ACCIDENT REPORT

Report on the investigation of

the accidental release of a lifeboat on

Nagato Reefer

Southampton, UK

on 9 April 2014

MAIB
MARINE ACCIDENT INVESTIGATION BRANCH

LESS SERIOUS MARINE CASUALTY REPORT NO 9/2015 MAY 2015

Extract from

The United Kingdom Merchant Shipping

(Accident Reporting and Investigation)

Regulations 2012 – Regulation 5:

"The sole objective of the investigation of an accident under the Merchant Shipping (Accident Reporting and Investigation) Regulations 2012 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."

NOTE

This report is not written with litigation in mind and, pursuant to Regulation 14(14) of the Merchant Shipping (Accident Reporting and Investigation) Regulations 2012, shall be inadmissible in any judicial proceedings whose purpose, or one of whose purposes is to attribute or apportion liability or blame.

All MAIB publications can be found on our website: www.gov.uk/maib

For all enquiries:
Marine Accident Investigation Branch
Spring Place
105 Commercial Road
Southampton
United Kingdom
SO15 1GH

Email: maib@dft.gsi.gov.uk
Telephone: +44 (0) 23 8039 5500
Fax: +44 (0) 23 8023 2459

Press enquiries during office hours: 020 7944 4166 / 3176
Press enquiries out of hours: 020 7944 4292

CONTENTS

FIGURES

GLOSSARY OF ABBREVIATIONS AND ACRONYMS

CAP	Corrective Action Plan (ISM)
CoC	Certificate of Competency
DPA	Designated Person Ashore
FPD	Fall Preventer Device
IMO	International Maritime Organization
ISM Code	International Safety Management Code
LRRS	Lifeboat release and retrieval system
MCA	Maritime and Coastguard Agency
MOU	Memorandum of Understanding
MSA	Marine Safety Advisory
PPE	Personal Protective Equipment
PSC	Port State Control
PSCO	Port State Control Officer
SMS	Safety Management System
t	tonne
TSB	Transportation Safety Board (Canada)
UTC	Universal Co-ordinated time
VHF	Very High Frequency (radio)

TIMES: all times used in this report are UTC + 1 hour unless otherwise stated

SYNOPSIS

On 9 April 2014 a crewman was injured while an abandon ship drill was being carried out on board the Panama registered refrigerated cargo vessel *Nagato Reefer* in the port of Southampton, UK.

A Port State Control inspection of *Nagato Reefer* had been conducted, during which the crew had been required to undertake an emergency fire drill. During the drill the Port State Control officer noted several deficiencies, which led to *Nagato Reefer*'s detention.

The crew were also required to complete an abandon ship drill using the vessel's port lifeboat. With six crew on board, the lifeboat was lowered into the water, released from its davit and manoeuvred away from the vessel before being returned for retrieval. With some difficulty the crew reset the lifeboat's hook release gear and attached the davit wire suspension links to the hooks. Fall preventer devices were connected before the boat was retrieved to deck level, where all the crew disembarked before it was lifted into its davit.

The crew then began to secure the lifeboat. The aft gripe wire had been attached and the forward gripe wire was being connected when an officer instructed the crew to release both fall preventer devices. When the forward fall preventer device was disconnected, the forward hook opened and the davit suspension ring released. The forward end of the boat then fell onto handrails on the deck below, striking and injuring a crewman and damaging the lifeboat's hull.

Emergency services were summoned to attend the injured crewman, who was taken to hospital for observation. He was found to have suffered only minor injuries and was able to return to the vessel the following day.

The investigation found that the management of safety on board *Nagato Reefer* was ineffective, and there was evidence of a poor safety culture both on board and in the management of the company. Specific areas of concern included a breakdown in trust and communication among the crew, failure to conduct drills and essential maintenance, and the falsification of records.

Recommendations have been made to the vessel's manager aimed at ensuring its crews are properly trained in emergency preparedness, the maintenance and operation of their safety equipment, and that the importance of maintaining accurate records required by international statutes is observed throughout its fleet.

SECTION 1 - FACTUAL INFORMATION

1.1 PARTICULARS OF *NAGATO REEFER* AND ACCIDENT

SHIP PARTICULARS		
Vessel's name	*Nagato Reefer*	Ship's lifeboat
Flag	Panama	
Classification society	Nippon Kaiji Kyokai (Class NK)	
IMO number	9227596	
Type	Refrigerated Cargo Ship	SZ-53BR (totally enclosed)
Registered owner	Ama Shipholding SA, Japan	
Manager	Kyokuyo Co. Limited	
Construction	Steel	
Year and place of build	2000, Kyokuyo Shipyard Corporation, Japan	Shigi Shipbuilding Co. Limited, Osaka, Japan
Length overall	135.03m	5.3m
Registered length	127.38m	
Gross tonnage	7367	
Weight		3.75 tonnes
Minimum safe manning	13	
Authorised cargo	Refrigerated cargo	
VOYAGE PARTICULARS		
Port of departure	Las Palmas	
Port of arrival	Southampton	
Type of voyage	International	
Cargo information	Canary Islands fruit	
Manning	20	
Capacity		25 (maximum)

MARINE CASUALTY INFORMATION		
Date and time	9 April 2014, 1600BST	
Type of marine casualty or incident	Less Serious Marine Casualty	
Location of incident	Southampton	
Place on board	Port Lifeboat	
Injuries/fatalities	1 crewman suffered minor injuries	
Damage/environmental impact		Hull holed
Ship operation	Port State Control inspection	
Voyage segment	Alongside in port – Discharging cargo	
External & internal environment	Daylight, light airs	
Persons on board	22	

Photograph courtesy of ABP, Southampton

Nagato Reefer

1.2 BACKGROUND

Nagato Reefer was a 7,367 tonne (t) refrigerated cargo vessel, with four cargo holds **(Figure 1)**. The vessel was equipped with two identical lifeboats positioned one on either side of the accommodation.

The vessel operated world-wide and carried temperature controlled cargoes.

Photograph courtesy of Ria Maat, Marine Traffic.com

Figure 1: *Nagato Reefer*

1.3 NARRATIVE

Nagato Reefer berthed in Southampton at 0122 on 9 April 2014 to discharge a cargo of fruit from the Canary Islands.

At 0815 a port state control officer (PSCO) from the Maritime and Coastguard Agency (MCA) began an *initial*[1] port state control (PSC) inspection on the vessel. During the inspection the PSCO noted several deficiencies, which included incorrect recording of the crew's hours of rest and defective fire hydrants.

The PSCO informed the master that a *more detailed* inspection of the vessel would be undertaken, and that he required the crew to carry out an emergency fire drill. The conduct of this drill was deemed unsatisfactory and the vessel was detained.

At about 1500 the PSCO ordered the crew to carry out an abandon ship drill using the vessel's port (number 2) lifeboat. The chief officer was in charge of the boat for the drill and, with five other crew members, entered the boat.

[1] The three types of Port State Control inspection are: initial, more detailed and expanded.

The chief officer used a portable very high frequency (VHF) radio to instruct the crewman operating the lifeboat davit winch on the embarkation deck to release the brake and lower the lifeboat into the water. When the boat was in the water its engine was started and the chief officer pulled the hook release handle **(Figure 2)** to free the boat from the falls. However, the hooks failed to open.

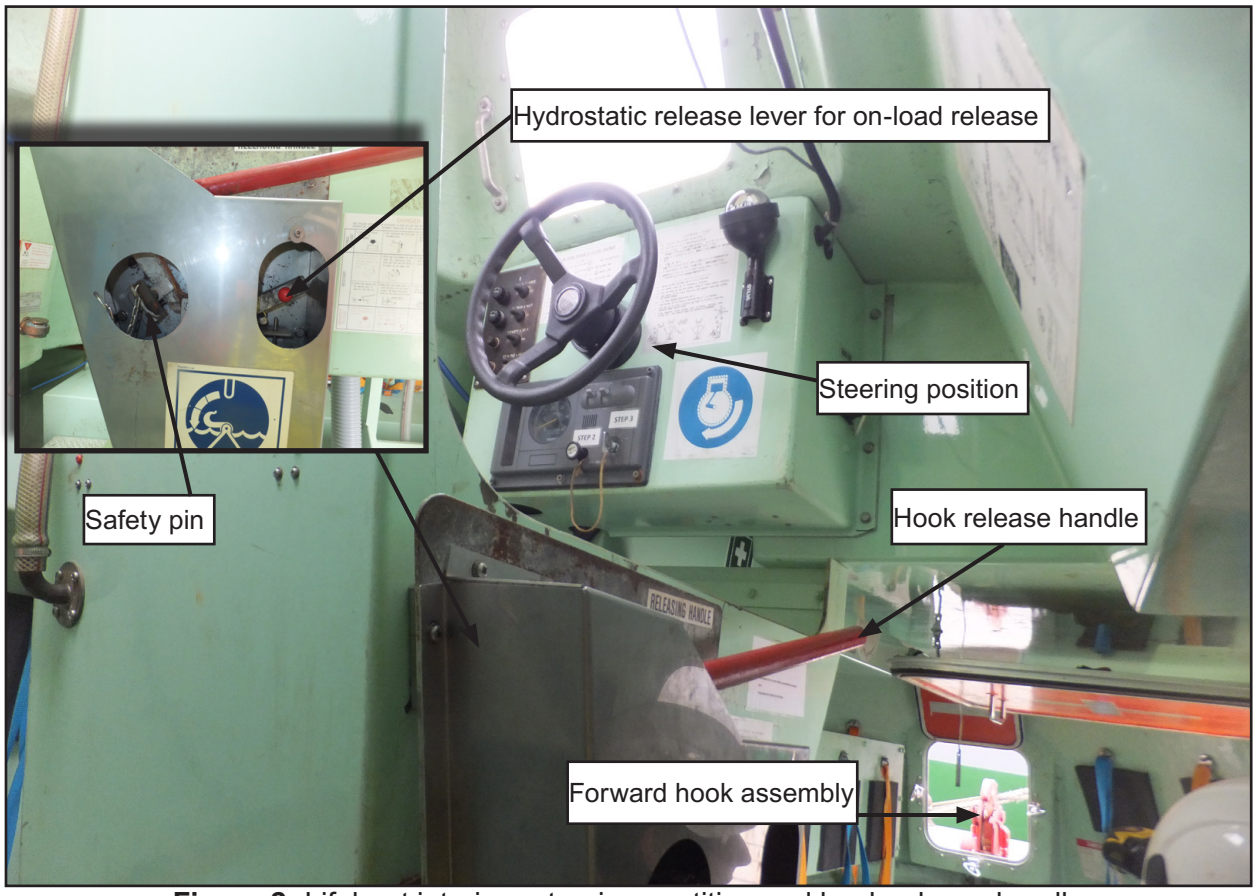

Figure 2: Lifeboat interior - steering postition and hook release handle

The chief officer instructed the winch operator to lift the boat slightly and then he pulled the release handle again. This time the hooks opened and released the boat from the davit suspension links.

The chief officer took the helm and manoeuvred the lifeboat clear of *Nagato Reefer* for about 10 minutes before returning it alongside for hoisting. The boat's crew experienced difficulty resetting the hook release gear and two crewmen were required to pull on the hook release handle to force it into a position in which the safety pin could be inserted.

With the boat in position under the davit arms, several attempts were made before the davit suspension links were connected to the lifeboat hooks. Once engaged, the hooks were checked by the chief officer, who then instructed the crew to connect the Fall Preventer Devices (FPD)[2] **(Figure 3)**.

By about 1540, both FPDs had been secured and the lifeboat was lifted from the water. Some of the boat's crew were not convinced that the hooks had been correctly reset and prayed while the boat was being retrieved. All six crewmen

[2] The FPD comprised a synthetic sling with a shackle at each end, which was connected between the suspension link and the hook maintenance shackle of the forward and aft hook assemblies.

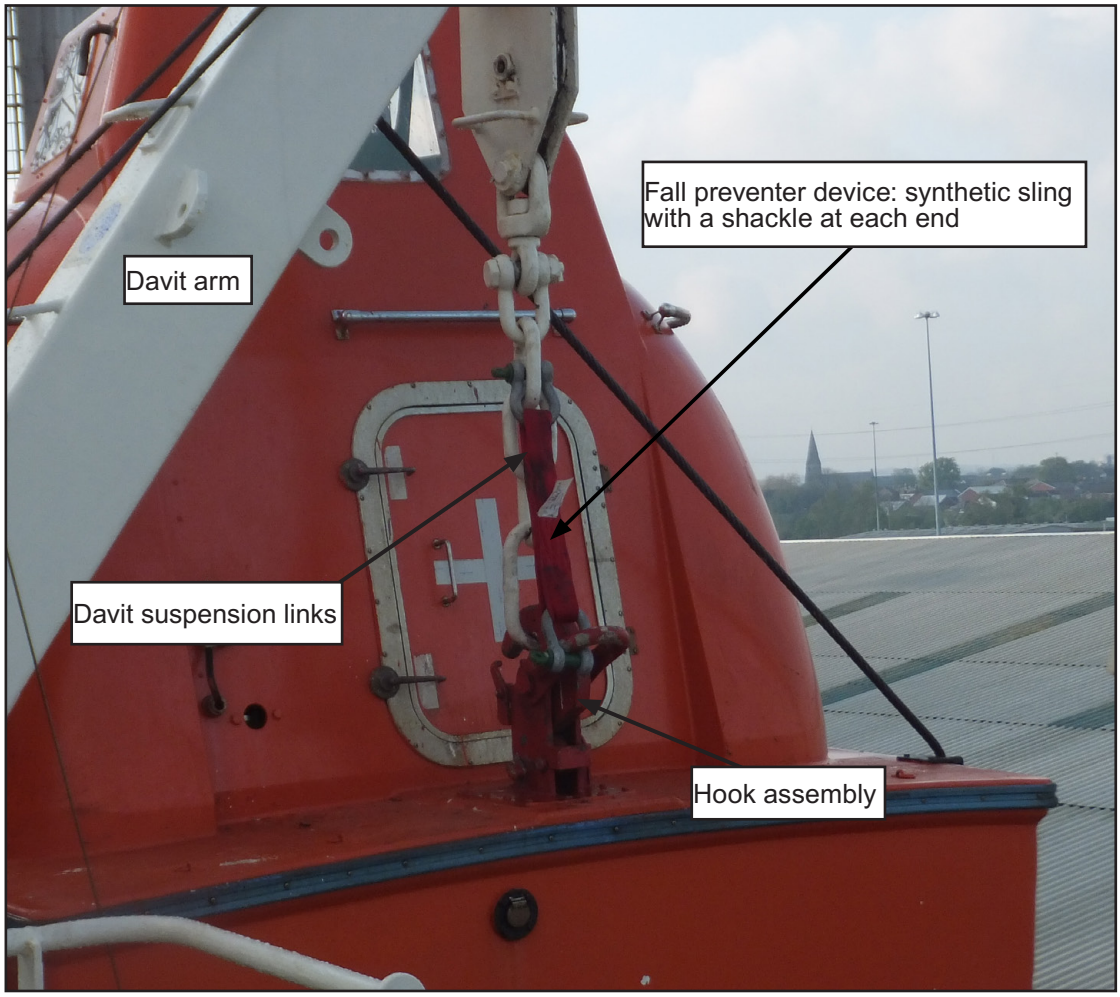

Figure 3: Fall preventer device fitted to starboard lifeboat

disembarked from the boat at the embarkation deck level and it was then hoisted into its davit **(Figure 4)**. The lifeboat was then left unsecured in the davit for about 20 minutes while the crew took a break.

At about 1600, the chief officer instructed the bosun[3] and two crewmen to secure the boat in the davit. Two crewmen boarded the boat to assist in positioning the gripe wires[4] fore and aft **(Figure 5)**; the bosun instructed the men in the boat not to release the FPDs until he had connected the gripes to the davit arms.

The aft gripe had been secured and the bosun was connecting the forward gripe when the chief officer came to the area and instructed the crewmen in the boat to release both FPDs. As soon as the forward FPD shackle pin was removed, the hook opened and the forward end of the boat fell onto handrails on the deck below **(Figure 6)**, striking and injuring the bosun as it fell.

At 1608 the PSCO, who had been in the wheelhouse, arrived at the accident scene and took a photograph of the forward hook **(Figure 7)**, which showed that the hook was open.

[3] Bosun is the common form of boatswain and denotes the senior crewman on a vessel.

[4] Gripe wires are used forward and aft to secure the lifeboat in its davit when a vessel is on passage.

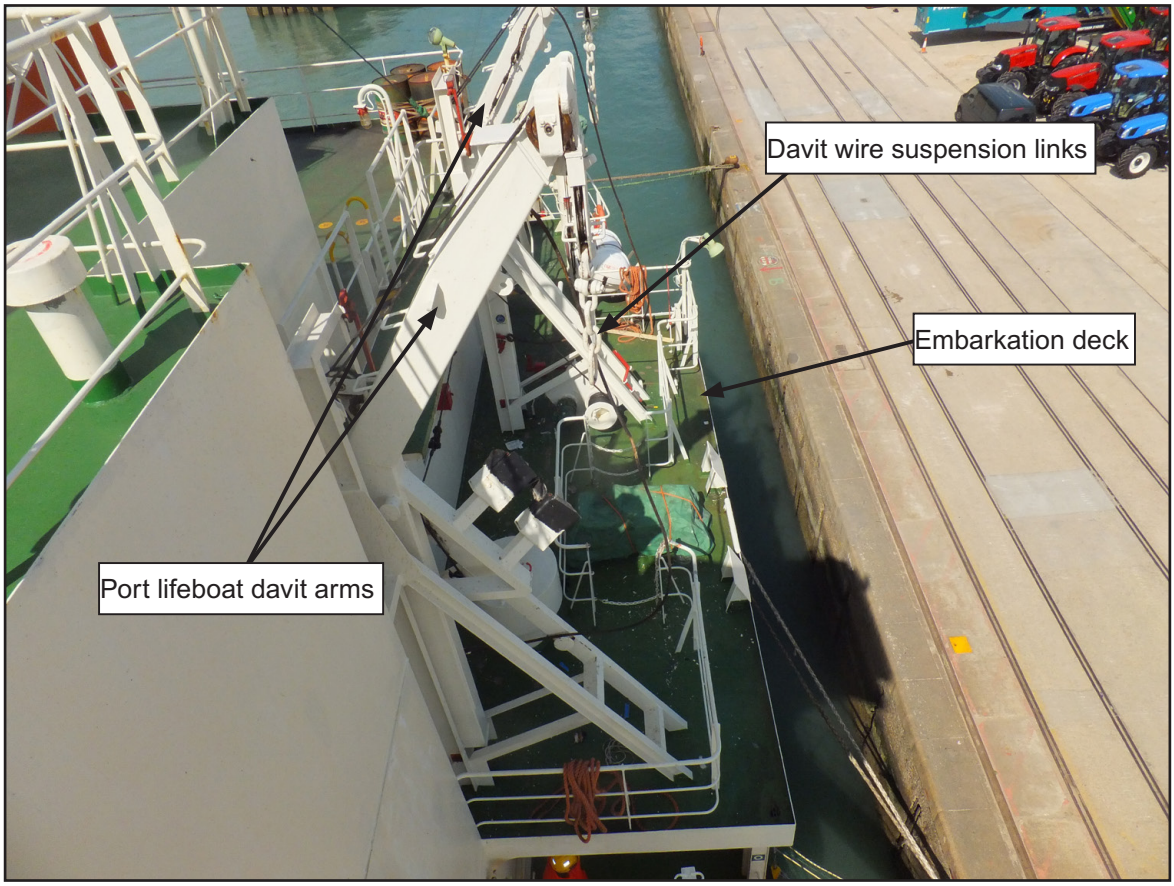

Figure 4: Port lifeboat davit

Figure 5: Gripe wires (on starboard lifeboat)

Figure 6: Lifeboat hull damage

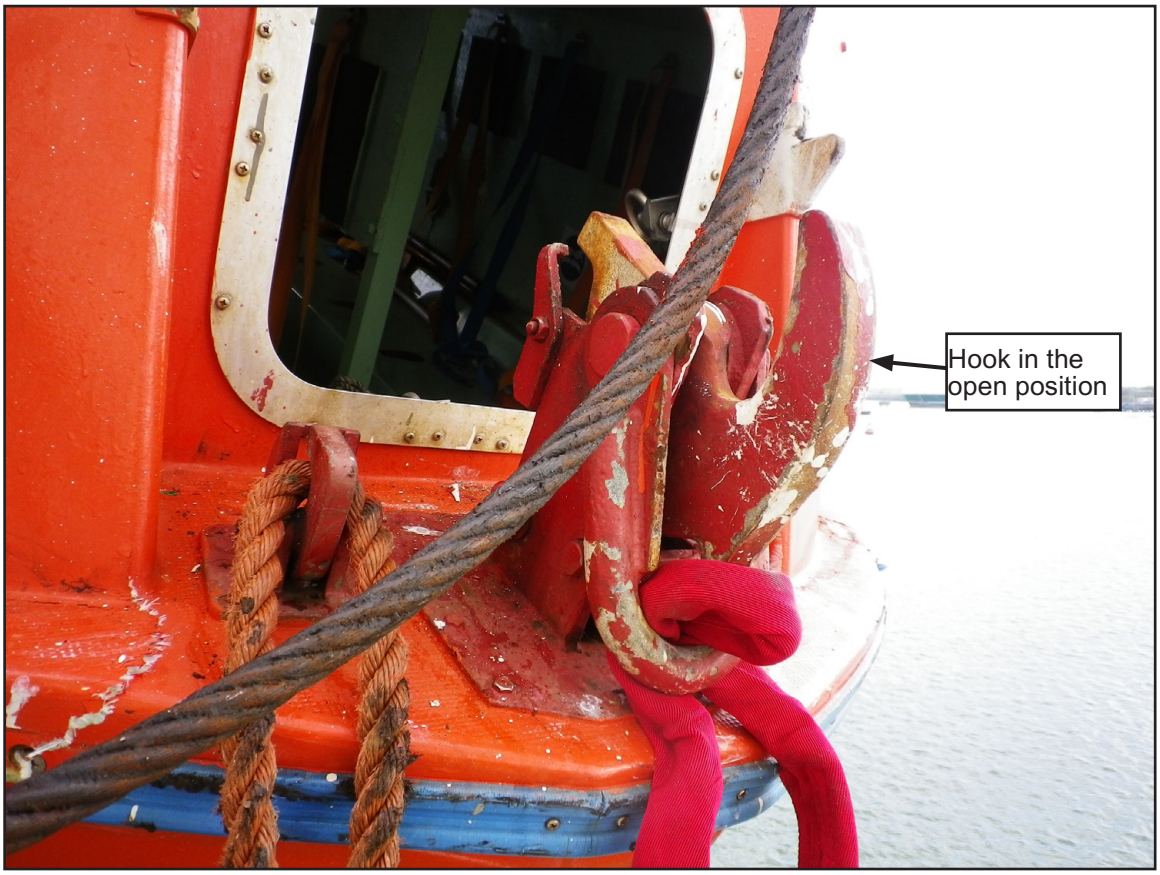

Figure 7: Forward hook as photographed post accident at 1608

The emergency services were called to attend and the bosun was taken to a local hospital for medical assessment. It was found that his injuries were not serious and he returned to the vessel the following day.

1.4 CREW

Nagato Reefer carried a crew of 20. The master, chief officer and chief engineer were Korean and the remainder of the officers and crew were Filipino. The vessel's official language was English.

1.4.1 Master

The 61 year old master held an STCW[5] II/2 certificate of competency (CoC) (master unlimited) and had worked at sea for 40 years including more than 20 years, as a master.

He was on his second consecutive tour of duty as master of *Nagato Reefer* and had gained more than 12 months' experience on the vessel at the time of the accident.

1.4.2 Chief officer

The 52 year old chief officer held an STCW II/2 CoC (master limited to 6,000 tonnes) and had been at sea for 23 years.

He had been employed by the vessel's manager, Kyokuyo Co. Limited (Kyokuyo), as chief officer for 3 years and had worked on two of the manager's other vessels. He had served on board *Nagato Reefer* for 9 months at the time of the accident.

1.4.3 Bosun

The 34 year old bosun had served on board *Nagato Reefer* for 1 month at the time of the accident.

1.4.4 Crew's time on board

Several of the Filipino crew had been on the vessel continuously for more than 12 months, some for more than 19 months, at the time of the accident.

1.5 PORT STATE CONTROL INSPECTIONS

1.5.1 Background

In Europe, Port State Control inspections are conducted in accordance with guidelines agreed by the Paris Memorandum of Understanding (MOU) organisation, which consists of 27 participating maritime administrations.

A foreign vessel calling at a member's port is targeted for inspection based on its "ship risk profile", the calculation of which is determined by a number of factors that include its type, age, history, cargo, and its owner's history. Information about the vessel is held on a publicly accessible database known as THETIS[6].

---

[5] STCW, International Convention on Standards of Training, Certification and Watchkeeping for Seafarers 1978 (STCW Convention).

[6] https://portal.emsa.europa.eu/web/thetis/ship-risk-profile-calc

The priority for carrying out a PSC inspection is based on the time since the last inspection or an unexpected factor, such as adverse reports received from pilots or port authorities about the vessel.

1.5.2 PSC inspection, 2 January 2014

An *initial* inspection, based on the time elapsed since the previous inspection, had been carried out on *Nagato Reefer* on 2 January 2014 in Southampton.

On that occasion a PSCO had boarded the vessel shortly before it was due to depart. The inspection was restricted by the time available to an inspection of the statutory documents, the navigation bridge, the outside decks, steering room and engine room.

No operational checks of the vessel were undertaken and no deficiencies were found.

1.5.3 PSC inspection, 9 April 2014

The PSC inspection conducted on 9 April 2014, which began as an initial inspection, was triggered by an *unexpected factor*; in this instance the factor being a complaint received by the MCA about the crew's living and working conditions.

The inspection became a *more detailed* inspection as the number and scale of the deficiencies increased. Thirty deficiencies were recorded during the inspection, which included a fire drill followed by an abandon ship drill. The accident occurred following the completion of the abandon ship drill.

1.5.4 ISM Code deficiencies

During the inspection the PSCO noted the following deficiencies:

- Certificates and flag state endorsements for some of the officers had expired.
- On board training – officers not familiar with the operation of essential safety equipment.
- Records of hours of rest were found to have been falsified.
- Emergency lighting found inoperative in some areas.
- Maintenance:
    - Hatch cover bolts found missing or seized.
    - Ventilators for cargo holds lashed open.
    - Anchor winch control box corroded.
    - Fixed fire extinguisher installation found with missing and blocked heads.
- Lifebuoys were secured to vessel's structure, not ready for use.

In the notice of detention the PSCO recorded that "*the ISM Code is not effectively implemented on board*" and required a safety management audit to be carried out by the Flag State administration, Panama, before the vessel was released from detention.

1.5.5 Fire drill

As part of the more detailed inspection the crew were required to carry out a fire drill. The PSCO considered the drill was unsatisfactory for the following reasons:

- *Lack of crew training*
- *Crew walking through designated fire area without personal protective equipment (PPE)*
- *Fireman's outfit was found torn*
- *Fire hose not charged during drill*
- *Fire doors left open and tied back during drill*
- *Breathing apparatus sets were not used*
- *Officer in charge of fire team not wearing correct PPE*
- *Fire pumps found leaking*
- *Fire hydrants found seized*
- *Communication between bridge and officer in charge was not in English*

In the notice of detention issued to the vessel, the PSCO concluded that the conduct of the fire drill was "*completely unsatisfactory*" and noted that there was a "*failure to comply with merchant shipping legislation*".

1.6 RECTIFYING THE DEFICIENCIES

The deficiencies found during the inspection were required to be rectified, to the satisfaction of the PSCO, before the vessel could be released from detention. Following completion of the actions listed in the following sub-paragraphs, *Nagato Reefer* was released from detention and sailed from Southampton on 12 April 2014.

1.6.1 Damaged lifeboat

The damaged lifeboat was landed ashore for repairs and an additional liferaft, approved by the MCA as a temporary replacement for the lifeboat, was supplied to the vessel.

The damaged lifeboat was transported by road to Rotterdam for repairs by a contractor who had been approved by the lifeboat manufacturer.

1.6.2 Abandon ship drill, 12 April 2014

As a condition of the vessel's release from detention, the PSCO required the crew to undertake a further abandon ship drill. This drill took place on 12 April 2014.

With no one embarked, the starboard lifeboat was lowered into the water. The crew and the PSCO then boarded it and discovered that the hook release mechanisms were seized and that the hooks could not be released.

The crew cleaned the hook assemblies and removed dirt and paint from the hook surfaces to enable the hooks to open, which took them about an hour. Once operational, the release gear was reset and retested to ensure it was working correctly. The boat was then retrieved and secured.

1.6.3 Fire-fighting training

Nagato Reefer's manager, Kyokuyo, arranged for the crew to undertake fire-fighting training to improve their response to emergency situations. A specialist fire training company, *Fire-Aid International Training Ltd*, conducted this training from 10 to 12 April 2014.

On 10 April the crew undertook a fire drill during which their capabilities were evaluated. On completion the training company recorded that:

- *The drill highlighted a major lack of knowledge from all the officers and crew in emergency preparedness; and*

- *It was very clear that the crew lacked the correct knowledge and competency in dealing with a fire situation.*

A further three drills were conducted the following day, after which the trainers recorded that:

- *There was major confusion with muster points and the location of the fire.*

- *The chief officer was sending his crews to the wrong location.*

On 12 April 2014 a final fire drill was carried out, which was witnessed by the PSCO, who recorded that:

- *While it was better than the first drill it was just about satisfactory.*

- *More short and medium term training of master and crew would appear to be required.*

On completion, the training company produced a report, which concluded that:

- *The ship's crew still require a lot more training to further improve the standard of emergency preparedness on board.*

Kyokuyo provided no further training at that time.

1.6.4 International Safety Management Code[7] audit

On behalf of the Panama Maritime Authority, Class NK undertook an audit of the vessel's ISM system, as required by the PSCO. This audit found major non-conformities[8] in relation to the crew's emergency response:

- *The ship's crew were not able to respond effectively to potential emergency shipboard situations.*
- *Fire drill was completely unsatisfactory.*
- *Crew could not show the release station for paint locker sprinkler.*

Non-conformities were also raised in relation to the maintenance of the ship and its equipment, and with the master's responsibility and authority, due to falsified hours of rest records.

Class NK issued a corrective action plan (CAP) to Kyokuyo in relation to the non-conformities, which required:

- *Master to review the Safety Management System (SMS) and report its deficiencies by 30 April 2014.*
- *Company management review to be held to discover root cause of deficiency and report to be sent to ship by 31 May 2014.*
- *Further training to be carried out on board, evaluated and reported by internal* audit by the company.
- *Internal audit to be held and crew familiarisation to be verified on board before additional audit by Class, but not later than 10 July 2014*. [sic]

1.7 MANAGER'S REVIEW OF ISM DEFICIENCIES

Kyokuyo, in accordance with the requirements of the CAP, undertook a review of the root causes of the ISM deficiencies and issued a safety notice to its vessels on 29 May 2014 **(Annex A)**.

The notice addressed the following points:

- The application of the Declaration of Maritime Labour Compliance[9] on board.
- ISM deficiencies found during the PSC inspection. The notice stated that the root causes of these were:
    - *Crew's routine patrol and inspection were not enough.*

---

[7] The International Safety Management (ISM) Code was adopted by the International Maritime Organization (IMO) in 1993 (Resolution A.741 (18)) to provide an international standard for the safe management and operation of ships and for pollution prevention. It was subsequently incorporated into SOLAS (Chapter IX).

[8] When objective evidence indicates non fulfilment of a specific requirement stated by the safety management system, a situation of non-conformity is considered to have occurred.

[9] Confirms a vessel's compliance with the Maritime Labour convention which sets minimum working and living rights for seafarers.

- *Habitual practice on board was not correct.*
- *Not enough common sense to the safety device, lifesaving appliances, and preparation of special work.* [sic]

- The accident, stating:
  - The root cause was "*a malfunction of the release gear, despite of periodical inspection in 2013 in shipyard was okay*" [sic]
  - The secondary causes were the crew's lack of knowledge of the hook release gear, insufficient routine inspections prior to the accident and "*improper operational procedure of FPD*".

- The root causes of the unsatisfactory fire drill were identified as:
  - "*insufficient drills and onboard training" and;*
  - *"Company also have not enough review the vessel's SMS report to be carried out Drill and Training."* [sic]

The safety notice concluded *"we would hope crews to learn that more of your own ship and life safety boarding with highly own interesting to protect yourself and the company."* [sic]

1.8 LIFEBOAT RELEASE AND RETRIEVAL SYSTEMS

1.8.1 Background

On-load lifeboat release and retrieval systems (LRRS) were mandated by the IMO in SOLAS[10] in 1986 in response to the capsize of the *Alexander Kielland* platform in the Norwegian sector of the North Sea, in 1980, that resulted in 123 deaths.

Following the introduction of on-load LRRS, a number of serious accidents occurred during lifeboat drills and servicing, and the IMO concluded that many were caused by a lack of maintenance, poor design or inadequate training.

The IMO recognised that the failure of on-load release gear could result in the unexpected release of lifeboats, with significant risks to crews, and in June 2011 issued MSC.1/Circ.1327,[11] providing guidance on the use of FPDs.

1.8.2 MSC.1/Circ.1327

MSC.1/Circ. 1327 explained that the use of an FPD should be considered as an interim risk mitigation measure that was only to be used with on-load release hooks, at the discretion of the master, pending the implementation of improved hook designs with enhanced safety features.

Where FPDs were synthetic slings, the circular stated that strict procedures, including a warning notice at the release handle, should be in place to ensure that the slings were removed before activation of the release gear.

[10] SOLAS is the International Convention for the Safety of Life at Sea 1974, as amended.

[11] http://www.imo.org/OurWork/Circulars/Pages/IMODOCS.aspx

The FPDs on *Nagato Reefer* were synthetic slings, but no warning notices had been posted in its lifeboats.

1.8.3 Amendments to SOLAS Chapter III

On 27 May 2011, the IMO issued MSC.1/Circ.1392[12] providing guidelines for the evaluation and replacement of lifeboat release and retrieval systems, pending the entry into force of SOLAS Regulation III/1.5.

SOLAS Regulation III/1.5, effective from 1 January 2013, required that lifeboat on-load release gear had to be replaced if it did not comply with the Life-Saving Appliances Code, as amended, not later than the first scheduled dry docking after 1 July 2014, but not later than 1 July 2019.

1.8.4 Class NK technical information paper

On 3 October 2013, Class NK issued technical information paper TEC- 0966 **(Annex B)** which informed its clients that it would survey the LRRS on their vessels at the first scheduled dry dock after 1 July 2014.

Owners were required to work with the lifeboat manufacturer or service agent to ensure the LRRSs on their vessels complied with SOLAS Regulation III/1.5 before the Class NK survey was undertaken.

1.9 *NAGATO REEFER*'S LIFEBOAT RELEASE AND RETRIEVAL SYSTEM

The LRRS fitted to the lifeboats on *Nagato Reefer* was model SRS-37, manufactured by the Shigi Shipbuilding Company Limited, Japan (Shigi). The unit was designed to enable the lifeboat to be released in both on-load and off-load modes[13].

Shigi produced approximately 500 of the SRS-37 units between 2000 and 2004 when production of the model ceased. The company estimated that 100 vessels were still fitted with the SRS-37 model at the time of the accident, but was unable to identify the vessels concerned.

1.9.1 Design

The SRS-37 system comprised hook assemblies forward and aft that were connected by operating cables to a release handle located beside the steering position. Simultaneous release of both hooks was achieved by pulling on the release handle **(Figure 8)**.

A hydrostatic interlock unit prevented accidental release of the hooks when the boat was not in the water. Once the boat was waterborne and the release handle was lifted, the hooks opened and the suspension links were released. The default operating mode was off-load but there was a mechanism that allowed the hydrostatic interlock to be bypassed, in an emergency, to facilitate on-load release.

---

[12] http://www.imo.org/OurWork/Circulars/Pages/IMODOCS.aspx

[13] On-load release is the action of opening the LRRS while there is load on the hook assemblies. Off-load release occurs when the lifeboat is in the water and there is no weight on the hook assemblies.

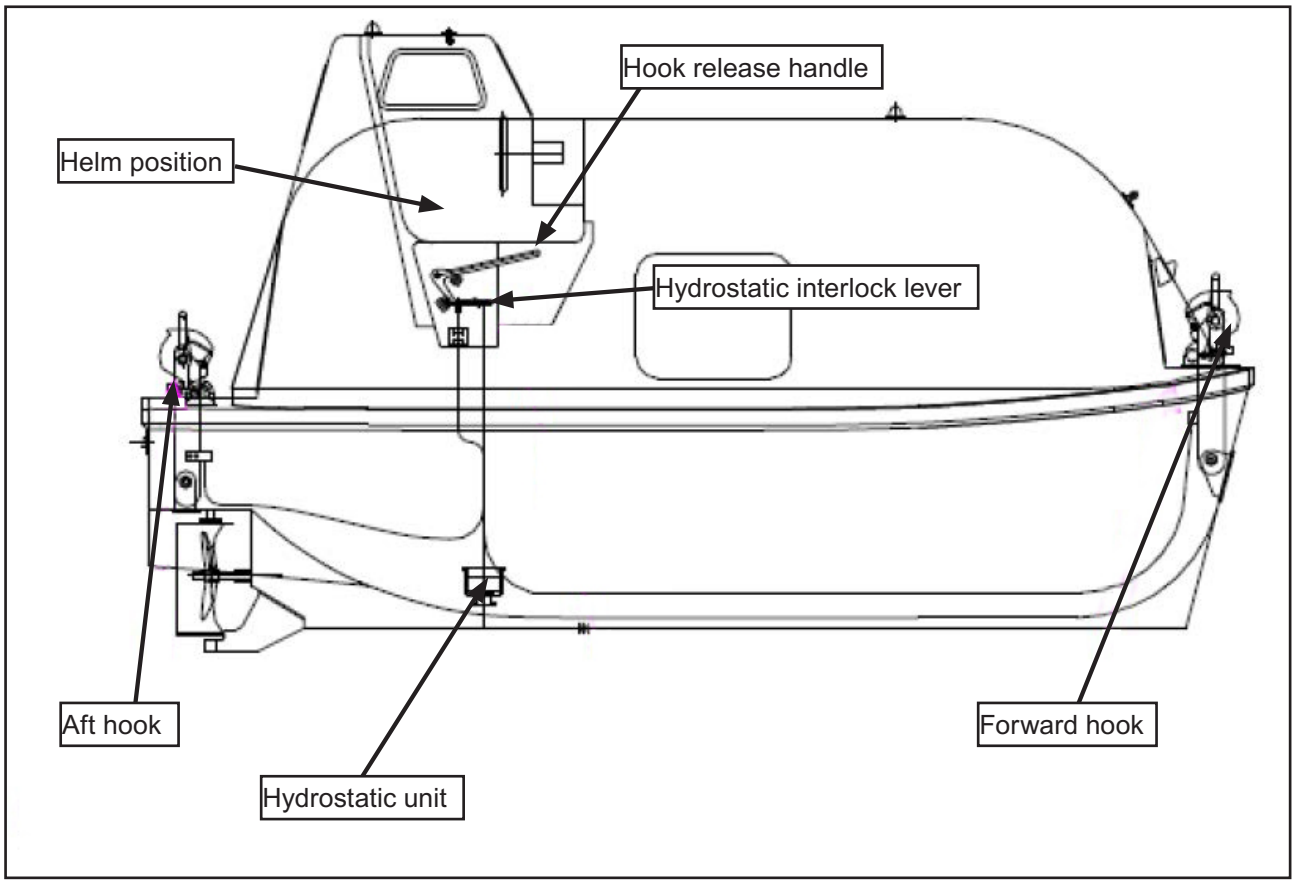

Figure 8: Lifeboat hook release gear arrangement

The hydrostatic interlock on *Nagato Reefer*'s port lifeboat was found to be defective following the accident.

1.9.2 Resetting the LRRS

Three persons were needed to reset the Shigi SRS-37 LRRS: one at the release handle and one at each hook. The hook assembly comprised three main components: the hook, the lock piece and the cam **(Figure 9)**. The hooks were pulled to an upright position so that the hook tail (B) fitted into the notch of the lock piece (A) which exerted a rotational force that lifted the lock piece and allowed the cam (C) to rotate **(Figure 10a)**.

If the reset had been done correctly there was a clearance between the lock piece and the cam **(Figure 10b)**. It was important that this clearance was maintained by applying constant pressure on the hook to keep the lock piece in place. If the clearance was not maintained the lock piece would pivot back down and would interfere with the operation of the cam and prevent it from resetting.

While the hooks were being held in the closed position the mechanism could be locked by pushing down on the release handle, which moved the operating cables and in turn rotated the cam lever into its final position **(Figure 10c)**.

With the release lever pushed down the holes in the handle and the bracket aligned, which allowed the safety pin to be inserted and rotated into its locked position.

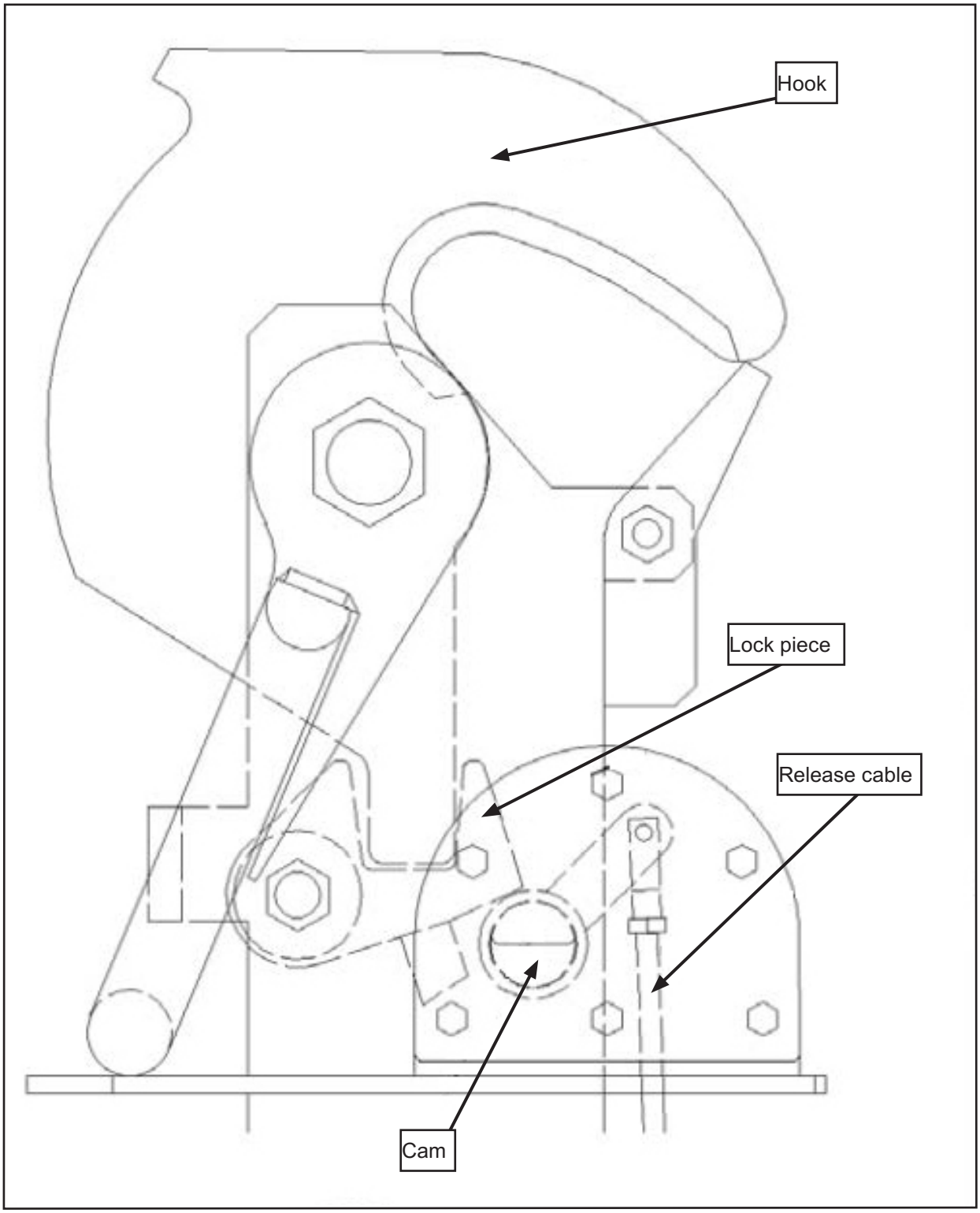

Figure 9: Hook assembly arrangement

Images courtesy of TSB, Canada

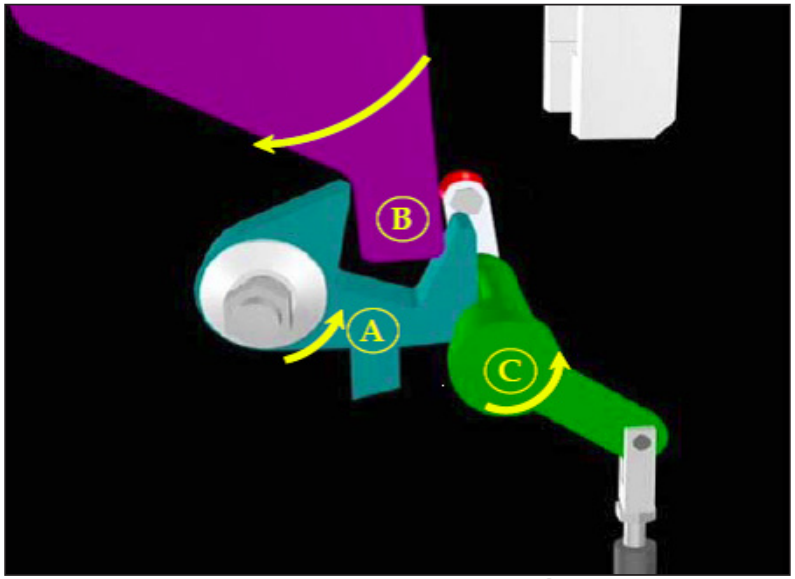

Figure 10a: Hook resetting hook tail Ⓑ lifting the lock piece Ⓐ as it enters the notch

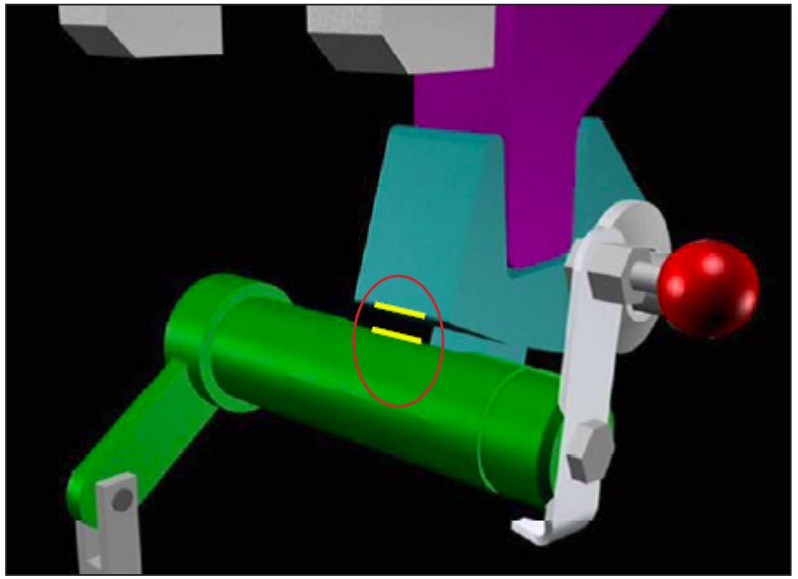

Figure 10b: Correct reset = clearance between lock piece and cam

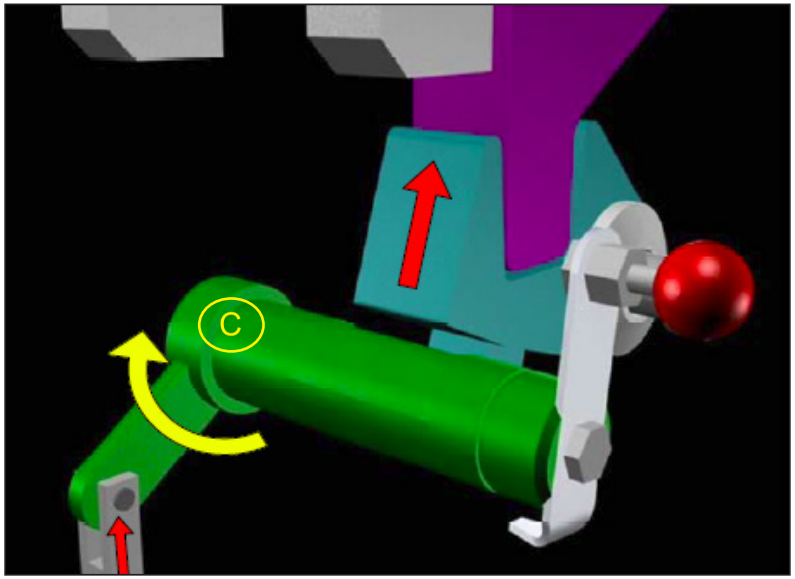

Figure 10c: Cable rotates cam Ⓒ into final position

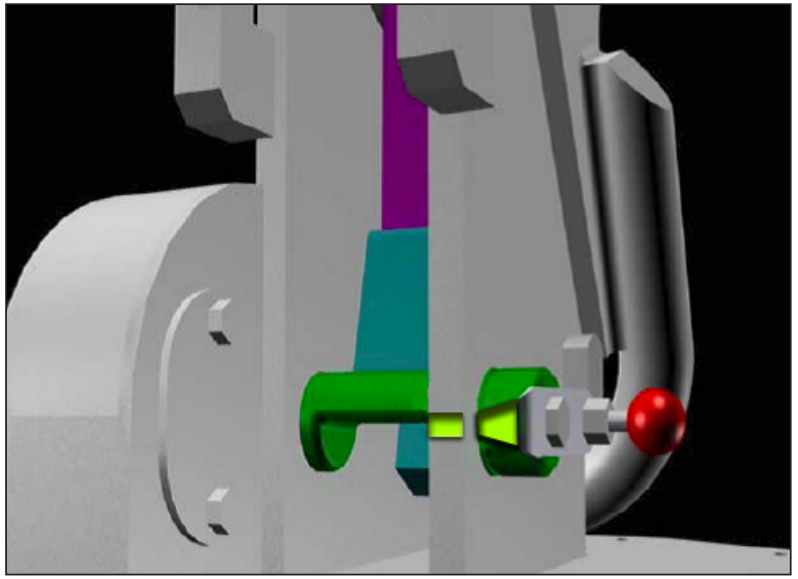

Figure 10d: When correctly reset the green marks will align

Figures 10a to d: Hook resetting sequence

When the operation to reset the SRS-37 was carried out as designed, the cam lever rotated into the horizontal position and the green reference marks on the cam lever and the bracket became aligned **(Figure 10d)**. The davit wire suspension links could then be connected to the hook assemblies and the boat retrieved.

1.9.3 Warning signs

Signs were posted in each boat to inform the crew that it was safe to retrieve the boat only once the green reference marks on the cam lever and bracket were aligned **(Figure 11)**.

Figure 11: Hook reset signs displayed in lifeboat

The manufacturer's procedures for the resetting operation **(Annex C)** advised that if excessive force was used on the release handle during the resetting process "*a very dangerous situation in which there is much possibility of lifeboat falling down*" [sic] would be created.

1.9.4 Modifications to comply with SOLAS Regulation III/1.5

In 2011 the SRS-37 was modified to comply with the requirements of SOLAS Regulation III/1.5. The modified version, model SRS-37M, was approved by the Japanese Maritime administration in February 2012. The modifications included the fitting of a counterbalance on the cam reset lever and a redesigned release handle assembly.

1.10 *NAGATO REEFER*'S FALL PREVENTER DEVICE

The FPDs supplied to *Nagato Reefer* were manufactured by Shigi and consisted of a synthetic webbing sling, with a safe working load of 3.47t, fitted with a shackle at each end.

The vessel had been provided with an operations manual for fitting the FPD to the model SRS-37 LRRS. The instructions stated that the FPD should be fitted during drills and maintenance, but not when a vessel was on passage.

The SRS-37 on *Nagato Reefer* would have needed to be replaced by the SRS 37M, or another SOLAS compliant system, at the vessel's first dry dock post 1 July 2014. Thereafter, the use of FPDs would no longer be required.

1.10.1 MAIB visit to vessel, 20 April 2014

On 20 April 2014, MAIB inspectors re-visited Nagato Reefer on the vessel's return to Southampton, when it was observed that the FPDs were in place on the starboard lifeboat.

The inspectors were advised that the FPDs had been in place while the vessel was on passage, in accordance with instructions received by the crew from the vessel's manager, Kyokuyo.

1.11 LIFEBOATS

Nagato Reefer carried two type SZ 53BR lifeboats, which were built by Shigi in July 2000. The lifeboat model was approved by Class NK under approval number N-478.

The lifeboats were davit launched gravity-type, totally enclosed, self-propelled, self-righting and certified to carry 25 persons.

In accordance with SOLAS Chapter III, Regulation 20.3.2 the boat builder had provided the weekly, monthly, annual and 5-yearly inspection requirements for the lifeboats and their associated equipment. As part of this regime the crew were required to inspect the lifeboat release gear on a monthly basis and this included the requirement to check the "*status of the reset*" and to "c*heck that there was no dirt or foreign matter on the moving part*". [sic]

1.11.1 Annual inspection, October 2013

On 24 October 2013 an annual inspection of the lifeboats and their equipment was undertaken, in accordance with SOLAS requirements, by a service engineer approved and certified by the lifeboat builder, at the Besiktas Shipyard, Turkey.

Prior to the inspection the service engineer prepared a report **(Annex D)** that listed the work required on the boats and davits.

The report noted that:

- *The hydrostatic unit on Number 2 lifeboat was not operational and was to be overhauled.*

On completion of the annual inspection the engineer's report indicated that the condition of the release gear was "good".

1.11.2 Inspection at abandon ship drill, 15 March 2014

Records held on board *Nagato Reefer* indicated that an inspection of both lifeboats had taken place following an abandon ship drill on 15 March, when the condition of the release gear was recorded as "*good*".

1.11.3 Weekly inspection, 22 March 2014

Records held on board indicated that the vessel's crew had inspected both lifeboats' release gear on 22 March 2014 when their condition was recorded as "good".

1.11.4 Post-accident inspection, 9 April 2014

Port lifeboat

MAIB inspectors inspected the port lifeboat soon after the accident and photographed the lifeboat and hook assemblies. At 1825, it was noted that the forward hook had been closed after it was photographed by the PSCO at 1608.

The forward hook assembly was inspected and it was observed that the hook was liberally coated with paint. Witness marks of surface to surface contact were noted on the curved surface of the cam, which was covered in paint and dirt, and multiple linear indentations were observed on the face of the lock piece **(Figure 12)**.

The lifeboat's release gear was inspected and the safety pin on the release handle was found seized and not in its keeper. The hydrostatic interlock lever was found in the bypassed position and it was noted that there was no protection against accidental or premature use of the hydrostatic interlock bypass.

Starboard lifeboat

The starboard lifeboat aft hook assembly was inspected and a build-up of paint was observed on the cam reset pin. It was also noted that the green reference marks had been painted over **(Figure 13)**.

Figure 12: Port lifeboat - forward hook assembly

Figure 13: Starboard lifeboat aft hook assembly (as found)

The release handle safety pin was observed to be not engaged and the protective cover on the hydrostatic interlock bypass was open **(Figure 14)**. The crew rectified these omissions before the vessel sailed.

Figure 14: Starboard lifeboat - release lever (as found)

1.11.5 Post-accident lifeboat repair and inspection report, 29 April 2014

Following the accident, repairs to the port lifeboat's hull and release gear were carried out by an approved service engineer in Rotterdam on 29 April 2014.

The engineer produced a report **(Annex E)** stating that the operating cables were found seized and that the forward cable had probably fractured internally. The operating cable attachment bracket was found to have been bent and the hydrostatic unit was not working. Also, the impellor of the lifeboat engine's water cooling pump was found broken.

The operating cables, bracket and impellor were renewed, the hydrostatic unit was overhauled and the hook assemblies were cleaned and serviced. The lifeboat was returned to the vessel on 6 May 2014, when some of the officers were given training in the safe operation of the LRRS.

1.12 EMERGENCY DRILLS

1.12.1 Regulatory requirements

SOLAS Chapter III, Regulation 19.3.2 requires that every crew member shall participate in at least one abandon ship drill and one fire drill every month. Regulation 3.3 requires that each abandon ship drill shall include the summoning of crew to muster stations, checks that the crew are suitably dressed and wearing lifejackets, the lowering of at least one lifeboat, and the starting and operating of the lifeboat engine. Regulation 3.3.2 requires that each lifeboat shall be launched and manoeuvred in the water by its assigned operating crew at least once every 3 months.

Additionally, on 11 June 2009, the IMO issued circular MSC.1/Circ.1206/rev114: *Measures to prevent accidents with lifeboats*. This circular included the following guideline on safety during abandon ship drills using lifeboats: "*drills should be conducted with an emphasis on learning and be viewed as a learning experience*".

SOLAS Chapter III, Regulation 19.3.4 requires that fire drills be planned in such a way that due consideration is given to regular practice in the various emergencies that may occur. Each drill should include:

- Reporting to stations and preparing for duties described in the muster list.
- Starting a fire pump, using at least two jets of water.
- Checking of firemen's outfits and other personal rescue equipment.
- Checking of the watertight doors, fire doors fire dampers and main inlets and outlets of ventilation systems in the drill area.
- Checking the necessary arrangements for subsequent abandoning of the ship.

1.12.2 Manager's requirements

Nagato Reefer's SMS included the following requirement from the vessel's management for emergency preparedness drills and crew training for abandoning ship:

"*Important Notice: When the Master as trainer and the crew members as trainee for abandon ship station, they should well understand the hazards associated during the lunching and recovery of Lifeboat and rescue boat operation due to overlooking failure of mechanism of Lifeboat and Davit, lack of familiarity for operation and communications failures*." [sic]

[14] http://www.imo.org/OurWork/Circulars/Pages/IMODOCS.aspx

The SMS also contained procedures for the conduct of abandon ship drills and the training requirements for the crew during drills, which included:

- *Name and function of the main components of the lifeboat davits and winches.*
- *How to use the automatic releasing device.*
- *How to start and operate the engine.*
- *How to maintain the portable two-way VHF radiotelephone apparatus.*
- *The company and related shore organisations to report, the method and content of the report*. [sic]

Safety manuals were available in the mess room for the crew to read. These were observed to be in good condition and showed no signs of having been regularly consulted.

1.12.3 *Nagato Reefer* abandon ship drills

Records for the last three abandon ship drills held on *Nagato Reefer* prior to the accident were examined.

- The record for 15 March 2014 stated that a muster was held but that the boats were not lowered due to rough seas.
- The record for 24 March 2014 stated that both lifeboats had been lowered into the water, the hooks released and the boats manoeuvred in the water and then recovered.
- The record for 6 April 2014 stated that the crew had entered the port lifeboat and the chief officer had given instruction in the use of the release mechanism.

Evidence obtained during the investigation indicated that these drills had not taken place as described in the vessel's records and that the lifeboats had not been lowered into the water for at least a year before the accident.

During the PSC inspection drills and the subsequent MAIB investigation, none of the crew was able to demonstrate an understanding of the operation of the vessel's LRRS.

1.13 SAFETY COMMITTEE MEETINGS

Nagato Reefer's SMS required that a safety committee meeting be held every 3 months to review accidents and near misses as well as other matters relating to shipboard safety. The safety committee was also required to undertake a continuous review of the SMS and make recommendations for changes if required.

The safety committee met on 19 April 2014 and again on 17 May 2014. The minutes of these meetings showed that the attendees included the majority of the vessel's officers and the bosun.

The minutes of the meeting held on 19 April 2014, 10 days after the accident, stated that there had been no occurrence of a near miss or an accident on board the vessel in the previous month. The minutes concluded with a statement that "*the SMS policy, manual and procedures were fully operational on board*".

The minutes of the meeting held on 17 May 2014 concluded with an identically worded statement to that of the previous meeting. This set of minutes was endorsed with a handwritten note by the Designated Person Ashore (DPA) of Kyokuyo Co Ltd, with thanks for holding more frequent meetings as per company's orders.

1.14 PREVIOUS ACCIDENTS

1.14.1 MAIB safety study 1/2001

In 2001 the MAIB produced a safety study[15] of accidents involving lifeboats and launching systems.

The study reviewed accidents and incidents that had been reported to the MAIB from 1991 to 2001 and included 11 accidents involving lifeboat release gear that had resulted in 7 fatalities and 9 injuries.

The study found that a root cause of many of the accidents was the over-complicated design of the launch and retrieval system and its component parts, which required extensive training to operate correctly. It considered that the training of crews needed to be specific to the LRRS fitted on the vessel.

The study recommended to the IMO that it should review the value, need and desirability of lifeboats and consider the introduction of common release and retrieval systems.

1.14.2 Lifeboat accidents reported to the MAIB in the decade 2002-2012

Between 2002 and 2012, 166 lifeboat and rescue boat accidents were reported to the MAIB by UK flagged vessels or by vessels in UK waters. These resulted in 1 fatality and 101 injuries.

1.14.3 *Sea Urchin*, 22 May 2006

In August 2008 the Transportation Safety Board of Canada (TSB) published report M06L0063[16] into the accidental release of a lifeboat and the consequent loss of life during an abandon ship drill on the bulk carrier *Sea Urchin*. The lifeboat was a Shigi SZ-53BR and its LRRS was Shigi model SRS-37, the same combination as fitted on *Nagato Reefer*.

As the starboard lifeboat was being hoisted from the water with five crew on board, the aft hook opened and the forward hook assembly, unable to support the load of the boat, also opened. The lifeboat fell 11m, stern first, into the sea, fatally injuring the second officer and seriously damaging the boat.

---

[15] http://www.maib.gov.uk/cms_resources.cfm?file=/Lifeboat_Study.pdf

[16] http://www.tsb.gc.ca/eng/rapports-reports/marine/2006/m06l0063/m06l0063.asp

The report found that when attempting to reset the LRRS prior to recovery, the crew had experienced difficulty inserting the safety pin into the release handle and it had required two men, pulling on the handle, to engage the pin.

When the TSB inspected the LRRS it found that the cam release lever had not been correctly reset and that there were linear indentations on the face of the hook lock piece. This indicated previous improper setting of the LRRS.

On 30 November 2006 the TSB issued Marine Safety Advisory (MSA) 11/06[17] to Transport Canada, which requested that the Paris and Tokyo Memorandum of Understanding (MOU) secretariats be informed of the accident. It also requested that all vessels equipped with the type SRS-37 LRRS should be inspected, and that the ability of the crew to safely operate the release gear be verified accordingly.

Transport Canada advised the Paris and Tokyo MOU secretariats of MSA11/06 and both secretariats informed their members accordingly.

In April 2007, Class NK issued notice TEC-0964 **(Annex B)** advising its clients about the Sea Urchin accident and of safety guidance issued by Shigi for the LRRS SRS-37. A copy of the notice does not appear to have been placed on board *Nagato Reefer*.

[17] http://fin.nepia.com/modules/assetlibrary/z_extra/getAsset.php?type=file&id=495

SECTION 2 - ANALYSIS

2.1 AIM

The purpose of the analysis is to determine the contributory causes and circumstances of the accident as a basis for making recommendations to prevent similar accidents occurring in the future.

2.2 THE ACCIDENT

The accident occurred when the forward end of *Nagato Reefer*'s port lifeboat fell from the davit as a result of the hook release gear not having been correctly reset when the lifeboat was hoisted from the water following an abandon ship drill. It was fortunate that the bosun was not seriously injured when he was struck by the falling boat.

The crew had not been trained in, and were not familiar with, the operation of the hook release gear. This, together with a breakdown in communications between crew members, led to the forward FPD shackle pin being released when the hook had not been correctly reset. There was also evidence that the LRRS on both of *Nagato Reefer*'s lifeboats had not been effectively maintained for some time.

The fact that the poor competence, maintenance and communications that led to this accident only came to light as a result of a PSC inspection demonstrates the value of the PSC regime.

2.3 LIFEBOAT RELEASE AND RETRIEVAL SYSTEM

Nagato Reefer's LRRS and lifeboats were probably serviceable and compliant with the relevant regulations following the annual inspection and service in October 2013. However, despite records to the contrary, in the 6 months before the accident the boats had not been lowered into the water and scheduled maintenance had not been undertaken.

2.3.1 Resetting Shigi SRS-37 type LRRS

The SRS-37 type LRRS was not reset correctly when *Nagato Reefer*'s port lifeboat was recovered from the dock, following an abandon ship drill. Evidence indicates that none of the vessel's crew were practised in using the LRRS and their understanding of the system's operation was weak.

TSB Canada had identified during its investigation of the *Sea Urchin* accident (Section 1.14.3) that improper resetting of the SRS-37 type LRRS could result in the hook mechanism opening inadvertently. Although appropriate guidance was issued to the Paris and Tokyo MOU members, and by Class NK to its clients, there was no evidence that the crew on board *Nagato Reefer* had been informed of this.

2.3.2 Use of fall preventer devices

The lifeboats on *Nagato Reefer* and *Sea Urchin* were both fitted with the Shigi SRS-37 LRRS. In both cases, the vessels' crews had used inappropriate force to reset the hooks prior to retrieval. Additionally, similar wear patterns on the face of the hook lock pieces on both lifeboats indicated that the hooks had been incorrectly reset on a number of occasions prior to each accident.

The significant difference between the two accidents is that FPDs were fitted on *Nagato Reefer* for the retrieval of the boat. There is little doubt that the requirement to fit FPDs, introduced by the IMO in 2009, prevented a potentially more serious outcome on this occasion.

In 2012 the manufacturer modified the design of the SRS-37, which it estimated was still fitted on more than 100 vessels at the time of the accident, to meet the revised requirements of SOLAS Regulation III/1.5. This unit, model SRS-37M, must be fitted by the first scheduled dry docking after 1 July 2014, but not later than 1 July 2019.

The modified unit is SOLAS compliant, but its safe operation will depend on appropriate maintenance and type specific crew training. Therefore, if the use of FPDs ceases when modified LRRSs are fitted to vessels, without appropriate maintenance and training being undertaken, these systems could be rendered more dangerous than is currently the case.

2.3.3 Use of fall preventer devices on passage

The FPD manual held on board the vessel stated that the FPDs should only be used during lifeboat drills and maintenance, and not when the vessel was on passage. It is clear that this requirement is in place to ensure that the lifeboat is ready to be deployed in an emergency whenever the vessel is at sea.

When MAIB inspectors visited the vessel on 20 April 2014 it was noted that the FPDs were in place on the starboard lifeboat. The vessel's manager had endorsed the decision to leave these in place at all times despite this lifeboat having been tested and still being considered a part of the vessel's statutory life-saving appliances.

The fact that the vessel's manager, Kyokuyo, endorsed the fitting of FPDs while the vessel was on passage, rendering the lifeboat inoperable in an emergency, is contrary to IMO and its own SMS requirements. It also demonstrates that the lack of understanding of LRRSs on board was symptomatic of widespread ignorance regarding their correct use throughout the company.

2.4 SAFETY MANAGEMENT SYSTEM

During the MAIB investigation it became apparent that application of Kyokuyo's safety management system was very weak and that, in general, there was a poor culture of safety at all levels. This situation was particularly manifest in the following areas:

2.4.1 Crew communications

The PSCO noted during the fire drill that communications between the bridge and the fire party were not in English, the working language of the vessel. However, the poor communication evident on board was not purely a result of the language in use.

The fact that the crew in the lifeboat were praying while the boat was being retrieved is indicative of their lack of trust in the security of the hook release gear. However, not one of them felt able to challenge the chief officer who was in charge of the boat.

Furthermore, the instruction from the chief officer to release the FPDs immediately prior to the accident was contrary to the instruction from the bosun that these were not to be released until he had secured the gripes. Again, the chief officer was not challenged even though the bosun was in a dangerous location when the FPD was released.

Operational safety on vessels relies on the crew working together to make the best use of the resources available. In order to achieve this, all crew members must be sufficiently empowered and encouraged to assist in the decision-making process whenever the need for them to do so arises.

2.4.2 Crew training and drills

The lack of competence displayed by the crew when required to carry out emergency drills as part of the PSC inspection was also evident when additional fire-fighting training was provided to them following the accident.

Some of the crew had been on board *Nagato Reefer* for 19 months, and the documentation provided to the vessel regarding the operation of the LRRS was sufficient to form the basis of a crew training programme in the safe operation of the lifeboats and their release gear. Despite this, no training had taken place and the investigation found that the training records on board had been falsified to indicate otherwise.

It is essential for the safe operation of any vessel that its crew is competent in the use of the life-saving and fire-fighting appliances on board. The MAIB Safety Study of Lifeboat Launching Systems found that the safe operation of LRRSs can only be achieved through crew training in the specific gear fitted on their vessels.

The repeated failure to undertake effective emergency drills, the fabrication of records, and the decision not to undertake further crew training before the vessel sailed, despite adverse comments regarding the crew's performance at drills, demonstrates the exceptionally poor safety culture on board *Nagato Reefer* and within its shore management structure.

2.4.3 Safety committee meetings

Onboard records indicated that *Nagato Reefer*'s safety committee met on 19 April 2014 and again on 17 May 2014. The minutes of both meetings were noted to be very similar and contained no reference to the lifeboat accident that had occurred on 9 April 2014.

It is remarkable that a serious accident that had occurred on board just 10 days before the first meeting was not recorded as having been considered by the vessel's safety committee, particularly as the bosun, who had been injured, was an attendee.

The minutes of the safety committee meeting gave the impression that the meetings were formulaic and did not provide the crew with the opportunity for an open and frank consideration of the vessel's safety regime. Given that other important records on board had been fabricated or falsified, it is also possible that these meetings were never actually held.

Analysis of shipboard accidents and near misses by a vessel's safety committee is an essential element of an effective safety management system.

The fact that Kyokuyo received these minutes but did not comment on the absence of any reference to the accident, despite the ongoing safety review, is yet another indication of the very poor safety culture within the company.

2.4.4 Maintenance inspections

Comprehensive maintenance schedules for the lifeboats and the LRRS had been incorporated into the vessel's SMS. The crew were required to inspect the release gear on a monthly basis; this included a requirement to check the "*status of the reset*" and "*that there was no dirt or foreign matter on the moving part*" [sic].

The vessel's maintenance records indicated that the release gear had been checked and was in "*good*" condition just a few weeks before the accident.

In reality, the moving parts of the hook release mechanism on the port lifeboat had been painted and were dirty, and the reset indicator had been painted over. Additionally, the release gear cables were found seized and damaged when inspected after the accident. The release gear on the starboard lifeboat was in a similarly poor condition, requiring an hour of effort to free it during the drill held on 12 April, 3 days after the accident.

It is apparent, despite records to the contrary, that no maintenance or inspections of the LRRS had been carried out since the annual inspection and service in October 2013.

2.4.5 Management Company's review of accident

A safety review was carried out by Kyokuyo Co Ltd in accordance with the CAP issued by Class NK following its ISM audit. The findings of this review were sent to vessels in its managed fleet. These further demonstrate Kyokuyo's minimalist approach to its safety management responsibilities:

- The crew's lack of knowledge of fire-fighting and life-saving appliances was identified but no instructions or guidance were given as to how these failings were to be addressed.

- Despite recognising the failure of the company in not identifying the lack of drills and training from the vessel's SMS reports, no corrective action was suggested.

- The statement "*we would hope crews to learn more your own ship and life safety*

*boarding with highly own interesting to protect yourself and the company"[*sic] suggests that the company's primary concern was for the reputational damage caused by accidents.

- The safety notice identified root causes, but no corrective action was suggested. The responsibility for ensuring a vessel has a robust safety management system rests with the vessel's owner/manager as well as the crew. Having identified shortcomings in the crew's emergency preparedness training, the management company did not review its procedures or produce an action plan to improve standards of emergency preparedness on its vessels.

2.5 POST-ACCIDENT INTERFERENCE WITH ACCIDENT SITE

When MAIB inspectors attended *Nagato Reefer* it became evident that the forward hook on the port lifeboat had been closed following the accident. This apparent attempt to tamper with important evidence led to a delay in identifying the circumstances of the accident, while other possible modes of failure were explored.

Regulation 10 of the Merchant Shipping (Accident Reporting and Investigation) Regulations 2012[18] states that after an accident the master or ship's owner must ensure that any equipment which might reasonably be considered pertinent to the investigation of the accident is, so far as is practicable, left undisturbed.

To ensure that robust and reliable safety investigations are carried out, it is important that crews are aware of the requirement not to interfere with accident sites. It was not possible to identify who closed the forward release hook, so their motivation for doing so could not be determined. However, the failure to secure the accident scene after the event is further evidence that safety management on board *Nagato Reefer* was inadequate.

[18] http://www.legislation.gov.uk/uksi/2012/1743/made

SECTION 3 - CONCLUSIONS

3.1 SAFETY ISSUES DIRECTLY CONTRIBUTING TO THE ACCIDENT THAT HAVE BEEN ADDRESSED OR RESULTED IN RECOMMENDATIONS

1. The accident followed a breakdown in communications between the crew who were not empowered to challenge orders or to participate in the decision making process on board. [2.2], [2.4.1]

2. The vessel's safety management system was poorly implemented, the crew had not been adequately trained and were not familiar with the operation of safety equipment on board. [2.2], [2.4.2]

3. There was evidence of paint and dirt on the hook assembly of the lifeboat release and retrieval system, which affected its operation. [2.4.4]

4. Despite records to the contrary, it was apparent that no maintenance or inspections of the LRRS had been carried out since the annual inspection and service in October 2013. [2.4.4]

3.2 SAFETY ISSUES NOT DIRECTLY CONTRIBUTING TO THE ACCIDENT THAT HAVE BEEN ADDRESSED OR RESULTED IN RECOMMENDATIONS

1. On the advice of the management company, the FPDs were fitted to the starboard lifeboat while the vessel was on passage, demonstrating a systemic lack of understanding of the correct use of the device. [2.3.3]

2. The crew's performance at the fire drill was indicative of the poor level of crew training and the failure to undertake the requisite SOLAS emergency drills on the vessel. [2.4.2]

3. The vessel's safety committee met after the accident but recorded that there had been no accidents or near misses on board. [2.4.3]

4. The manager's review of the accident identified shortcomings in the crew's emergency preparedness training but did not produce an action plan to improve emergency response standards on its vessels. [2.4.5]

5. The lifeboat hook had been moved following the accident, before the accident investigators attended the scene. [2.5].

3.3 OTHER SAFETY ISSUES NOT DIRECTLY CONTRIBUTING TO THE ACCIDENT[19]

1. Shigi estimates that more than 100 vessels have lifeboats which are fitted with the SRS-37 release gear. Owners/managers should ensure that the crews of these vessels have received specific training in the operation of this type of on-load release gear. [2.3.2]

2. Phasing out the use of FPDs when modified LRRSs are fitted to vessels in line with the IMO requirements, may render these systems more dangerous unless owners/managers ensure that appropriate maintenance and type specific training takes place. [2.3.2]

[19] These safety issues identify lessons to be learned. They do not merit a safety recommendation based on this investigation alone. However, they may be used for analysing trends in marine accidents or in support of a future safety recommendation

SECTION 4 - ACTION TAKEN

4.1 KYOKUYO COMPANY LIMITED

The Kyokuyo Company Limited has:

- Issued a safety notice on 29 May 2014 to the masters of vessels in its managed fleet informing them of the circumstances of the accident.
- Identified that the release gear had malfunctioned.
- Identified that the crew did not have enough knowledge of the operation of the release gear.

SECTION 5 - RECOMMENDATIONS

Kyokuyo Company Limited is recommended to:

2015/124 At the highest management level, take urgent action to devise and implement a plan designed to realise a substantial improvement in the safety culture throughout its fleet and shore-based management. Such a plan should ensure, inter alia:

- Its vessels' crews are properly trained in onboard emergency response, and specifically the correct operation of the lifeboats and their associated launching and recovery systems.
- That all its vessels' logs and records provide a true reflection of activities conducted.
- That all accidents and incidents are accurately recorded; the findings of investigations are reviewed at the relevant level; and appropriate actions are taken to help prevent a recurrence.

Safety recommendations shall in no case create a presumption of blame or liability

Marine Accident Report

INVESTORS IN PEOPLE