56H/LT | • Capt. Salaguste arrived Engine by Elevator and saw Chief Engineer Hector B. Collado lying down on face up and held the right pulse by relieving Chief Engineer Robert L. Gattoc for observation |
| 08:03H/LT | • Capt. Salaguste came back to the bridge and reported to Capt V. Salas Jr. and the two Pilots regarding the condition of C/E Collado Pilot/Capt. Craig Duthie decided for emergency berth of Sage Sagittarius at Dike1 |

| | |
|---|---|
| 08:05H/LT | • Capt. Salaguste called to Hachiuma Office, Capt. Franco S. Serrano with permission to Capt. V. Salas Jr. and reported the incident. |
| 08:15H/LT | • Two Ambulance car arrived at the jetty in Dike 1. |
| 08:20H/LT | • Second Pilot Capt. Craig Duthie came down to Engine room and executes first aid (CPR) until ambulance Crew and Police arrived in engine room.<br>• Vessel arrived at berth Dike 1. |
| 08:27H/LT | • Ambulance Crews arrived in Engine Room and took over the patient. |
| 08:31H/LT | • Capt. V. Salas Jr. called our agent by telephone and reported the incident. |
| 08:35H/LT | • The crew opened the engine room skylight |
| 08:55H/LT | • As per Medics, They declared that C/E Collado is DEAD. |

### 2.2.5 Post Accident Events and Actions

At around 1600H/LT on 14th September 2012, the forensic pathologist and coroner had been embarked the vessel to inspect the body, and was transferred from the vessel to land.

Although it has been reported that the cause of C/E's death would be 'heart attack', there were no conclusive reports from the NSW police.

M/V SAGE SAGITTARIUS was released from NSW Police at 1640H/LT on 14th September 2012.

All crew were completed questioning and released from NSW Police station on 16th September 2012.

Vessel has been returned normal commercial operation for loading intended Cargo.

### 2.3 Case-3: Superintendent KOSAKU MONJI
### 2.3.1 Personal Information of Casualty

| | | |
|---|---|---|
| Full Name | **KOSAKU MONJI** | |
| Date of Birth / Age | Sept 18 1975/ 37 | |
| Details of Injury | Asphyxia by Chest compression | |
| Description of accident | He was accidentally entangled on the carrier of the roller of the belt conveyor before dawn on October 6th while he had a maintenance work. | |
| Person supervising activity | Capt R. Salaguste | |
| First aid or other action O/B | Nothing.<br>His death was announce by the Ambulance Personnel who arrive at the scene | |
| Capacity on board | Superintendent | |
| Certificate of Competency: | E1-0011459 | |
| Grade | 1st Grade Marine Officer (Japanese) | |
| Date/Place issued | 11/Aug/2008 Japan | |
| Time spent on vessel concerned | 3 weeks (sail with the vessel) | |
| Experience on similar vessels | Bulk Carrier including SAGE Sagittarius | |
| Experience in current capacity | 3 years | |
| Experience in other ranks | First, Second and Third Engineer | |
| | | |

### 2.3.2 Voyage Information

On 3rd of October 2012 the vessel, MV Sage Sagittarius arrived in port Kudamatsu, Japan for complete discharging its Cargoes of COAL to abt 81,000MT.

- ✓ A ship superintendent, called hereafter "SI", SI, Kosaku Monji, joined the vessel at Newcastle, 17 Sept 2012 apparently to care for the welfare and safety of the crew.

- ✓ The vessel commenced discharging its Cargoes in Kodamatsu Port- COAL Termina on the same date.

### 2.3.3 Events Leading to Incident

Following are the events prior to Death of SI Monji (Superintendent) on 6th October 2012.

**5 Th Oct 2012**

| | |
|---|---|
| **08:00H/LT** | • SI Monji took a breakfast |
| **08:00H/LT**<br>**12:00H/LT** | • He had maintenance and inspection works |
| **13:00H/LT** | • After lunch, SI Monji, Capt. Watanabe and Capt. Shimogama looked around the coal yard with agent. |
| **14:00H/LT** | • The abnormal noise occurred from one of the belt conveyor roller. The noise was stopped if the roller was lubricated. So seemed need to lubricate the roller every 3hrs |
| **18:00H/LT** | • He took dinner with Capt. Watanabe and Capt. Shimogama |
| **20:00H/LT**<br>**21:00H/LT** | • He joined the close meeting of internal audit with Capt. Watanabe and Capt. Shimogama.<br>• Upon completion of the meeting, Capt. Watanabe told him that he should take shower and rest. |

06 Th Oct 2012

| | |
|---|---|
| 00:11H/LT | • He sent an E-mail message to Shin Ondo of which he is person in charge. **This was his last message**. |
| 02:00H/LT | • Stevedore saw him in ship's office. He used the computer for some time |
| 03:15H/LT | • AB saw him to proceed to the above mentioned conveyor belt. |

Since the vessel took a pilot 02:20 and berthed 07:30 on 3rd Oct., his condition was seemed to be lack of sleep.

### 2.3.4 Events and Consequences

03rd October 2012

| TIME | EVENTS |
|---|---|
| 07:30H/LT | • M/V Sage Sagittarius Arrived at Kudamatsu, Japan Coal Terminal |
| 17:00H/LT | • Commenced discharging operation |

### 2.3.5 Post Accident Events and Actions

On 6th of October 2012, the police and coast guard completed on-site investigation.

Management staffs of local labour supervision office came on board and they started the investigation.

The labour supervision office completed the investigation. The crew started the recovery of the damage SUL roller.

The Japan Coast Guard officers came back on board, and interviewed the AB who was the last witness of the SI.

## SECTION (3): CASUALTY ANALYSIS

### 3.1 Aim

The purpose of the analysis is to determine the contributory causes and circumstances of the accident as a basis for sorting out for necessary recommendations to prevent similar Incidents in the future.

### 3.2 Case-1: Chief Cook CESAR P. LLANTO

#### 3.2.1 Crew Interrogation

The Inspector was able to attend at Kudamatsu Japan to which vessel stayed on Jan 5/6 2013. Likewise at Ship Managers Office (Hachiuma Steamship) at Kobe Jan on 7th Jan 2013.

The Interrogation was done to all party concerned including the Master, and Manager of Personnel Division, as well.

The prepared **Questionnaire**[51] was submitted by the vessel's Master through the Manager of Personnel Division to which been perused and the following items were highlighted:

- ✓ The Chief Cook was last seen 0800HLT/ Aug 30 2012 at position Lat.13-44.4S, Long 152-32.2E at Coral Sea.
- ✓ The Incident took place in a broad daylight with the visibility of more than 5 miles, Wind was moderate to fresh and Sea condition was moderate to rough.
- ✓ Wind (Direction/Force) at time of casualty SE/6 with the speed of 12.3K.
- ✓ The Bridge was manned by Chief Officer and 3rd Officer to which they are about to Turn over of Watch. The Engine Room was manned by 3/E after Taking over the Watch from the 1st Engr.
- ✓ The Master was about to having breakfast in the mess room and C/E was in the Engine Room

During the Investigation it was learned that all Crew mentioned in the Crew List[71] were already taking their vacation and nothing can be interviewed except for the Master that happened to be on board at Port Kembla Australia on Sept 8 2012.

The Investigator relied only on the Statement of Facts issued by all Officers/Crew.

- ✓ Basis Interview with the Master, it was learned that C/Cook was new to the vessel to about 13 days and it's impossible to have enemies on-board.
- ✓ There were no problems of the relationship among all Crew and sounded harmonious.
- ✓ The were no issues on the Provision and Cooking abilities of the Chief Cook's was good and so with his personal records[51].
- ✓ The Chief Cook is not capable of taking his own life as he was looking after his family's future.
- ✓

### 3.2.2 Documentation Analysis

#### .2-1 Records Analysis

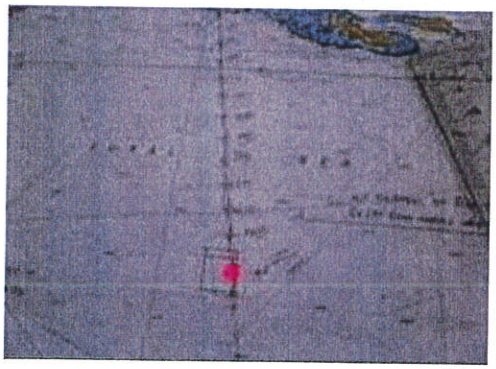
- ✓ The Deck Logbook[31] for M/V SAGE SAGITARRIUS, for the Voyage No. 111-B from 30 Aug to 1st of September 2012 was reviewed and recording was in normal sea practice. There was no alteration in the records.
- ✓ The passage plan was prepared by 2/O for the Voyage 111-B for and found to be in order.
- ✓ Company's Checklist was properly utilized and found to be in order.
- ✓ Last Internal Audits found to have 8 observations which pertain to maintenance.

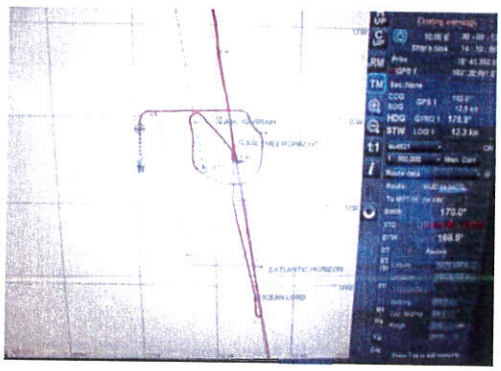
As per review on the Statement of Facts from Masters and Officers Crew of M/V SAGE SAGITTARIUS, following items were highlighted:

- ✓ Chief Cook was on the Bridge looking for mess man, while later was talking to Chief Officer.
- ✓ The mess man was always reprimanded by the Chief Cook and the Master due to his poor performance.
- ✓ There was intriguing comments statement by the Chief Officer and Mess man regarding watching the mess man for "**Security reasons**".
- ✓ There was no threat mentioned on their Statement of Facts.
- ✓ The Chief Cook vanished from 0758H between the Bridge Deck and the A-Deck.
- ✓ The location of Chief Cook cabin, Mess man and Oiler was on the B-Deck.

- ✓ The only possible location to where the Chief Cook was possibly fall was in Deck-A (Lifeboat Deck) to which no one can confirm if the watertight doors already opened at the time of accident.
- ✓ There were no sound recorded in the **VDR** for unknown reason to which can confirmed what was the conversation made by personnel at the Bridge before and after the Chief Cook was on the Bridge.

## 2.2 Sketch/Location of the Accident





## PICTORIAL REPRESENTATION DURING SEARCH AND RESCUE OPERATION

- 07:58H/LT 30/Aug/2012 Chief Cook was last seen at Bridge
- 09:35H/LT Master Declared C/Cook was missing
- 10:41H/LT Distress Signal was sent
- 11:02H/LT All vessels in the vicinity commenced search/rescue
- 12:36H/LT Aircraft search commenced
- 06:52H/LT 01/Sept/2012 Terminated Search and Rescue

### 3.2.3 Vessel's Position at the time of Accident

✓ The position of M/V SAGE SAGITARIUS to which they discovered that Chief Cook was Missing in the position of Lat.13-44.4S, Long 152-32.2E at Coral Sea.

### 3.2.4 Documentation Analysis

#### .4-1 Navigation Equipment Inspection

- ✓ The SVDR discovered that No Voice recording was present during the retrieval of the Data.
- ✓ All navigation equipment and aids (Radars, VHF, GPS, AIS, GMDSS, Echo sounder…etc.) of **M/V SAGE SAGITTARIUS** were inspected and were found in good working condition.
- ✓ Nav Equipments shore maintenance records was found to be in order.

#### .4-2 Passage Plan Analysis

- ✓ The **Passage Plan**[37] of **M/V SAGE SAGITTARIUS** for the Voyage(V111-B), detailed as follows:
  1. The Passage Plan from Kudamatsu Japan to New Castle found to be in order and complete including the Charts, Manoeuvring data, Pilot and port information, Tide tables…etc., were available on board.
  2. The vessel proceed for their intended Voyage from Kudamatsu Japan to New Castle until the time the Chief Cook found missing in the CORAL SEA to which the vessel diverted to Port Kembla for questioning as required by the AFP.
  3. The vessel Draft F: 9.12M, and Aft is 10.53 M with the speed of 12.8K

### 3.2.5 Primary Causes of the Incident

#### .5.1 Internal Factors

There were NO issues of Human Errors, Cargo related factors and technical failures of machinery/equipments including any design errors attributed to this Incident.

#### .5.2 External Factors

- ✓ **Environment**
  1. The weather was good at the time Chief Cook were found missing including the sea condition. Whether he was disposing some garbage at sea there is no reason he can be fell overboard.

2. **Weather Condition**

| | |
|---|---|
| o Visibility (Clear) | Over 5 miles |
| o Wind (Moderate to Fresh ) | SE |
| o SEA & Swell Direction | Moderate to rough SW |
| o Weather | Overcast |

✓ **Criminal Acts**

1. Since there was no witness of the Incident, the Company (Hachiuma Steamship) did not make any comments or insist any speculations as it may lead to propagate rumours and gossips.
2. The case is now handled by the AFP, and the official conclusion of the case is yet to release.

**.5.3 Underlying Factors**

✓ **Fatigue**

Based on the Works and Rest Hour Records and Activity Records[58], he had a maximum working hours of 10.5H per day until the accident happened.

✓ **Psychological**

Based on the records and Master's Declaration, Chief Cook was looking after his family, taking his own life is very marginal cause.

✓ **Intoxication**

Based on reports submitted, last Breath Alcoho[85] was carried on 29th August 2012, and results were negative. Result of Alcohol Sale[86] reveals that are volumes spirits purchased by Crew.

**3.2.6 Nature of Damage & Consequences**

✓ **Report to Authorities**

Vessel was advice by AFP (Australian Federal Police) to divert the vessel to Sydney for Questioning, however due to draft restriction at Sydney Vessel instead proceed to Port Kembla for Investigation.

- ✓ **Investigation on Board by AFP**
  On Sep 7 2012, the AFP boarded the vessel of MV SAGE SAGITTARIUS at Port Kembla for Investigation and further issued Search Warrant in relation to the missing Crew.

  The vessel was not seized nor any Crew Member detained in relation to the accident as such they leave to the discretion of the Company.

  The Master was advice to proceed with the vessel's Commercial Voyage and follow-up investigation to be done at Port of New Castle Australia.

### 3.3 Case: 2 Chief Engineers HECTOR COLLADO

#### 3.3.1 Crew Interrogation

The prepared **Questionnaire**[61] was submitted by the vessel's Master through the Manager of Personnel Division to which been perused and the following highlighted:

- ✓ The Accident was happened when vessel in Horse shoe Channel w/ 2 pilots proceeding to berth K-4 in New Castle Australia, on 14th September 2012 /0800H/LT at position Lat.32-55.39S, Long 151-47.12E.
- ✓ The Incident took place in a broad daylight with the visibility of more than 5 miles, Wind was moderate to fresh at direction of East and Sea condition was smooth to slight.
- ✓ The Bridge was manned by Master, AB and the 2 Pilots, while Engine Room is manned by C/E and late C/E Collado with 2/E,3/E and 2 Engine Ratings.
- ✓ The Master was on the Bridge together with the 2-pilots as vessel is manoeuvring to berth port of New Castle, while the New C/E (C/E Gattoc) was with Engine room together with the C/E Collado

During the Investigation it was learned that only 4 Crew remained on board who was around at the time of accident as mentioned in the Crew List[80].

- ✓ Basis Interview with the Master it was learned that C/Engr was a good person and physically fit.
- ✓ Master declared that Chief Engr Collado had no problems with his relationship among all Crew and describe as soft spoken.
- ✓ He was working in the Engine Room as he comes from the Engine/Electrical stores to which there are traces of blood spots including on the railings as C/E try to hold before he was fall down to the 4th Deck at the height of 10.4M.
- ✓ The Master speculate that C/E possibly had nose bleed which making him unconscious.

### 3.3.2 Documentation Analysis

#### .2-1 Records Analysis

- ✓ Basis Personal Records[68] of C/E Collado he was just promoted as C/E on board.
- ✓ C/E Collado was assigned to the vessel M/V SAGE SAGITARRIUS, for the 3rd time, he was assigned as 1st Engr in both 2 occasions.
- ✓ Basis his Medical Records, C/E Collado found to be Normal and Fit to Work as likewise there are NO conditions and Medicine prescriptions.

As per Statement of Facts issued by the Masters, following items were highlighted:

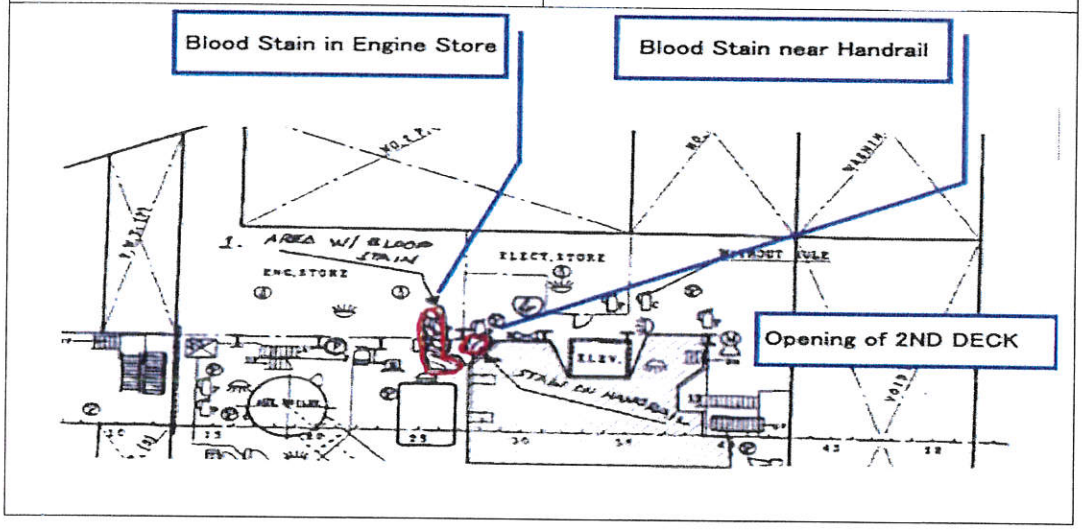
- ✓ Engine Crew were preparation for Manoeuvring for berthing at New Castle.
- ✓ C/E Robert Gattoc (relieving C/E) was in control room together with 2/E and 3/E including 3 Engr Ratings.
- ✓ Location of C/E Collado was not mentioned in the Masters SOF and who was with the Chief Engr at the Eng/Electrical Store (2nd Deck).
- ✓ Tug Boat made fast to vessel at 0752H the same time C/E Collado was reported fall from 2nd Deck to 4th Deck and there were NO reported hard contact with Tugs owing to make the vessel excessive vibrations.

#### .2-2 Sketch/Location of the Accident

- 09:52H/LT ECR reported to Bridge that C/E Collado was fell down in Engine Room
- 08:03H/LT Emergency Berth at Dike-1 (New Castle Australia)

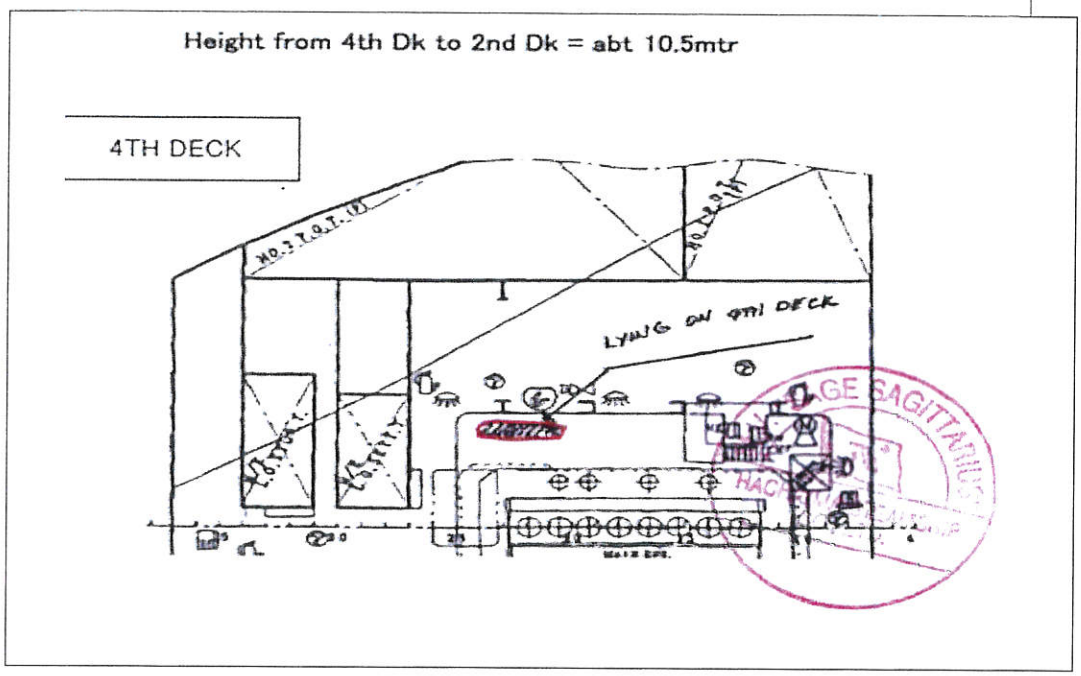
Blood spots in the Engine Store Room

Blood spots on the Railings




- 08:15H/LT Two ambulance Car arrive at Scene
- 08:20H/LT 2nd Pilot administer CPR
- 08:35H/LT E/R Crew opened the skylight
- 08:55H/LT C/O Collado was declared DEAD by the paramedics.

Paramedics try to C/F




### 3.3.3 Vessel's Position at the time of Accident

✓ M/V SAGE SAGITARRIUS when Docking at New Castle Australia.

### 3.3.4 Documentation Analysis

#### .4-1 Navigation Equipment Inspection

✓ All Equipments in good condition during their Transit from Port Kembla to New Castle.

#### .4-2 Passage Plan Analysis

- ✓ The vessel **M/V SAGE SAGITTARIUS** utilized the same **Passage Plan**[37] as part of their original Voyage.

- ✓ Tidal Information was revised basis Date of Entry at Port of New Castle.

### 3.3.5 Primary Causes of the Incident

#### .5.1 Internal Factors

1. There were NO issues of Human Errors, Cargo related factors and technical failures of machinery/equipments.
2. Design Failure were noted as follows:
   a. The design of the railing height is abt 0.8M
   b. The height of Engine Room Deck that separate on each section is too high at 10.4M.

#### .5.2 External Factors

**Environment**

1. The weather was good at the time of the accident. Vessel speed varied due to manoeuvring condition.
2. **Weather Condition**

| | |
|---|---|
| o Visibility (Clear) | Over 5 miles |
| o Wind (Moderate to Fresh ) | East |
| o SEA & Swell Direction | Smooth to Slight |
| o Weather | Overcast |

#### .5.3 Underlying Factors

- ✓ **Physiological**

1. **Fatigue**

   Based on the Works and Rest Hour Records and Activity records[69], he had normal working hours and has enough rest for a period of 3 days, until the day the accident happened to which he was awake earlier due to M/E preparation.

2. **Prescription Medicine**

There were NO records of he take some Medicines as it does not reflect to his Medical Results.

3. **Intoxication**

There were no other records of BA Test after the 1st Case to which the latest test was on 29th August 2012.

✓ **Psychological**

He may be bothered for some Mental and emotional disorder for uncertain reasons. He can't be fall easily off the railing as he is much familiar to the Engine Room since he was working the vessel MV SAGE SAGITTARIUS for the 3 contracts.

### 3.3.6 Causes of Death

✓ Basis Death Certificate issued by NSW Australia cause of Death was Multiple Chest Injury owing from fall in the Engine Room.

✓ Basis initial finding Hearth Attack was the cause for his loss of consciousness but NSW Police does not release yet the result of their Investigation.

### 3.3.7 Nature of Damage & Consequences

✓ **Company Arrangement**

The Company (Hachiuma) arrange 2 Superintendent to assist the NSW Police for the Investigation of the vessel MV SAGE SAGITTARIUS.

✓ **Investigation by NSW Police**

All crew including new joining crew were completed questioning at police station and released from NSW Police on 16th September 2012 afternoon.

✓ **Vessel Release from Crime Scene**

At 1640H/LT the NSW Police Force released the vessel MV SAGE SAGITTARIUS from the Crime scene.

Vessel has been returned normal operating condition for loading cargo

### 3.4 Case: 3 Superintendent KOSAKU MONJI

#### 3.4.1 Crew Interrogation

The prepared **Questionnaire**[72] was submitted by the vessel's Master through the Manager of Personnel Division to which been perused and the following highlighted:

- ✓ The Accident was happened when vessel MV SAGE SAGITARRIUS is discharging its Cargoes in Kudamatsu COAL Terminal Japan on October 6 2012.
- ✓ The Incident took place in early morning at between 0300H~0400H.
- ✓ SI Monji found to be overwork and experience fatigue and stress due to consecutive failures of SUL rollers.
- ✓ SI Monji found to be lack of Rest after the vessel started its Cargo Operation.
- ✓ The Bridge was not manned but C/Officer and 3/O was on duty for Cargo Works, while Engine Room is manned by 1st/E and one Engine Ratings (oiler).
- ✓ The Master and the C/E were both in their cabin at the time of accident.

Upon discussions with the Master, Chief Engr and with Marine Personnel Manager, the results of which are detailed as follows:

- ✓ Basis Interview with the Master it was learned that SI Monji is found restless due to several failure of the SUL.
- ✓ At around 0315H SI Monji was last seen by AB on Duty that he was proceed to the Conveyor Rollers.
- ✓ He possibly made lubrication again to Noisy Roller of SUL to which believed he was caught by the running Roller and Belts.

#### 3.3.2 Documentation Analysis

#### .2-1 Records Analysis

- ✓ SI Monji joined the vessel from New Castle to Kodamatsu Japan for Maintenance and Crews welfare.
- ✓ Basis Personal Records[76] He handled most of the Chips carrier as Technical Superintendent .
- ✓ His last activity records[77] He had only 2 hrs of rest leading to the Accident

- ✓ His Medical Records bares NO abnormalities, however all records are written in Japanese.

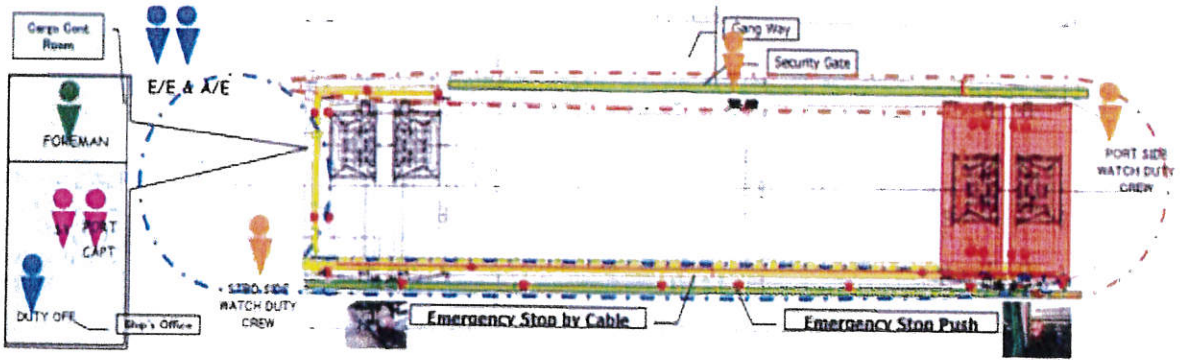
As per Statement of Facts was issued by the Masters and from Marine Personnel Department, following items were highlighted:

- ✓ On 5th Oct 2012/ 1400H/LT, there was an SUL failure due to abnormal Noise in one of the Rollers, which was ceased after lubrication was carried out.
- ✓ He was taking part of the discussion of the results of Internal Audit until 2100H/LT.
- ✓ On 6th Oct 2012 he was seen working early morning at Ship Office around 0200H/LT.
- ✓ At 0502H/LT, There was a temporary stoppage of SUL due to problem in the longitudinal roller which was renewed and restarts the operation.
- ✓ At 0727H/LT, Stevedore rush to the Ships Office to report that there was a person entangled on the between the Roller/Belt on the Conveyor, where it was confirmed to be SI Monji.
- ✓ Discrepancies in some documents and Statements of Master and Office Personnel.
  - o Master told that SI Monji was staying the vessel the whole time after arrive from New Castle, however Office Personnel commented that he was going back to office then return to vessel.

### .2-2 Sketch/Location of the Accident

Location where SI was found Dead

SUL set of Rollers




- 07:27H/LT Stevedore reported that one person was entangle with The Roller/Belt of SUL.
- 08:55H/LT Rescuers remove the body of SI Monji from the Conveyor Belt.
- 09:29H/LT SI Monji cleared from ship and his Dead body was Brought ashore.

### 3.3.3 Vessel's Position at the time of Accident

✓ M/V SAGE SAGITTARIUS when Berthing at Kodamatsu Japan.

### 3.3.4 Documentation Analysis

**.4-1 Plan Maintenance System**

- ✓ The vessels PMS[39] do NOT cover the Maintenance schedule of the SUL Equipment.
- ✓ No Safety procedures were defined during operation of SUL unit.
- ✓ NO procedures were detailed of how to lubricate the Rollers and stopping Operation.

### 3.3.5 Primary Causes of the Incident

**.5-1 Internal Factors**

- ✓ **Human Error Violation**
  1. SI decided to lubricate the Rollers by himself without stopping the SUL operation.
  2. SI Monji didn't follow usual practice of stopping the SUL prior making maintenance instead cutting corners for quick unsafe maintenance.

- ✓ **Technical Failure**

  SUL Machinery found to have several problems on its Conveyor Rollers which prompted the SI to lubricate by himself to avoid off-hire.

**.5.2 External Factors**

- ✓ **Environment**
  1. The weather was good at the time of accident; however lighting condition of the location of the accident was not ascertain.
  2. **Weather Condition**
     - Wind — Light/NWt
     - SEA & Swell Direction — Smooth to Slight
     - Weather — Partly Cloudy

**.5.3 Underlying Factors**

- ✓ **Physiological**
  1. **Fatigue**

Based on his Activity records Shore[77], and Office SOF he was found to have less rest hours.

2. **Intoxication**

He was considered a moderate drinker, to which he consume a cans of beer and wine before he joined the Internal Audit discussion at 2100H/ 5th Oct 2012.

### 3.3.6 Nature of Damage and Consequences

✓ **Ships Action**

1. Ship Management was informed the accident. The roller was disengaged and the SI body was rescued by ambulance attendants.
2. The SI body was sent ashore with the stretcher. Five shore ambulance attendants arrived on-board and they confirmed/declared SI Monji DEAD.

✓ **Investigation by Authorities**

1. Four local police officers came on-board and started accident investigation including Seven local coast guard.
2. At 1200H/LT The police and coast guard completed on-site investigation.
3. A staffs of local labour came on board and conducted the Investigation.

✓ **Vessel proceed to Commercial Aspects**

1. At 1615H/LT The roller of the conveyor was recovered and adjusted. The SUL system was ready for the cargo work after the test operation.
2. At 0345H/LT 8th of October 2012 All discharging cargo work was completed.
3. At 0840H/LT the vessel left Kudamatsu for Newcastle for another commercial Voyage.

### 3.5 International Regulation Implementation

The International Regulation/parameters applied to the present casualty on-board MV SAGE SAGITTARIUS was described in the detailed matrix as follows:

| Rule No | Rule Title | Rule Wording | Applicable to |
|---|---|---|---|
| MLC 2006 Reg 4.3 | Health and Safety Protection and Accident | (a) the adoption and effective implementation and promotion of occupational safety and health policies and programmes on ships that fly the Member's flag, including risk evaluation | Case 2: Death of Chief Engineer |

| | | | |
|---|---|---|---|
| OHSAS 18001<br>Section 4.3.1 | **Prevention** | as well as training and instruction of seafarers;<br>**(b) reasonable precautions to prevent occupational accidents, injuries and diseases on board ship,** including measures to reduce and prevent the risk of exposure to harmful levels of ambient factors and chemicals as well as the risk of injury or disease that may arise from the use of equipment and machinery on board ships;<br>(c) on-board programmes for the prevention of occupational accidents, injuries and diseases and for continuous improvement in occupational safety and health protection, involving seafarers' representatives and all other persons concerned in their implementation, taking account of preventive measures, including engineering and design control, substitution of processes and procedures for collective and individual tasks, and the use of personal protective equipment; and<br>(d) requirements for inspecting, reporting and correcting unsafe conditions and for investigating and reporting on-board occupational accidents | |
| MLC 2006<br>Reg 2.3 | **Minimum Rest Hours of work** | The limits on hours of work or rest shall be as follows:<br>(a) maximum hours of work shall not exceed:<br>**(i) 14 hours in any 24-hour period; and**<br>**(ii) 72 hours in any seven-day period;**<br>(b) minimum hours of rest shall not be less than:<br>**(i) ten hours in any 24-hour period; and**<br>**(ii) 77 hours in any seven-day period.**<br>Hours of rest may be divided into no more than two periods, one of which shall be at least six hours in length, and the interval between consecutive periods of rest shall not exceed 14 hours | **Case 3: Death of Superintendent** |

| | | | |
|---|---|---|---|
| ISM Code-10.1 | Maintenance of the Ship and Equipment | **The Company should establish procedures to ensure that the ship is maintained in conformity with the provisions** of the relevant rules and regulations and with any additional requirements which may be established by the Company | **Case 3: Death of Superintendent** |
| ISM Code-10.2 | Maintenance of the Ship and Equipment | In meeting these requirements, the Company should ensure that:<br>**.1 inspections are held at appropriate intervals;**<br>**.2 any non-conformity is reported, with its possible cause, if known;**<br>.3 appropriate corrective action is taken; and<br>.4 records of these activities are maintained. | **Case 3: Death of Superintendent** |
| SOLAS Ch.II-2 Reg.13 | Means of Escape | **Guidance 5.2**<br>Handrails should be fitted in corridors at an approximate height of **1000mm above the deck** | **Case 2: Death of Chief Engineer** |

## SECTION (4): HUMAN ERROR ANALYSIS

### 4.1 Introduction

The most common human factors causes were error of judgment and followed by failure to comply with regulations. The 'human element' as it is often termed in the shipping literature has frequently been cited as a cause of these costly incidents.

Merchant shipping is known to be an occupation with a high rate of fatal injuries caused by organizational accidents and maritime disasters.

Research has illustrated that there are potentially disastrous outcomes from fatigue in terms of poor health and also diminished performance. Despite the introduction of work rest mandates by the IMO, there are still occasions where individuals simply have to work for more than 12 hours with a 6-hour break.

Stress has been identified as a contributory factor to the productivity and health costs of an organization as well as to personnel health and welfare. Most seafarers reported occasional to frequent stress at sea (80%).

Research from other domains indicates a positive relationship between health management and safety performance

Although the research on stress and health behaviours establishes a high level factor as compared with other occupational groups, there is an absence of literature that aims to evaluate the relationship between seafarers health, and performance.

### 4.2 Cause of Accident

Based on the Facts collected from the vessel, the Human Error is also attributed to the root cause of Incidents happened on-board MV SAGE SAGITTARIUS which detailed as follows:

✓ **Case 1: Missing Chief Cook**

There were no definite Human Error Facts on this accident as case is still under Investigation by the AFP (Australia Federal Police)

✓ **Case 2: Death of Chief Engineer**

The vessel did not make any Risk Management on the Engine Room railing to which might cause the C/E to fall after he might loss his consciousness.

✓ **Case 3: Death of Superintendent**

1. There are lapse of implementation of Maintenance for SUL rollers.
2. Inspection/Safety procedures were NOT defined by the Company Manual..
3. Fatigue greatly affected the Superintendent judgment to which he deviate the normal operating procedures in working with running gears.

### 4.3 Human Error Analysis

The human error for this particular casualty had been studied through the conducted investigation with the vessel's crew and the analysis of all available documents on hand. Accordingly, all detected errors were drafted as detailed below:

#### 4.3.1 Human Errors for Case-1: Missing Chief Cook

There were no define Errors for Chief Cook's case except that there had been some miss-understanding among Crew Members.

### 4.3.2 Human Errors for Case 2: Death of Chief Engineer

| Human Error | Error Class. | Violation Rule/Standard | Proper Action |
|---|---|---|---|
| Health and Safety Protection and Accident Prevention | V | MLC 2006 OHSAS 18001 | Master failed to undergo risk evaluation as well as training and instruction of seafarers of how to understand the Hazards in Working Places and during works. |
| Means of Escape | V | SOLAS Ch.II-2 Reg.13 | Risk assessment was not properly adhere taking consideration for the height of Guide rails |

### 4.3.3 Human Errors for Case 3: Death of Superintendent

| Human Error | Error Class. | Violation Rule/Standard | Proper Action |
|---|---|---|---|
| Minimum Work and Rest Hours | V | MLC 2006 (REG 2.3) | The Company should have advice SI to observe the normal working and rest hours to avoid fatigue which lead to accident. |
| Maintenance of the Ship and Equipment | V | Company SMS and ISM Code 10.1 | The Company should establish procedures to ensure that the ship is maintained in conformity with the provisions of the relevant rules and regulations and with any additional requirements which may be established by the Company |
| Maintenance of Important Machineries | V | Company SMS and ISM Code 10.2 | The Master must ensure that the vessels important machineries are well sound and Maintenance shall be properly done in timely manner as per Company (PMS) Plan Maintenance System. |

V: Violation (Deliberate decision to act against rule or plan).

# SECTION (5): LEARNING LESSONS & RECOMMENDATIONS

## 5.1 Learning lessons

### 5.1.1 Introduction:

The sole objective of the investigation of an accident under the Merchant Shipping (Accident Reporting and Investigation) Regulations 2005 shall be the prevention of future accidents through the ascertainment of its causes and circumstances. It shall not be the purpose of an investigation to determine liability nor, except so far as is necessary to achieve its objective, to apportion blame

The development of a full proof structure from safety point-of-view is definitely not a trivial task, yet an efficient approach should be configured in order to achieve the best possible results. Accordingly, the learning lessons and recommendations to all involved parties are extremely important in order to eliminate/anticipate any recurrence of same accidents in the future.

### 5.1.2 Learning Lessons:

The following points represent the main learning lessons, resulting from the investigation on the death casualty which took place on-board M/V SAGE SAGITTARIUS.

### .2.1 Learning Lesson for the Crew

1. Effective use of Work and Rest Hours in order to avoid fatigue and stress during Works.
2. To always make Risk Assessment to all potential hazards in order to eliminate them.
3. Master and Head of the Department must deal immediately to all grievances administer by any Crew member.
4. Drug and Alcohol Policy to be tighten and purchased of alcohol on each individual should be monitored.

5. The MLS rules and their implementation must be fully understood by all Officer and Crew.\
6. Effectiveness of ISM Code and Safety management system especially Maintenance of Important Machinery and Equipments.

**.2.2 Learning Lesson for the Owners/Ship Managers**

1. More attention to the distribution of crew duties & the review of the SMS for utilization of additional lookouts during special operations.
2. Take SMS Review and note special Operations for Tankers especially Radars can't be operated on time.

**5.2 Recommendations:**

The following recommendations were highlighted for all parties involved in the Maritime Chain, as a result of the Investigation:

**5.2.1 Recommendations for Vessels' Crew Members**

1. The Masters must ensure the Company's Safety Management System under the ISM Code is fully adhere at all times and administering following items but not limited to:
    - Maintenance of Important Machinery Passage Plan
    - Risk Assessment/Management

      The Master must make a proper Risk assessment with no short cutting to avoid fatal mistake which may to lead to accident
    - Bridge Team Management

      The Master has to make sure that the Bridge Team Management effective working to ensure proper communication and understanding of important task to be executed during Special Operation
2. The Master and Officers/Crew should have complete understanding of COLREGS rules and their proper implementation.

**5.2.2 Recommendations for Ship Owners/Operators**

1. To follow the ILO-OHSAS requirements regarding the Working hours of all Personnel.

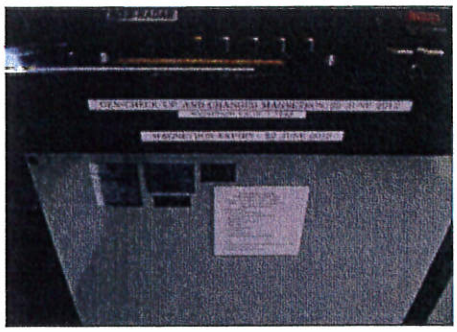
2. The vessel's Owners/Operators should focus on extensive Internal Audit to identify potential problem especially in Maintenance of Equipments on-board.
3. Advice all fleets to exercise full utilization of Risk Management to eliminate all Hazards.
4. To advice Manning Agents to closely cross check personal back grounds of hired Crew including the Medical records.
5. Result of Company's Investigation shall be circulated to all manage vessels through Circulars and implementation shall be verified by visiting Superintendent.

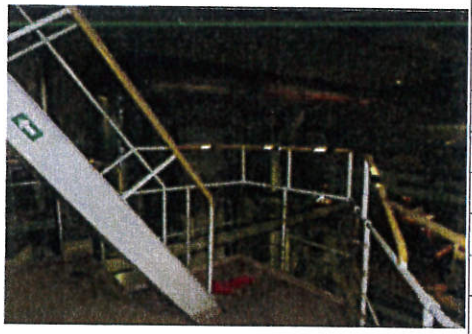
### 5.2.3 Recommendations for Recognized Bodies

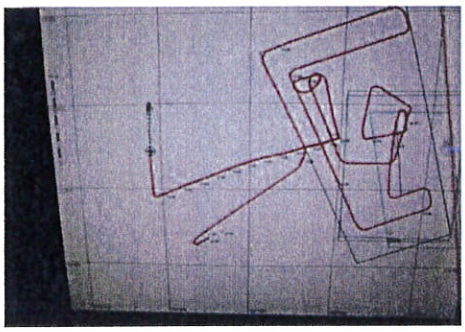
1. A centralized Data and statistics of Marine Casualties in order to have efficient transfer of information to all concerned parties. This will enhance the awareness level of the Owners/Operators of the vessels under different flags.
2. A punitive measure to effect to Owners for failure to report any Marine Casualty happened on their fleets to which present a grave threat to Health, Safety and Environment.
3. To clearly define the Height of Engine Room Railing in IACS rules.
4. To define the height for safer working Deck in the Engine Room in IACS rules.

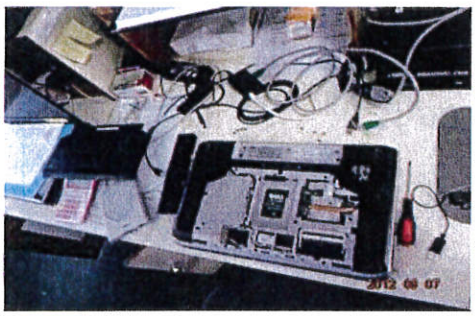
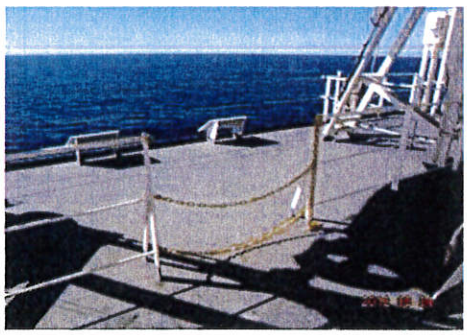
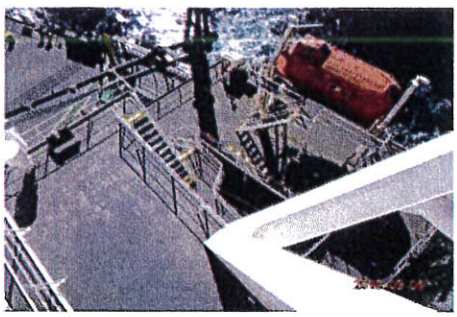
## SECTION (6): CASUALTY PHOTOGRAPH

| | |
|---|---|
|  |  |
| General View of SAGE SAGITTARIUS | At Kodamatsu Japan Jan6 2013 |

| | |
|---|---|
|  |  |
| SUL (Self Unloader) View from the Bridge | Nav Equipment Service Records - Radar |

| | |
|---|---|
|  |  |
| Location to where the C/E was found dead (4th Floor) | Height from 2nd Deck where CE was drop (10.7M) |
|  |  |
| ECR | Stairways to Engine Room with Additional Railings |

| | |
|---|---|
|  |  |
| ECDIS Records<br>Vessels Position | Search and Rescue<br>Operation |
|  |  |
| AFP (Australian Federal Police)<br>Investigation | Hired ARM Guards sail with<br>Vessel from PK to NC |

| | |
|---|---|
|  |  |
| Email PC's Hard disk Seized by AFP | ECDIS Information Data Secured |
|  |  |
| Boat Deck – The Only Location to where the C/Cook fall | Boat Deck – View from the Bridge |

| | |
|---|---|
|  |  |
| Location to where the Superintendent was Died | SUL Rollers/Belts |

## SECTION (7): CASUALTY DOCUMENTATION

### 7.1 Vessel & Management Documentation

1. REGISTRY CERT
2. RADIO STATION LICENSE
3. TASA
4. MINIMUM MANNING CERT
5. DRILL RECORDS
6. ITC-69 CERTIFICATE
7. CREW ACCOMMODATION CERTIFICATE
8. CSR
9. CLASSIFICATION CERTIFICATE
10. INTERNATIONAL SAFETY EQUIP CERTIFICATE
11. INTERNATIONAL SAFETY EQUIP CERTIFICATE-FORM E
12. INTERNATIONAL SAFETY CONSTRUCTION CERTIFICATE
13. SAFETY RADIO CERTIFICATE
14. SAFETY RADIO CERTIFICATE-FORM R
15. INTERNATIONAL AIR POLLUTION CERTIFICATE
16. INTERNATIONAL OIL POLLUTION CERTIFICATE
17. INTERNATIONAL SEWAGE POLLUTION CERTIFICATE
18. INTERNATIONAL LOADLINE CERTIFICATE
19. SAFETY MANAGEMENT CERTIFICATE
20. DOCUMENT OF COMPLIANCE
21. AFS
22. ISPP
23. IMSBC
24. EXEMPTION CERTIFICATE
25. ISM DECLARATION
26. CLASSNK PARTICULARS

### 7.2 Voyage Documentation

27. COMPANY PRACTICAL GUIDE
28. DOCUMENT CONTROL LIST
29. INTERNAL AUDIT REPORT
30. PSC RECORDS
31. SHIPS PARTICULARS
32. MASTER CE STANDING ORDER

33. DECK LOG BOOK
34. ENGINE LOG BOOK
35. BELL BOOK
36. NIGHT ORDER BOOK

37. OFFICIAL LOG BOOK
38. STOWAGE PLAN
39. PASSAGE PLAN
40. CHARTS CORRECTION
41. PMS RECORDS
42. COMPASS DEVIATION
43. GMDSS RECORDS
44. GYRO ERROR RECORDS
45. GA PLAN
46. SERVICE REPORT-FURUNO RADAR

### 7.3 Casualty Documentation

47. C1-MASTER SOF
48. C1-CREW SOF
49. C1-PRELIMINARY CASUALTY REPORTS
50. C1-CASUALTY ANNEX
51. C1 AMSA INCIDENT REPORT
52. C1 P&I CLUB REPORT
53. C2 AFP REPORT
54. C1 CASUALTY PERSONAL INFO
55. C1 COMPANY INVESTIGATION & ANALYSIS
56. C1 ACTIVITY FORM
57. C2 MASTERS SOF
58. C2 CREW SOF
59. C2-CASUALTY ANNEX
60. C2-PRELIMINARY CASUALTY REPORTS
61. C2 P&I CLUB REPORT
62. C2 AMSA INCIDENT REPORT
63. C2 DEATH CERTIFICATE
64. C2 COMPANY INVESTIGATION & ANALYSIS
65. C2 LOCATION OF ACCIDENT
66. C2 CASUALTY PERSONAL INFO
67. C2 ACTIVITY FORM
68. C3 MASTERS SOF

69. C3 OFFICE SOF
70. C3-CASUALTY ANNEX
71. C3 COMPANY INVESTIGATION & ANALYSIS
72. C3-PRELIMINARY CASUALTY REPORTS
73. C3 CORRECTIVE ACTION PLAN
74. C3 CASUALTY PERSONAL INFO
75. C3 ACTIVITY FORM

### 7.4 Crew Documentation

76. C1 CREW LIST
77. C1 F-IAM-01-07 ( CREWLIST )
78. C2 CREW LIST
79. C2 F-IAM-01-07 ( CREWLIST )
80. C3 CREW LIST
81. C3 F-IAM-01-07 ( CREWLIST )
82. CREW LICENSES
83. ALCOHOL TEST RECORDS
84. BAR CONSUMPTION RECORDS
85. WATCH SCHEDULE

## FINAL WORDS

All of those 3 cases were still under investigation
under the jurisdictions of the
Australian Federal Police (Port Kembla-Australia),
The NSW Police (New South Wales Police-Australia) and the Japanese police to which until this writing there are no official results of the Investigation.

The Ship Management Company did not further
Elaborate pertains to 3 cases since those are in the process of Investigation under the Authority to avoid any further
Create rumours and gossip around the
Maritime word.