Report on the investigation of

the fatal accident to person on board

Thomson Celebration

Tender 15

at anchor - St Peter Port, Guernsey, Channel Islands

26 September 2006

MAIB

Marine Accident Investigation Branch
First Floor
Carlton House
Carlton Place
Southampton
United Kingdom
SO15 2DZ

States of Guernsey Public
Services Department
St Charles Frossard House
La Charroterie
St Peter Port
Guernsey
Channel Islands
GY1 1FH

Directorate of Shipping &
Maritime Affairs
Fokkerweg
26 Curacao
Netherlands Antilles

Report No 11/2007
June 2007

This investigation was carried out by MAIB (on behalf of the States of Guernsey) and in conjunction with the Directorate of Shipping & Maritime Affairs of the Netherlands Antilles. The MAIB has taken the lead role pursuant to the IMO Code for the Investigation of Marine Casualties and Incidents (Resolution A.849(20)).

Extract from

The United Kingdom Merchant Shipping

(Accident Reporting and Investigation)

Regulations 2005 – Regulation 5:

"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."

NOTE

This report is not written with litigation in mind and, pursuant to Regulation 13(9) of the Merchant Shipping (Accident Reporting and Investigation) Regulations 2005, shall be inadmissible in any judicial proceedings whose purpose, or one of whose purposes is to attribute or apportion liability or blame.

Further printed copies can be obtained via our postal address, or alternatively by:
Email: maib@dft.gsi.gov.uk
Tel: 023 8039 5500
Fax: 023 8023 2459
All reports can also be found at our website:
www.maib.gov.uk

CONTENTS

Page

GLOSSARY OF ABBREVIATIONS AND ACRONYMS

SYNOPSIS 1

SECTION 1 - FACTUAL INFORMATION 3

1.1 Particulars of *Thomson Celebration* and accident 3
1.2 Background information 4
1.2.1 St Peter Port 4
1.2.2 *Thomson Celebration* 5
1.3 Narrative 6
1.4 The use of lifeboats as passenger tenders 8
1.5 Relevent documentation 11
1.5.1 Safety Management System (SMS) - general 11
1.5.2 Documents applicable to tender operations 11
1.5.3 Training system 11
1.6 The crew of *Tender 15* 12
1.7 Environmental conditions 12

SECTION 2 - ANALYSIS 13

2.1 Aim 13
2.2 Similar accidents 13
2.3 The circumstances of the accident 14
2.4 Training and experience of the coxswain and crew 14
2.5 Supervision of the tender's recovery 15
2.6 The maintenance of passenger tenders 16
2.7 The designed location of the tenders 18
2.8 Communications 19
2.8.1 Pre-arrival briefing 19
2.8.2 Communications: ship to tender 19
2.8.3 Communications between the crew in *Tender 15* 19
2.8.4 Communications: ship to port 19
2.9 International standards covering the use of lifeboats as tenders 20
2.10 Safety Management System 20
2.10.1 Control of documents 20
2.11 Fatigue 20

SECTION 3 - CONCLUSIONS 21

3.1 Safety issues directly contributing to the accident which have resulted in recommendations 21
3.2 Other safety issues identified during the investigation also leading to recommendations 21
3.3 Safety issues identified during the investigation which have not resulted in recommendations but have been addressed 21

SECTION 4 - ACTION TAKEN 23

4.1 By Columbia Shipmanagement Ltd 23
4.1.1 Safety officer 23
4.1.2 Training 23
4.1.3 Safety Management System 23
4.2 By Guernsey Harbourmaster 23
4.3 By MAIB 23
4.4 Action in progress by ICCL and CLIA 23

SECTION 5 - RECOMMENDATIONS 24

GLOSSARY OF ABBREVIATIONS AND ACRONYMS

AB	-	Able Bodied seaman
CLIA	-	Cruise Lines International Association
IACS	-	International Association of Classification Societies
ICCL	-	International Council of Cruise Lines
IMO	-	International Maritime Organization
ISM Code	-	International Management Code for the Safe Operation of Ships and for Pollution Prevention
LR	-	Lloyd's Register
MCA	-	Maritime and Coastguard Agency
PMS	-	Planned Maintenance System
PO	-	Petty Officer
PSSC	-	Passenger Ship Safety Certificate
SMS	-	Safety Management System
SOLAS	-	International Convention for the Safety of Life at Sea
STCW	-	International Convention on Standards of Training, Certification and Watchkeeping incorporating the 1995 Amendments
UTC	-	Universal co-ordinated time
VHF	-	Very High Frequency

SYNOPSIS

On the afternoon of 26 September 2006, the passenger vessel *Thomson Celebration* prepared to depart from St Peter Port, Guernsey. All passengers had been confirmed on board and the passenger tenders were recalled for recovery. When *Tender 15* was being positioned under its falls, close to the side of the ship, the 1.5 knot tide affected the manoeuvre and the coxswain lost full control of the boat. The tender was carried astern and against the ship's side. A crew member had left his station at *Tender 15*'s stern to try to prevent the davit hook from damaging the tender. He moved between the coach house and the ship's side and became trapped. He received fatal crush injuries to his upper chest.

The onboard training given to *Thomson Celebration'*s passenger tender crews only covered the approach to the ship's side in fine conditions; it did not include handling the tenders in tidal stream conditions. Additionally, there had been problems with hydraulic oil loss from the steering system of *Tender 15,* which might have adversely affected the efficiency of the steering.

Thomson Celebration carried 16 lifeboats, 4 of which were designated as lifeboat/passenger tenders. These craft complied with international lifeboat regulations; they also met further requirements issued by the vessel's classification society on behalf of the Flag State. The passenger tenders on *Thomson Celebration* were larger, faster and more manoeuvrable than the vessel's other lifeboats and, when being operated as passenger tenders, could each carry a maximum of 80 passengers, at speeds of up to 12 knots.

The coxswain of *Tender 15* was an AB/quartermaster and was qualified to command it by virtue of his lifeboatman's certificate. A passenger tender coxswain is not required to meet further international competency standards, and no training criteria exist on which companies can base in-house tender drivers' courses. Nevertheless, the company had procedures in place for on board training and certification of coxswains, but these were not well implemented, monitored or verified. There is no evidence that the coxswain of *Tender 15* at the time of the accident had completed the company's in-house course, and he did not hold a company tender drivers' certificate.

The safety officer usually supervised the launching and recovery of the tenders. However, at the time of the accident, there was no safety officer on board the vessel; his duties had been re-assigned to the chief officer who, at the time of the accident, was on the forecastle preparing to heave up the anchor. This effectively left supervision of the recovery of the tenders to the bosun, who had been promoted to that rank only 6 days previously, although he had been bosun on other vessels, including vessels under Columbia Ship Management control.

There are no international standards for the operation of lifeboats as passenger tenders. However, classification societies provide and administer guidelines on an 'ad hoc' basis.

The MAIB investigation into the accident identified safety issues relating to *Thomson Celebration'*s safety management system. These include:

- Inadequate shipboard supervision of the tender operations;
- Manning levels on passenger tenders not in accordance with levels specified in the ship's SMS;
- Inconsistent application of the in-house passenger tender training scheme.

Recommendations have been made to:

Lloyd's Register of Shipping to:

- Develop within IACS agreed standards for the issuing of lifeboat/passenger tender certificates.

The Maritime and Coastguard Agency to:

- Take forward to IMO, through the most appropriate channels, competency requirements for passenger ship lifeboat/tender coxswains and crew for inclusion in a revision of STCW.

Columbia Ship Management:

- Concerning unauthorised maintenance being carried out on passenger tenders.

SECTION 1 - FACTUAL INFORMATION

1.1 PARTICULARS OF *THOMSON CELEBRATION* AND ACCIDENT

Vessel details

Registered Owner	:	Holland America Line
Registered Operator	:	Columbia Shipmanagement Ltd
Port of registry	:	Philipsburg
Flag	:	Netherland Antilles
Type	:	Passenger Cruise Ship
Built	:	1984 Chantiers de l'Atlantique, St Nazaire, France
Classification society	:	Lloyd's Register (LR)
Construction	:	Steel
Length overall	:	214.65m
Gross tonnage	:	33,933
Engine power and/or type	:	2 x Sulzer 7RLB66. Each 11,353kW (15,435 hp) at 140 rpm
Service speed	:	21 knots
Other relevant info	:	16 lifeboats, 4 of which were designated as lifeboat / passenger tenders

Tender details

Maker	:	Mulder & Rijke
Type	:	"SPURT 48" Twin propeller and rudders
Capacity	:	100 persons
Construction	:	Glass Reinforced Plastic
Length Breadth Depth	:	14.60 x 4.25 x 1.87 metres
Gross weight	:	20,800kg
Engine power and/or type	:	Twin VOLVO PENTA 147kW / 200 hp @ 3,800rpm
Service speed	:	Greater than 6 knots
Trial Speed		19.60 knots (2 engines and 5 persons) 12.95 knots (1 engine and 7 persons)
Other relevant info	:	Classed as part of the lifesaving equipment.

Accident details

Time and date	:	1715 (UTC +1) on 26 September 2006
Location of accident	:	St Peter Port, Guernsey. Anchored 0.6 cable north east of Castle Breakwater
Persons on board	:	5
Injuries/fatalities	:	One fatality
Damage	:	Superficial damage to paintwork.

1.2 BACKGROUND INFORMATION

1.2.1 St Peter Port (Figure 1)

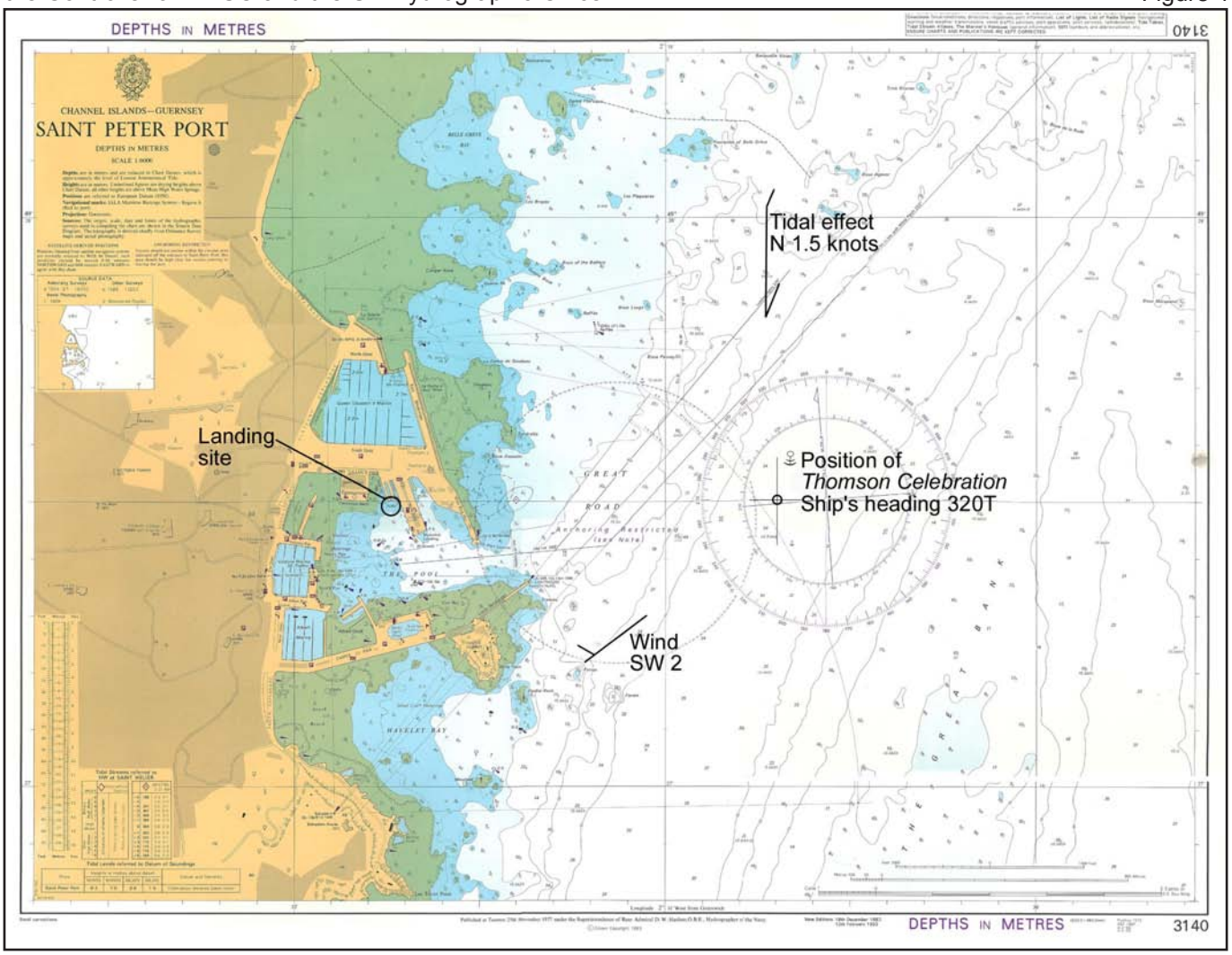
St Peter Port is the main passenger port for Guernsey. The number of passenger cruise vessels calling at the port is increasing, with 79 vessels visiting in 2006 compared with 68 in 2005.

Further rises in traffic calling at St Peter Port are expected, and port development is continually under review to accommodate the port's increasing popularity with cruise operators.

The majority of the passenger vessels calling at St Peter Port are too large to berth alongside, therefore a substantial number of passengers are transported to and from the shore by ships' lifeboats operating as passenger tenders.

The weather conditions at the anchorage are generally good, but this area experiences strong tidal currents.

Figure 1



1.2.2 *Thomson Celebration* (Figure 2)

Thomson Celebration was built in 1984 at the Chantiers de l'Atlantique St Nazaire yard for Holland America Line. On delivery she was named *Noordam*, and was operated by Holland America until 2004, when she was bareboat chartered to Thomson Cruises. She had a capacity for 1,378 passengers and 520 crew. The crew are multinational but the officers and crew in the deck department are Filipino, with European senior officers.

Columbia Shipmanagement became the technical managers of *Thomson Celebration* in November 2004 on behalf of Thomson Cruises and, after a 5-month refit, she re-entered service cruising in the Mediterranean, Red Sea and European areas.

The 2006 summer cruising season was centred around Northern Europe, with port calls as far south as Gibraltar, and as far north as the Norwegian fjords. At the time of the accident, *Thomson Celebration* was at the end of a 7-day cruise out of Southampton covering the north west coasts of Spain and France. St Peter Port was the last port of call prior to her return to Southampton.

Figure 2

Thomson Celebration

1.3 NARRATIVE

Thomson Celebration ended passage at St Peter Port at 0624 hours on 26 September 2006. As is not unusual at this port, she was too large to berth directly alongside, and was required to anchor. The anchor position selected was 6 cables north east of Castle Breakwater.

Anchoring operations started at 0650, with the chief officer supervising the operation on the forecastle. The anchoring was completed at 0730 and the engines were placed on stand-by at 10 minutes notice for the port stay.

Because the passengers were to be taken ashore using the ship's passenger tenders, the transfer pontoon was rigged on the port side of the vessel.

Tender operations commenced soon after *Thomson Celebration* had been anchored. Three of the vessel's four tenders were launched and then used to transport the passengers. The fourth tender was out of service with a mechanical fault on one of its two engines. After the tenders were clear of the ship's side, the davit fall blocks were left hanging close to the water **(Figure 3)**.

Photograph courtesy of Guernsey Police Figure 3

Davit fall blocks

At midday, when the coxswain of *Tender 15* was relieved, he told the incoming driver that the tender's steering had felt loose and that he had topped up the steering hydraulic oil during the morning. He also pointed out that the tender's rudder angle indicator was inoperative. After the handover, the incoming driver also topped up the oil using oil from a plastic bottle kept on board the tender for this task. This emptied the container, so a request was made to the bridge for more hydraulic oil.

Tender operations continued throughout the afternoon, without incident, and at 1600 preparations for departure began on board.

At this time, the driver of *Tender 15* noticed the tidal effect had increased, but he did not report this to the bridge. At around 1700, the staff captain was on the bridge and informed the coxswain of *Tender 13*, on the working VHF channel, that there was some increase in the tidal effect. This message was not directed specifically to the ship's other two tenders, although it was expected that they would hear it.

At 1700, all passengers had returned to *Thomson Celebration* and the recovery of the tenders began. At 1710 the last tender, *Tender 15,* was instructed to collect the ship's security party and security equipment from the shore base, and then return directly to the davits for recovery.

The approach to the davits was conducted in the routine manner, but failed to make any allowance for the effect of tide. As the tender moved closer to the ship, the tide set the tender in towards the ship's side and the crew member on the bow signalled to the coxswain to abort the approach and back off.

As the coxswain put the engines astern, the tender was carried aft and toward the ship's side. As the after hook had been left near the water level it passed down the coach housing, between tender and ship's side. The AB stationed at the stern noticed this and moved towards the block, intending to walk it clear of the coach house windows to prevent damage. He did this without advising the coxswain of his intentions, and the coxswain, who was concentrating on trying to manoeuvre the tender clear of the falls, was unaware that one of his crew was now in a position of danger.

There were no communications or advice passed to the tender from the recovery team on deck, or from the bridge team, who were supposed to be monitoring the recovery.

As the AB walked down the side of the tender, he placed himself between the tender's coach house and the ship's side. The tender was then set onto and hard against the ship. The AB was trapped and sustained severe crush injuries to his chest, but as the tender rebounded off the ship's side he managed to stagger into the passenger area of the tender, where he collapsed.

The security officer immediately informed the bridge that there had been a serious injury to the AB on *Tender 15*. The tender driver was instructed to take *Tender 15* to the boarding pontoon. The staff captain broadcast "Code Alpha", which is used to indicate a medical emergency, and the ship's doctor was contacted and told to go to the pontoon to meet the tender. The doctor went on board the tender as soon as it was alongside, and she attempted to stabilise the condition of the AB.

At this time, the coxswain of *Tender 15* advised the bridge that the steering had felt loose during the approach to the hooks, and that he needed to top up the system with more oil. The deck fitter was summoned to the pontoon and he brought more oil with him. The steering system was topped up while the tender was at the pontoon and at the same time as emergency treatment was given to the AB.

The master was called to the bridge and told of the accident. He then used his mobile phone to contact the ship's agent. He informed the agent about the emergency on board and asked for the emergency services to be contacted. Although the master

had been informed that St Peter Port port authority operated on VHF channel 12, he did not inform them of the accident. The port authority remained unaware of it until the pilot boarded the vessel at 1730.

After the ship's doctor had completed an initial examination of the AB, she called the bridge and told the master that the patient needed urgent medical attention ashore and could not be moved from the tender. At 1738, *Tender 15* was used to transport the AB, accompanied by the doctor, to the shore - arriving at 1746. An ambulance was waiting on the jetty and the AB was taken directly to hospital under a police escort. However, despite efforts to revive him, the AB was pronounced dead at 1825.

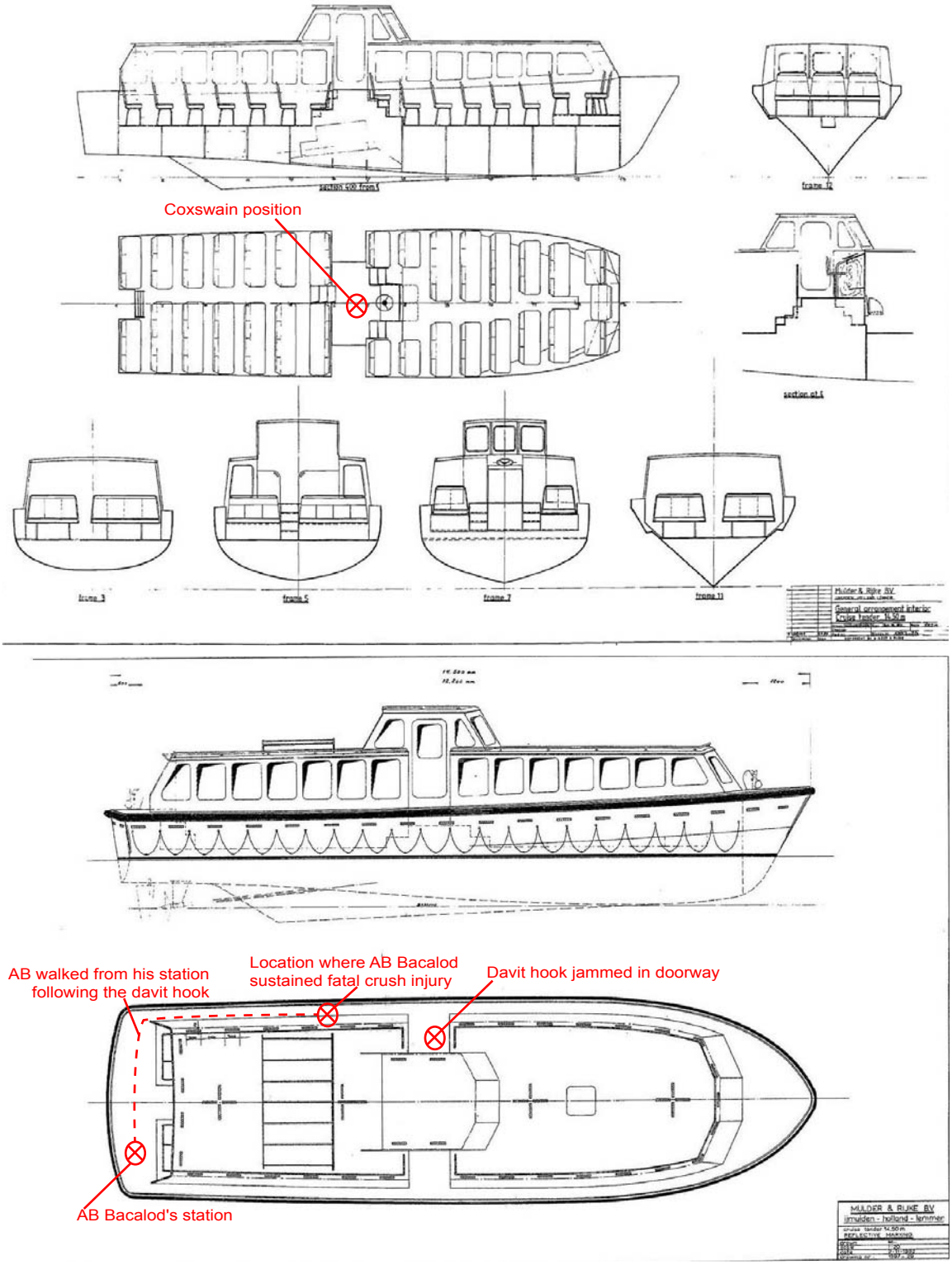
1.4 THE USE OF LIFEBOATS AS PASSENGER TENDERS (Figure 4)

Passenger tenders, together with their launching and recovery systems, are designed to comply with the requirements for operation as a lifeboat, and are considered to be part of the vessel's lifesaving equipment. Passenger tenders are listed on the Safety Equipment Certificate.

Thomson Celebration had 16 lifeboats. *Tender 15*, the aftermost boat on the starboard side, was one of four that were also designated as passenger tenders **(Figure 5)**. The design of the launching and recovery equipment for the passenger tenders was the same as for the conventional lifeboats. However, this equipment had been strengthened to take into account the greater weight of the passenger tenders and fitted with mechanical lowering capability **(Figure 6)**. The tenders were equipped with twin inboard engines and twin rudders; this made them fast and very manoeuvrable.

Figure 4

Thomson Celebration - Passenger Tender



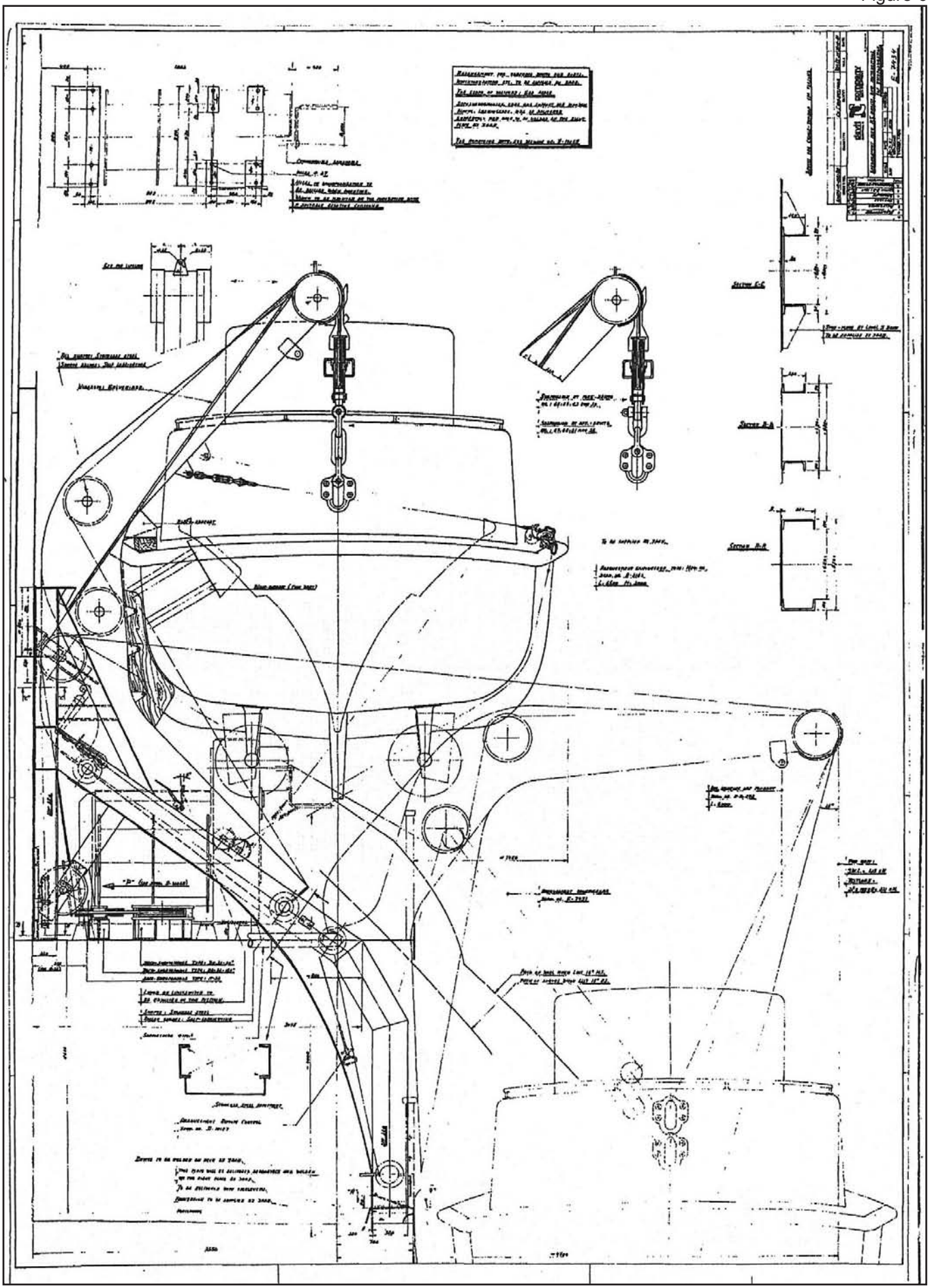
Seating plans of Passenger Tender on *Thomson Celebration*

Boat No.	Type and NSI Number	No. of persons	Dimensions (m.)	Cub.capacity (cu.m)	Weight empty/full
15 (S.B.)	Tender SIY 3/83	100	14.50 * 4.05 * 1.87 m	28.30 m³	20300 kg
Manufacturer and number			Material	Propulsion	Fuel tank
Mulder & Rijke Nr. 4341			G.R.P.	Motor	

Davit	Make/Type: Davit NT E 7434	S.W.L.: 105 kN
Winch	Make/Serial no.: Unelec KE 180 L04	S.W.L.: 160.37 kN
Falls	Wire size: 29.4/30.9 mm Construction: 6*37 + 1 FMC	Length: 200 m Breaking load: 520 kN

Weights and dimensions of *Tender 15*

Figure 6



Davit launching arrangements for *Tender 15*

1.6 THE CREW OF *TENDER 15*

The usual operational practice on *Thomson Celebration* was for each tender to be manned by a coxswain and two crew throughout the operation, including during launching and recovery operations. This was less than the manning levels specified in *Thomson Celebration*'s SOLAS Training Manual for launching and recovery of tenders; this required two seamen to be placed at each end of the tender **(Annex 3)**.

At the time of the accident, the coxswain of *Tender 15* was an able seaman (AB) who was also a designated quartermaster for a navigational watch. It was his second contract on *Thomson Celebration.* He had rejoined as AB 6 months prior to the accident, and was assigned as a quartermaster 3 months prior to the accident.

The coxswain was aged 37 and held an STCW Deck Rating Support A-II/4 certificate. He also held survival craft proficiency and crowd control certificates. His relevant onboard training consisted of 5½ hours unspecified driver training conducted on 3 September 2005, but no records were available to show his participation in the company tender driving course, and he had no certificate as tender coxswain.

The deceased, Jay Bacolod, was an AB. He had been assigned to the aft station of *Tender 15* during the recovery operation, and it was his duty to watch and attach the aft lifting hook. It was also his second contract on *Thomson Celebration.* He had rejoined as AB on 27 May, 4 months prior to the accident.

Mr Bacolod was aged 38 and held an STCW Deck Rating Support A-II/4 certificate. He also held a survival craft proficiency certificate. His on board training had consisted of participation in the company's passenger tender driving course on 14 June 2005 and 20 December 2005, but he had not been issued with any certification as tender coxswain. The training had been undertaken during his previous contract of employment on board *Thomson Celebration*.

At the time of the accident, a deck cadet was manning the fore part of the boat whose task was to connect the tender's forward hook to the forward falls.

1.7 ENVIRONMENTAL CONDITIONS

At the time of the accident, it was a fine and calm afternoon. The wind was SW force 2 with a low, slight sea and swell. The tidal stream was quite strong, estimated by the pilot to have been about 1.5 knots from the north. Visibility was good.

Time of LW – 14:38 UTC Ht 2.0m

Time of HW – 20:33 UTC Ht 8.6m

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 SIMILAR ACCIDENTS

During the investigation, the MAIB database was searched for previous accidents involving passenger tenders. Information was also requested from other marine administrations.

While some marine administrations were unable to provide any information relating to this kind of accident, it was possible to identify 51 accidents, involving passenger tenders, which had occurred since 1991.

These accidents can be categorised as follows:

Type of Incident	Number
Collision	6
Grounding	5
Man overboard	6
Engine failure	5
Fires	4
Injuries during mooring	6
Trip/fall getting on/off the tender	9
Oil spill (all minor)	3
Release / recovery incident	7
TOTAL	**51**

The man overboard statistic includes one accident during tender recovery operations where a crew member was struck by the davit hook and then fell into the water.

One of the grounding incidents occurred due to a navigational error where the coxswain missed the entrance buoy and was caught in heavy surf outside the channel. The tender then ran onto a shallow reef. Another grounding occurred due to the coxswain becoming disoriented.

Four of the six reported collisions involved contact with stationary vessels.

The above statistics provide a snapshot which represents the accident record of only a small proportion of the world's passenger cruise vessels. Nevertheless, they indicate a need for improved safety in the area of cruise ship tender operations.

2.3 THE CIRCUMSTANCES OF THE ACCIDENT

The coxswain of *Tender 15* manoeuvred the boat towards the falls in the routine manner despite the fact that there was a 1.5 knot tidal stream running. It had been his intention to place the bow of *Tender 15* under the forward falls until the bowman could grab hold of them, and then to put the engines astern to bring the stern under the aft falls. The bow and stern crew members would then hook-on to the falls and the boat would be hoisted clear of the water. In the event, the tidal stream affected the planned manoeuvre and the coxswain failed to make a suitable approach to the forward falls. His ability to positively control the boat might also have been affected by the fault with the steering system. The coxswain was trying to abort the manoeuvre when the boat was set toward the ship's side. It appears that the crew member stationed at the stern saw that the after block and falls were likely to damage the coach house, so he moved in between the coach house and the ship's side to try and help control them. The coxswain was unaware that the crew member had moved into this position and could do nothing to avoid the accident as the tender landed alongside *Thomson Celebration*, crushing the crew member between the coach house and the ship's side where it began to cut away towards the transom. The factors that appear to have contributed to the accident are:

- The ability of the coxswain to handle the craft in the prevailing conditions.
- The lack of oversight and supervision of the tender recovery operation from on board *Thomson Celebration*.
- The inability of the passenger tender's crew to recognise the developing hazardous situation.
- The fault with the steering system affecting the response of the craft.
- The location of the falls near an area where the ship's side was cut away.
- The fact that the heavy blocks were hanging close to the water.
- Poor communications.

2.4 TRAINING AND EXPERIENCE OF THE COXSWAIN AND CREW

The passenger tenders on *Thomson Celebration* had been used 15 times since the beginning of 2006, and this was the fourth time passenger tender operations had been conducted in a 4 week period.

A review of the records held on board *Thomson Celebration* revealed that most of the ports where it had been necessary to deploy passenger tenders had been sheltered and not subjected to significant tidal streams. It was concluded from this that the coxswain of *Tender 15* would have had little or no experience of operating the tender in significant tidal conditions. The on board training given to the coxswain did not include sufficient instruction on how to manoeuvre the tenders in tidal conditions.

There are no agreed international standards for the training and certification of tender coxswains or crew, however, Lloyd's Register covered the subject to some extent in the society's own instructions to surveyors **(Annex 6)**. From these, it can be deduced that the generally accepted qualification required to be the coxswain of a passenger tender was either:

- a certificate of competency;
- a boatmaster's certificate (UK only); or
- a certificate as a lifeboatman.

The standards required to obtain these certificates vary greatly and, at the lowest level, it is permissible for lifeboats operating as passenger tenders with up to 150 passengers on board, and capable of high speeds, to be under the command of an AB with a lifeboatman's certificate. The basic training of coxswains is usually supplemented by in-house training but, as there are no formally agreed competency standards for this training, the conduct and content of the course is left to the company's discretion.

There was an in-house training program provided on *Thomson Celebration* **(Annex 5)**. The conduct of this was confused as there were no instructions or guidance provided on its implementation and monitoring in the company manuals.

The staff captain had overall responsibility for the training of coxswains, but had no training or experience as a tender coxswain himself. He delegated the practical running of the training courses to the junior deck officers. There is no indication that these officers were competent in the specific skills or knowledge to deliver these courses, neither did they possess any formal training qualifications.

The administration and format of the course was not being monitored effectively, and it had not been realised that the course syllabus was not being followed. The training programme had been reduced to a series of lectures that did not include any process which verified that the syllabus had been understood by the students. Practical demonstration of boat-handling was not formally monitored or assessed.

There was a requirement in the tender driver course for a certificate to be issued to successful candidates at the end of the course. However, as there were no defined methods of measuring if the required level of competence had been achieved, these certificates were not being issued.

At the time of the accident, Mr Bacolod had left his designated station at the stern of the tender because he saw that there was a possibility of the tender coachwork being struck by the after davit block. He moved between the coach house and the ship's side and was not aware of the danger this position placed him in. This appears to indicate a shortfall in his experience and training.

In general, the specific training that is given to a crew member nominated to be a coxswain of a passenger tender varies from company to company and ship to ship. Currently there is no industry-wide agreed competency standard, and the levels required are at the discretion of the relevant company and/or the ship's officers. However, the Cruise Lines International Association (CLIA) intends to issue guidance to its members on a minimum training standard **(Annex 7)**. Neither Columbia Shipmanagement Ltd nor Thomson Cruises are members of the CLIA.

2.5 SUPERVISION OF THE TENDER'S RECOVERY

On *Thomson Celebration,* it was normal practice for an officer to supervise the launching and recovery of passenger tenders; the safety officer was designated to this task in the SMS. However, the vessel's safety officer had been repatriated 4 days prior to the accident involving *Tender 15,* and his duties had been passed to the chief officer.

The chief officer was also required to attend either on the bridge or on the forecastle during anchoring operations. It had not been realised that the chief officer was unable to supervise both tasks if they were scheduled for the same time, and this left the operation of launching and recovery of the tenders under the supervision of the bosun.

It was the bosun's first time on *Thomson Celebration* although he had served as bosun on other vessels including those under the control of Columbia Ship Management. He joined this ship as an AB on 13 August and had been promoted to bosun 6 days prior to the accident.

Had the operation to recover *Tender 15* been under the supervision of the chief officer, as required by *Thomson Celebration*'s SMS, it is possible that the difficulties experienced by the coxswain, in manoeuvring to the falls in the tidal conditions, might have been detected at an early stage in the operation and advice given to the coxswain on how to cope with the conditions. Similarly, a warning might have been given to Mr Bacolod to remain in a position of safety as *Tender 15* was caught by the tide and pushed onto the ship's side.

In the ship's SOLAS Training Manual, under Launching and Recovery Procedures for Passenger Tenders **(Annex 3)**, it is stated that after the launch of the tender, the davit blocks should be raised about 3 metres (9.8 feet) clear of the water. On this occasion, the deck party was supervised by the bosun, and the hooks were left down near the water level **(Figure 3)**. Had the blocks been raised clear of the water, there would have been no reason for the crew member to leave his position at the aft end of the tender, and place himself in an area where there was a risk that he could become pinned against the ship's side.

2.6 THE MAINTENANCE OF PASSENGER TENDERS

There were no clearly stated limitations for the use of tenders either from an operational or a maintenance consideration.

Tender 15 remained in operation with an oil leak from the steering system that caused progressively poorer rudder response. Before the accident, the steering was reported to be 'loose' and required an excessive amount of turns for the rudder to respond. This was noted at the coxswain's handover, as was the fact that the rudder indicator was inoperative. The accepted procedure to inform *Thomson Celebration*'s bridge of any mechanical problems affecting the passenger tenders when in service, was not followed, and the bridge was therefore unaware of these problems.

Due to the loss of hydraulic oil in the steering system, it is possible that the coxswain was having problems applying full helm quickly, and this might have contributed to the tender's lack of manoeuvrability during the approach to the hooks.

The practice on *Thomson Celebration* was for routine maintenance on the passenger tenders to be conducted by the deck fitter. There were contradictory requirements within *Thomson Celebration*'s SMS on how such maintenance should be recorded.

Notwithstanding a company requirement to record routine maintenance performed on the passenger tenders, it had become routine practice for the fitter to discuss with the coxswains any problems that had been experienced during tender operations. Any defects were then rectified once the ship was at sea, but the work done was not recorded in the PMS. Thus an opportunity for senior ship's staff to be aware of developing or recurring mechanical problems affecting any passenger tender was lost. In one section it stated that all maintenance should be recorded in the planned maintenance system (PMS), in another section it stated that there was no need to record day to day routine maintenance.

The fitter did keep a personal work diary. In this diary there were entries referring to the

loss of oil from the *Tender 15* steering system. His records indicate that the initial fault finding traced the leak to a drain plug. After the accident, the piping system was fully

inspected and the leak was found to be at a weld. The size of the weld fracture had probably increased over time, leading to more oil loss and leading to the need for more frequent topping up of the system.

After the accident, the fitter developed his own solution to the oil loss by manufacturing and fitting a header tank in the tender wheelhouse. The officer responsible for the maintenance of the tenders was unaware of this modification **(Figures 7 and 8)**.

Figures 7 and 8

Controls, *Tender 15*

Controls, *Tender 15* - with oil header tank fitted

2.7 THE DESIGNED LOCATION OF THE TENDERS

On *Thomson Celebration*, the passenger tenders were the two aftermost lifeboats on either side. At this position, the hull at the waterline starts to curve under to meet the transom, with the curvature becoming more pronounced further aft. At the position the tender was in at the time of the accident, it was possible for the tender coach house to touch the ship's side before the tender's rubbing strake/fendering came into contact with the hull **(Figure 9)**.

If *Tender 15* had been located further forward, where there was no curvature of the hull at the waterline, it is probable that the accident would not have occurred. Given the frequent use made of passenger tenders on *Thomson Celebration*, manoeuvring of the boats to the falls during recovery operations would be significantly easier in such a position, especially in tidal conditions.

Figure 9

Photograph showing the curve of the ship's side at the position of the accident
(dotted parallel lines indicate the coach house will strike the vessel's hull before the tender's rubbing strake)

2.8 COMMUNICATIONS

2.8.1 Pre-arrival briefing

Prior to arrival at a tender port, the company SMS required a briefing to be held covering the operation **(Annex 2)**. Local conditions were to be discussed and the tender schedule agreed.

The practice on board was to hold an informal briefing at which only the coxswains assigned to the first watch attended. The local information in the briefing was expected to be passed to the relief coxswains as part of the handover. There is no record of this being done and it is probable that the handover did not include this information.

No records were kept of these briefings, and no tender schedules were produced. A document that was referred to as the schedule was made available during the investigation, but this was found to be a record of the history of the actual times the tenders were in operation, instead of a plan.

2.8.2 Communications: ship to tender

A requirement of the lifeboat / tender certificate was that there should be a fixed VHF radio telephone unit or hand-held portable VHF radio in the tender. The tender coxswains had no formal training or certification covering the use of VHF radio. Training in VHF procedures covered a basic level of understanding, with only a short section in the onboard training course providing a selection of phrases to be used. There was no training in proper terminology and procedures.

During the day, the VHF was used to pass operational messages from the bridge of *Thomson Celebration* to the passenger tenders. There were procedures in place to pass information to the tender crews when the weather conditions were changing or if the current / tidal stream was increasing. At 1700 a message was passed to *Tender 13* about an increase in the strength of the tidal stream. There was no system for positive confirmation that communications had been received and understood, and no response was expected from the other tenders when the message was passed to *Tender 13*. It was assumed that the other coxswains would hear the message because it was part of their duties to constantly monitor the VHF. The bridge team did not know for sure if the coxswain of *Tender 15* was aware of the increased tidal stream.

2.8.3 Communications between the crew in *Tender 15*

Communication between the crew of *Tender 15* was poor. They did not routinely inform each other of what they were doing. The coxswain did not advise the crew to remain in a safe area when he was having difficulty manoeuvring the tender near the falls, and the AB left his aft station and placed himself in a position of danger without informing the coxswain what he was intending to do.

The accident was not witnessed by the coxswain or the recovery party on the embarkation deck, although part of their duty was to closely monitor the operation.

2.8.4 Communications: ship to port

On arrival at St Peter Port, a master/pilot exchange of information took place, during which the pilot advised the master that the port working channel was channel 12. During the accident, no attempt was made to inform the port authority of the situation. The communications from the ship were directly to the ship's agent, and were conducted by mobile phone. The port authority was unaware of any accident on *Thomson Celebration* until the pilot reported it to them.

2.9 INTERNATIONAL STANDARDS COVERING THE USE OF LIFEBOATS AS TENDERS

There are no international standards related to the construction of lifeboats, or additional equipment they should carry when operating as passenger tenders, in excess to that specified for lifeboats. However, it has become a custom of the trade for specific passenger tender certificates to be issued by classification societies, each of which have developed their own rules.

These rules broadly cover extra equipment to be carried, operational restrictions on the distance passenger tenders may operate from the shore, and the total length of any passage from ship to shore. The content of the rules varies depending on the classification society issuing the certificate. Classification Societies and some flag administrations have also included guidance on the manning and operation of passenger tenders in their “Instructions to Surveyors”.

Some passenger tenders can carry 150 or more passengers at high speeds from open anchorages to remote destinations, and there appears to be a need for international standards covering the design, equipping and manning of these craft.

2.10 SAFETY MANAGEMENT SYSTEM

2.10.1 Control of documents

The information and guidance provided for ship’s staff on *Thomson Celebration,* concerning how to conduct tender operations was not clear, concise or controlled. There were three different sources of advice and instruction referring to tender operations, namely the fleet generic SMS manuals, the SOLAS Training Manual and additional ship specific instructions.

The SMS contained a broad description of how tender operations should be conducted, including who had the responsibility for different parts of the operation. The relevant parts of the SOLAS Training Manual concentrated only on the operation to launch and recover the tenders because it was recognised that they were larger than the other lifeboats and required enhanced procedures. The ship specific instructions included notes on the operation of the tenders, but largely from the point of view of the passengers and their care. Additionally there was another, uncontrolled document which detailed the Tender Drivers’ Training Course.

To some extent, the different sources of information complemented each other, but there were areas of both overlap and contradiction. For example, depending on the document being read, the command and control of the recovery operation should have been exercised by “the bridge”, “the Safety Officer” or the “Staff Captain” (in the event it was left to the newly promoted bosun). The SOLAS training manual clearly indicates that a crew of five was needed for recovery, but the practice developed on board was to use three, while the SMS manual indicates that no more than two are needed for this operation.

2.11 FATIGUE

The hours of work and rest for the officers and crew involved were inspected, and it was concluded that fatigue was not a factor in this accident.

SECTION 3 - CONCLUSIONS

3.1 SAFETY ISSUES DIRECTLY CONTRIBUTING TO THE ACCIDENT WHICH HAVE RESULTED IN RECOMMENDATIONS

- There are no internationally agreed standards for the training and certification of tender coxswains or crew. [2.4]

3.2 OTHER SAFETY ISSUES IDENTIFIED DURING THE INVESTIGATION ALSO LEADING TO RECOMMENDATIONS

- The number and type of previous accidents indicate that there is a need for improved safety in the area of cruise ship tender operations. [2.2]

- There are no international standards relating to the design and equipping of passenger tenders. Some tenders can carry 150 or more passengers at high speed to remote destinations, and there appears to be a need for such standards. [2.9]

- An unofficial system for the reporting and rectification of mechanical faults affecting the passenger tenders was in operation on *Thomson Celebration* which prevented senior ship's staff from becoming aware of developing or recurring mechanical problems. [2.6]

3.3 SAFETY ISSUES IDENTIFIED DURING THE INVESTIGATION WHICH HAVE NOT RESULTED IN RECOMMENDATIONS BUT HAVE BEEN ADDRESSED

- The seaman designated to look after hooking-on the after falls was crushed between the tender and the ship's side as he moved from his station to try and control the after block. [2.3]

- The coxswain of *Tender 15* had little or no experience of operating the tender in significant tidal conditions, and he had not been trained sufficiently. [2.4]

- The conduct of in-house training provided on board *Thomson Celebration* for tender drivers was confused and there were no instructions and guidance provided on its implementation and monitoring in the company safety manuals. [2.4]

- Despite it being a requirement of the tender coxswain's course, for a certificate to be issued on completion, this was not happening. [2.4]

- It was normal practice for a ship's officer to supervise the recovery of the tenders, but on this occasion it had been left to the bosun who had only been promoted 6 days previously. [2.5]

- The fact that the davit blocks had been left hanging near to the water, contrary to the instructions contained in the SOLAS Training Manual, was a significant factor in this accident. [2.5]

- The fact that the tender crew member put himself in a place of danger indicated a lack of safety awareness and a shortfall in his training and experience. [2.4]

- Given the frequent use made of passenger tenders on *Thomson Celebration*, manoeuvring of the boats to the falls during recovery operations would be significantly easier for the coxswains of the passenger tenders, especially in tidal conditions, if *Tender 15* had been located further forward. At this location there was no curvature of the hull at the waterline, and it is probable the accident would not have occurred. [2.7]

- The information contained in pre-arrival briefings appears not to have been passed on to subsequent relieving crews. [2.8.1]

- There was no system of positive confirmation in place to ensure that VHF safety communications from the ship to one tender were heard and understood by the coxswains of other tenders. [2.8.2]

- Communication between the crew of *Tender 15* was poor, and the coxswain was unaware that the seaman had moved from his station to a place of danger. [2.8.3]

- The Safety Management System on *Thomson Celebration,* in relation to tendering operations, was confusing and contradictory. [2.10]

SECTION 4 - ACTION TAKEN

4.1 BY COLUMBIA SHIPMANAGEMENT LTD

4.1.1 Safety officer

The safety officer has returned to the vessel. The importance of this officer has been stressed to the operations and crewing departments to prevent a recurrence of the situation where a vessel is sailing without a safety officer, even for short periods.

4.1.2 Training

Two qualified safety training officers were appointed to the vessel for a period of one month; the duty of the additional officer was solely to conduct refresher training of all tender coxswains and crews. After this period, the safety officers continued to work on a back to back basis on the same vessel.

The company is investigating the suitability of shore-based training courses that may be used for coxswain training leading to the issue of a formal certificate.

4.1.3 Safety Management System

A full review of the Safety Management System - Passenger Manual is in progress. This will include a revised tender driver training scheme, new tender operations procedures and revised procedures for launching and recovery.

The existence on board of multiple and/or uncontrolled versions of documents was acknowledged. During the revision, these documents will be either incorporated fully into the system or will be removed.

4.2 BY GUERNSEY HARBOURMASTER

The Guernsey Pilots provide vessels, on arrival, with a standard information sheet as part of the Master/Pilot exchange process. The Guernsey Harbour Authority has reviewed the pre-arrival and Master/Pilot information exchange process to make clearer statements regarding communication requirements.

4.3 BY MAIB

The MAIB has published a flyer containing a short account of this accident and the main lessons to be learned, to raise general awareness and to highlight, in particular, the need for proper training of tender crews.

4.4 ACTION IN PROGRESS BY ICCL AND CLIA

The International Council of Cruise Lines (ICCL) and the Cruise Lines International Association (CLIA), which together represent many of the larger international cruise operators, is intending to publish guidelines on the training and certification standards for passenger tender drivers in 2007 **(Annex 7)**.

SECTION 5 - RECOMMENDATIONS

2007/152 **Lloyd's Register of Shipping** is recommended to:

Propose and develop within IACS agreed standards for the issuing of lifeboat/passenger tender certificates.

2007/153 **The Maritime and Coastguard Agency (MCA)** is recommended to:

Recognising the need for additional training, to achieve a level of competence appropriate to operating large capacity passenger tenders, develop and take forward to IMO, through the most appropriate channels, competency requirements for passenger ship tender coxswains and crew.

2007/154 **Columbia Ship Management Ltd** is recommended to:

Put in place and enforce procedures that will prevent unauthorised maintenance being carried out on passenger tenders.

Marine Accident Investigation Branch
June 2007