

Report of an Investigation
of the flooding to the
engine room of the cargo vessel

mv Sonia

off Sandown Bay, Isle of Wight
on 1 September 1999

MAIB 1/4/165

Marine Accident Investigation Branch
First Floor, Carlton House
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Extract from
The Merchant Shipping
(Accident Reporting and Investigation)
Regulations 1999

The fundamental purpose of investigating an accident under these Regulations is to determine its circumstances and the causes with the aim of improving the safety of life at sea and the avoidance of accidents in the future. It is not the purpose to apportion liability, nor, except so far as is necessary to achieve the fundamental purpose, to apportion blame.

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GLOSSARY OF ABBREVIATIONS AND ACRONYMS

BST	-	British Summer Time
CAST	-	Coastguard Agreement on Salvage and Towage
CSM	-	Continuous Ship & Machinery Survey
gt	-	Gross tonnes
IACS	-	International Association of Classification Societies
LOF	-	Lloyd's Open Form
m	-	metres
MAFF	-	Ministry of Agriculture, Fisheries and Food
MAIB	-	Marine Accident Investigation Branch
MCA	-	Maritime & Coastguard Agency
MoD	-	Ministry of Defence
MRSC	-	Maritime Rescue Sub-Centre
PRS	-	Polish Classification Society
PSC	-	Port State Control
QHM	-	Queen's Harbour Master
SCOPIC	-	Special Compensation P&I Clause
SOLFIRE B	-	Solent Marine Emergency Plan
SOSREP	-	Secretary of State's Representative
UTC	-	Universal Co-ordinated Time
VTS	-	Vessel Traffic Services



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SYNOPSIS

On 1 September 1999 at 1718, the Solent Coastguard notified the Marine Accident Investigation Branch (MAIB) that the engine room of the cargo ship *Sonia* had flooded. Initially the situation was monitored, and the following day an MAIB inspector started an investigation.

Sonia was a 1968 built, 4,659gt, four hold, single screw general cargo vessel, with a crew of 15. She was registered in St Vincent and The Grenadines, and operated worldwide by the managers, Balthellas Chartering SA. She arrived alongside No 47 berth in Southampton docks on 27 August and started loading a bulk cargo of grain later that day. Loading was completed by 1955 on 31 August, and at 2240 the pilot boarded and *Sonia* left Southampton for Greece.

At about 0220 on 1 September, water was discovered flooding into the engine room from a hole beneath one of the main seawater inlet valves. At this time the vessel was about 6 miles south-east of Saint Catherine's Point, Isle of Wight. After an inspection by the chief engineer, and discussions with the master, she turned back and anchored in Sandown Bay to carry out repairs. Early attempts by the crew to use a collision mat to seal the inlet to the sea chest were unsuccessful, and the engine room continued to flood. At 1514, the coastguard became aware of the incident and the serious nature of the flooding. The emergency services were alerted and the condition of the vessel monitored. At 1600, the water level in the engine room caused all main electrical power to be lost.

Over the next few hours, both Portsmouth and Southampton port officials, together with the coastguards, attempted to assist the vessel. With the ship's operators initially reluctant to seek official help, the Maritime and Coastguard Agency (MCA) instigated the Intervention Powers in an effort to force the issue while the appointment of salvors remained under discussion. This resulted in an early appointment of salvors, with technical assistance and equipment being used. Once the water ingress had stabilised and the water level reduced to below the floor plates, the vessel was towed back to her berth in Southampton. There, a seal plate was welded in place and the remaining water pumped out of the engine room.

The cause of the water ingress was a corroded seawater pipe connecting the sea chest to a system isolating valve. This 7mm thick pipe wall had suffered galvanic corrosion adjacent to the isolating valve flange over two-thirds of the pipe circumference. This level of corrosion reflected some years of neglect and suggested that the required inspections and surveys on a 31 year old vessel were not as thorough as they should have been. Given her age and the extent of the water damage in the engine room, *Sonia* was subsequently scrapped.

There were no injuries to sea staff but the MoD salvage master suffered shock after falling into the sea.

Recommendations regarding updating and supplying information and technical guidance are made to the MCA, the ship's owners and The International Association of Classification Societies (IACS).

SECTION 1 - FACTUAL INFORMATION

1.1 PARTICULARS OF VESSEL (Photographs 1 and 2)

Name	:	<i>Sonia</i>
Official No	:	7928
Port of Registry	:	Kingston, St Vincent
Gross Tonnage	:	4659
Nett Tonnage	:	2295
Overall Length	:	111.60m
Breadth	:	16.70m
Maximum Draught	:	6.79m
Year and place of Build	:	1968 Soviet Union
Type	:	General cargo vessel
Main Engines	:	B&W 2SA 9DKPH 50/110 3825Kw @ 110 rpm
Generators	:	3 off
Owners	:	Gleam Maritime SA Monrovia, Liberia
Managers	:	Balthellas Chartering SA 10 Amfitheas Ave 175-64 P.Faliro, Athens Greece
Class	:	Polish Register
Date and Time	:	1 September 1999, 0520 BST
Place of Incident	:	Off Sandown Bay, Isle of Wight
Injuries	:	None
Damage	:	Flooding of engine room, loss of all propulsive and electrical power

Photograph 1



General view of vessel alongside at Southampton after salvage

Photograph 2



General view forward from bridge

1.2 BACKGROUND (all times UTC)

Sonia was a 1968 Russian built, four hold, four crane, general cargo vessel, manned by a crew of 15. She was ice strengthened and propelled by a single slow-speed marine diesel. Three diesel generators supplied electrical power. She was purchased by Gleam Maritime SA of Monrovia, Liberia on 10 July 1998. During the period 22 September to 5 November 1998, she underwent survey and maintenance in Piraeus, Greece, including a period in dry dock.

Sonia left Rotterdam at about 0100 local time, on 26 August 1999, on a ballast voyage to Southampton, UK. The weather during the short passage was moderate, force 3 to 4, and the sea slight with good visibility. At 2228, on 27 August, *Sonia* arrived in the Solent, anchoring off the Nab Tower to await the pilot. At 0910 the same day, with pilot on board, she left the anchorage and came port side alongside No 47 berth in Southampton docks. Loading started later that day.

By 1955 on 31 August, the loading of 5299.530 tonnes of grain had been completed and the vessel prepared for sea. At 2240, the pilot boarded and *Sonia* left Southampton for Greece. At 2358, when in St Helen's Roads off Bembridge, the pilot left and the sea passage to Greece began.

1.3 NARRATIVE (all times UTC)

- 1.3.1 At the start of the sea passage, the weather was force 3, sea smooth and with good visibility. The main and auxiliary machinery was operating smoothly, and no problems were experienced during the manoeuvring period. At about midnight on 31 August, with all machinery operating normally, the chief engineer, who had been present in the engine room since departure, returned to his cabin.

The main engine, which had been operating on diesel fuel, was changed over to fuel oil, and engine revolutions were slowly increased as normal. The vessel continued her passage in a south-westerly direction when, at about 0220, the third engineer, who was on watch with a motorman, discovered water flooding into the engine room from a hole beneath one of the main inlet seawater valves. At this time, the vessel was about 6 miles south-east of Saint Catherine's Point, Isle of Wight.

- 1.3.2 The chief engineer was called. He went below to inspect the leak and to decide what action should be taken. The leak, which was in a stub pipe connecting a seawater isolating valve to a main seawater inlet chest, presented a serious problem. There was no way that the section of pipe containing the hole could be isolated from full sea pressure. Realising the severity of the problem, the chief engineer told the third engineer to call the bridge watchkeeper, the chief officer. He, in turn, was told to call the master and tell him that the chief engineer needed to talk to him urgently about the engine room flooding. Although a plug was fitted in the hole, this was only partially successful as the pipe started to split. Realising that the situation could very quickly deteriorate, the master decided to return to a safe anchorage so that repairs could be carried out.

- 1.3.3 At about 0300 on 1 September, with the decision made to return to Southampton, the main engine fuel was changed back from fuel oil to diesel oil. This was to allow the vessel to manoeuvre without the danger of misfiring due to cold fuel. While the vessel was making its way back towards the Nab Tower, the chief engineer started to carry out some preliminary repair work on the pipe. This entailed removing three bolts from the valve and pipe flange, and fitting a curved steel joggled plate to deflect the water spray downwards, and form the start of a patch. This also reduced the inflow marginally, and allowed better access to the site. Pumping the bilge water into the bilge tank, No 8 starboard, controlled the water level in the engine room.

In response to a call from *Sonia* at 0437, advising that they wished to anchor in order to carry out repairs, Southampton Vessel Traffic Services (VTS) advised the vessel to anchor on a bearing 245° x 5.0 miles from the Nab Tower. At 0525, *Sonia* was in position and anchored in 12.5m of water.

- 1.3.4 With the vessel anchored, the chief officer and second engineer, together with a number of deck and engine room crew, started to prepare an external patch using a collision mat and various mooring and/or cargo securing ropes (**Photograph 3**). It was hoped that by manoeuvring a collision mat under the vessel, using a combination of deck cranes and winches, the mat could be drawn over the sea chest to effect a seal. Although not expected to be watertight, sea pressure would force the mat against the hull opening and reduce the water inflow. At 1030, water inflow increased, as ship movement started to cause the split to open further. By 1140, with the patch still not in place, double bottom ballast tanks No's 12 and 13 were being used to store bilge water from the engine room bilges.

At 1220, with the water level still rising, No 2 diesel generator (aft) was stopped and No 1 (forward) started. The master telexed the agent at 1343 asking for divers and equipment to seal the sea chest inlet. Shortly after this, the agents advised the owners in Greece that the vessel was anchored in Sandown Bay and that the crew were carrying out repairs to the vessel and that tugs with salvage pumps might be required to bring the vessel back alongside. By 1400, the patch had been drawn into place and water ingress appeared to have been stopped. At 1430, the engine room watertight tunnel door was closed. At 1440, the water level in the engine room started to rise again and it was found that the strong tidal stream at the anchorage had caused the patch to move. With the water level rising, No 1 diesel generator was stopped and No 3 diesel generator started. All main engine pumps were stopped at the same time. At about this time, a second telex was sent to the agents advising them that attempts to seal the leak had not been successful and that the divers were now urgently required.

At 1514, the coastguard was asked, via channel 67, if a link call with the vessel's agents could be arranged. During subsequent discussions, the coastguard was told that the vessel had a leaking sea valve which had occurred just after the vessel left Southampton for Greece. Although water was entering the engine room at a rate of about 25 to 30 tonnes per hour, the ship's pumps were coping with the inflow.

- 1.3.5 While in the process of alerting the agents, Southampton VTS, Queen's Harbourmaster (QHM) Portsmouth and the Marine Pollution Control Unit, the master

Photograph 3



Collision mat

reported that the rate of leakage had increased and that the vessel then had about 120 tonnes of water in the engine room. The agents had instructed Andark Diving to attend and had briefed the vessel's owners in Greece.

Bembridge lifeboat, coastguard helicopter rescue IJ and Bembridge inshore rescue team were called, with Southampton VTS and QHM Portsmouth having been asked to provide tugs with pumping equipment. The agent was also asked to contact VTS and QHM Portsmouth regarding contracting a tug to attend *Sonia*.

At 1548, the coastguard helicopter IJ was on scene and reported that the vessel was slightly down by the stern. The helicopter was instructed to maintain her position until Bembridge lifeboat arrived. At 1600, No 3 diesel generator was stopped because of the rising water, and the main electrical system was shut down. The emergency battery system then became operative. With Bembridge lifeboat on scene, the coastguard helicopter was released and returned to Lee-on-Solent.

- 1.3.6 Discussions about salvage conditions continued between the agents, owners, master, QHM and Southampton VTS. At about this time, the master told the coastguard that the ingress of water was now about 120 tonnes per hour, with her pumps capable of discharging 2½ tonnes per hour. There were now about 80-100 tonnes of water in the engine room. On hearing this, the QHM sent the tug *Powerful*, together with the pilot cutter *St Clemence*, to aid the vessel.

With *Sonia*'s master/agents involved in salvage negotiations and, therefore, using the radio, Bembridge lifeboat placed a man on board to provide an additional communication link for the emergency services. He reported that 25 tonnes of water per hour was entering, and not 120 tonnes per hour as previously stated.

At 1626, MRSC Solent declared SOLFIRE B which is an emergency plan covering the Solent area. At 1717, the tug *Powerful* arrived and secured to *Sonia*'s port side. With salvage negotiations still continuing, *Sonia*'s master refused to allow the salvage master or a pilot on board. Salvage pumps were installed in *Sonia*'s engine room ready for use when agreement on the salvage had been reached. The Andark diving team was airlifted by helicopter at 1751 and delivered on board *Powerful* by 1829. During the transit, it was confirmed that they were divers, not welders. Welders were to be brought out later after/while the divers were sealing the hole from the outside. Due to strong tides around *Sonia*, no diving would be attempted before 2130. With concern now being expressed about the possibility of the vessel sinking, and no clear mandate from the vessel's owners to carry out a salvage operation, the Head of Operations, MCA, was called at 1800 and told of the potential difficulties. He contacted the owner and stressed the urgency of the situation and said that a decision needed to be made as soon as possible.

- 1.3.7 At about 1820, with the water level in *Sonia*'s engine room now rising rapidly, *Powerful* asked, and was granted, permission from the coastguard to use her salvage pumps. The intention was to take clean water from the lower levels of the engine room, well below the water/oil interface, and discharge it overboard. At about this time, the agents told the coastguard that a flat-top barge, *Will Carry*, with crane and storage tanks, with a capacity of 300 tonnes, was on her way to *Sonia*, and expected to arrive within three to

four hours. At 1845, with all *Sonia*'s engine room pumps under water, permission was given to use *Powerful*'s salvage pumps. Coastguard advised both Ministry of Agriculture, Fisheries and Food (MAFF) and the Environmental Agency, of the situation at about 1900, with the local authority and English Nature similarly being updated 15 minutes later.

Despite operation of the salvage pumps, the water level in the engine room increased. Discussions between the master of *Sonia*, the agents, and coastguard about what to do were inconclusive, although the master was told that it might be necessary to move her into shallower water and beach her in Sandown Bay. A second tug, *Bustler*, was sent from Portsmouth.

At 2030, with the water level in the engine room still rising, *Sonia*'s crew prepared the starboard anchor cable for disconnection. The divers, although having been within a metre of the sea chest opening, felt that the inflow was still too great for them to approach safely to carry out sealing operations.

- 1.3.8 As *Bustler* arrived at about 2100, the salvage officer (from on board *Powerful*) asked for cutting gear to be made available as soon as possible. While this equipment was being sourced, a second salvage pump suction pipe was laid into *Sonia*'s engine room. Despite this additional pump, the water level continued to rise. At about 2130, the Head of Operations, MCA, again contacted the owner and stressed the need for action. Soon after this, at about 2200, a Salvage Control Unit was set up at Solent MRSC with an Environment Group being organised to cover local concerns.

At 2153, the salvage officer fell into the sea while moving between vessels. He was quickly picked up, but due to shock, was taken ashore at about 2217. At about the same time, an MCA principal surveyor boarded *Sonia* to take charge of the operation. At 2254, the required cutting gear finally arrived with *Bustler*, ready for use.

At about 2300, the MCA was told that the leak was caused by a 40mm hole in a 305mm (12") diameter intake pipe. The pumps were holding the water level steady. The flat-top barge *Will Carry* arrived alongside with additional pumps 30 minutes later.

- 1.3.9 At about 0045 on 1 September, the Head of Operations, MCA, advised the owners that the powers of intervention for, and on behalf of, the Secretary of State might be exercised. Shortly after this, brokers advised the MCA that owners were discussing the appointment of salvors and tugs, with details to follow.

While an additional large pump was transferred from *Will Carry* to *Sonia* and piping laid into the engine room, the MCA surveyor on board found and organised the closure of the quick closing fuel valves. He also advised Solent MRSC that the battery emergency lighting was expected to fail at about 0300.

At 0100 on 2 September, Solent MRSC was updated as to the condition of *Sonia* and was told that four salvage pumps were in operation and that the water level was dropping.

At 0200, Head of Operations, MCA, acting in the role of SOSREP, contacted Red Funnel Ltd and formally invoked the Coastguard Agreement on Salvage and Towage (CAST agreement) after discussions with tug brokers revealed no tug availability. Discussions continued on arrangements for moving *Sonia* into shallower water, if the situation deteriorated. At 0330, Titan Maritime stated that they could not act as salvors until appointed by underwriters, who would not be available until the morning.

At 0430, the Head of Operations, MCA, issued a General Direction to the owners, through the agent, regarding specific salvage measures to be taken (see **Annex 3**).

At 0508, with the divers still unable to get close enough to the sea chest inlet to fix a seal in place, the Andark Divers' team was stood down and arrangements were made for them to return ashore.

- 1.3.10 At 0604, arrangements were made for the tug, *Will Challenger*, to collect another salvage pump from Portsmouth for the operation. By 0700, a 0.5 mile surface exclusion zone was placed around *Sonia* while *Bustler* was being prepared to return to Portsmouth. She was released at 0719. The tug *Lyndhurst* arrived on scene at 0838 to replace *Bustler*. At 0924, *Will Challenger* arrived and off-loaded two pumps on to *Sonia*. At 0930 the tug *Powerful* was released and started for Portsmouth, but was ordered back by QHM as hoses were required.

At about 1030, the agent stated that TRITON had been appointed salvage operators, under a Lloyd's Open Form (LOF). At about 1130, the stores barge *Muius*, with heavy equipment, went alongside *Sonia*. At this time there were 31 people on board *Sonia*. Pumping continued with the water level in the engine room being reduced. *Powerful*, having passed hoses across to *Sonia*, was released at 1215. The fast launches *Will Venture* and *Will Dart* were involved in ferrying men and materials to and from shore and inter-vessel transfer during this period.

Although the existing pumps currently on board were just about coping with the water inflow, the loss of any pumping capacity made the situation critical. When barges needed to be moved alongside, and between other vessels and *Sonia*, some of the pumps had to be stopped. During these periods, control of the flooding was lost. However, the arrival of the MCA salvage pumps, and equipment from the Milford Haven depot, enabled the situation to be brought under control. When these extra pumps started to operate shortly after 1200, the water level in the engine room started to drop noticeably.

With *Sonia*'s condition likely to be stabilised, discussions started with the Southampton harbour master as to the availability of berths, if and when the vessel moved. Head of Operations, MCA, requested, and the agents provided, a salvage manager to join the salvage control unit at Solent Coastguard headquarters. Just before the oil/water interface approached the pump suction, the pump discharge was changed from directly overboard to the storage tanks on *Will Carry*. This was to avoid any likelihood of pollution.

At about 1600, the salvage master, four salvage men and the owner's representative boarded *Sonia*. The subsequent inspection showed the water level in the engine room had been lowered, allowing confirmation of the MCA surveyor's opinion that the inlet

was a crack in a pipe between the sea chest and isolating valve. Discussions were held regarding a temporary repair and the discharge of the cargo. Andark Divers were recalled to the vessel to attempt another sealing operation. At about 1700, a pollution control plane carried out an aerial sweep of the area and confirmed that there was no pollution.

- 1.3.11 At 1700, Head of Operations, MCA, intervened and issued a General Direction requiring the salvors to discuss salvage plans regarding *Sonia* with him before any action was taken (see **Annex 4**). At about 1830, the weather deteriorated with fog reducing visibility to under 50m. A “Securité” message was sent to all shipping in the area using medium frequency and channel 16. At 1915, *Wye Guard* came alongside with divers on board. At 2130, a casualty plan was issued after discussion in the salvage control unit between Head of Operations MCA, Portsmouth and Southampton harbourmasters, and salvors, which gave both general conditions and specific passage plans for a projected move to a berth at Southampton.

The divers tried again at about 2200 to fix a patch over the sea chest inlet and failed, but another attempt was scheduled for about 0430-0500 the following day. A jackstay was rigged above the inlet to assist the divers in their next attempt. At about 0300, 3 September, the divers again tried to fix patches in place over the two halves of the inlet, but although patches were placed in position, it did not significantly alter the rate of water inflow. Another aerial sweep at 0600 saw no signs of pollution.

At about 0800, the tug *Redbridge* arrived on site to relieve *Lyndhurst*, and connected up a towline to *Sonia*'s bow. The tug *Wye Guard* secured at the stern. After cutting free four shackles of the anchor cable and buoying them, at 0815 *Sonia* started being towed towards Southampton. The Nab Tower was passed at 0912, and No Mans Land Fort at 1021.

At 1112, the salvage control team stood down.

Sonia approached No 7 berth at Southampton at 1438 and was secured, starboard side alongside, at 1459. The barge *Will Carry* and the tug *Will Challenger* moored on *Sonia*'s port side to enable pumping to continue.

At 1555, the intervention direction issued to the salvors, Titan Maritime, at 1700 on Thursday 2 September was revoked.

- 1.3.12 At 1900, a diving team boarded *Sonia*, and started sealing operations, which continued over the next few days. A plywood-backed patch was fitted over the seawater inlet to the sea chest. At 1000 on Sunday 5 September, the inlet had been sealed and work to remove the corroded sea valve pipe began. By 1745 that day, the pipe had been removed and a steel sheet welded in place. Work then started on cleaning the engine room and recovering the machinery (**Photographs 4 and 5**).

1.4 CREW PARTICULARS

- 1.4.1 *Sonia*'s 15 crew were all Russian nationals. All officers, including the master, kept watches, with a rating always in attendance.

Photograph 4



General view of inlet pipe showing S.W. pipe leaking even with temporary seal fitted externally

Photograph 5



Steel plate welded on top of plate

View of 'sealed' S.W. inlet.
Wooden seal covers inlet to filter

The 50 year old master, Evgeny Mezentsev, was issued with his current licence as master by the Russian Federation on 12 April 1999. The licence was valid until 1 February 2002.

The 44 year old chief officer, Vladimir Tereschuk, was issued with his “Deep Sea Navigator” certificate of competency by the Russian Federation on 12 February 1996.

- 1.4.2 The 46 year old chief engineer, Yury Milyukov, was issued with his First Class Engineer’s certificate on 3 December 1997. His licence to act as chief engineer was issued by the Russian Federation on 3 December 1997, and was valid until 1 February 2002. He joined *Sonia* in 1997, initially as second engineer. He was promoted to chief engineer two months later and, apart from leave periods, had stayed with the vessel since that time.

The 47 year old second engineer, Nadir Abdullin, was issued with First Class Engineer’s certificate on 21 February 1996. His licence to act as a chief engineer was issued by the Russian Federation on 21 February 1996.

The 43 year old electrical engineer, Sergey Romanchuk, was issued with his certificate as a First Class Electrical Engineer on 8 November 1995. His licence to act as an electrical engineer was issued by the Russian Federation on 8 November 1995.

1.5 DESCRIPTION OF VESSEL

- 1.5.1 *Sonia* was a traditional, steel, general cargo vessel with four holds, three forward of the bridge, and one aft. She had a raised forecastle and poop deck. The four holds were fitted with Macgregor style, direct lift, steel hatch covers, with four 5-tonne pedestal deck cranes installed to service each hatch. The bridge and crew accommodation was slightly aft of amidships, and consisted of the main deck, boat deck, captain’s deck, and bridge deck.

The main engine was a slow speed, nine-cylinder, turbo-charged marine diesel, originally designed to give a service speed of 15.7 knots. Three generators supplied electrical power.

- 1.5.2 An inspection of the engine room after the accident, showed that it had been generally clean, and recently painted. The machinery, although old and suffering from the visible effects of being submerged, looked as though it had been in reasonable condition before the flooding (**Photograph 6**). The main switchboard was clean with no evidence of broken or defective devices or controls (**Photograph 7**). With the vessel under emergency conditions and no main power available, a further assessment of the condition of the general machinery was not possible.
- 1.5.3 No in-depth inspection of the holds or deck structure could be carried out at the time of the incident. However, with a water sensitive cargo on board, and no subsequent recorded instance of water or other liquid contamination during discharge ashore, the hull and internal bulkheads appear to have been sound.

Photograph 6



Forward engine room bulkhead showing 'tide mark' of flooding above floor plates

Photograph 7



Main switchboard

1.5.4 *Sonia* was registered in Kingstown, St Vincent and the Grenadines. She was classified with the Polski Rejestr Statkon, with certificates issued in Gdansk on the 19 March 1999. She was fully certificated and was properly manned by experienced seafarers.

1.6 DETAILS OF SEAWATER INLET CHEST AND STUB PIPE (Figure 1)

1.6.1 With no structural plans available showing details of the sea chest, the following description is based on the divers' inspection, comments and inboard observations.

The seawater inlet chest, to which the corroded seawater inlet pipe was connected, was constructed on the port forward side of the engine room between frames 124 and 126. The rectangular chest was constructed from 14.7mm thick steel plating and was built into the hull. It consisted of two chambers separated by a swash plate which extended upwards from the bottom of the box to about two-thirds of the box height. The first chamber had direct access to the sea via a grid fitted on to the hull, while the second or inner chamber, had a number of stub pipes welded on the inboard side of the chest to provide connections to various inboard cooling systems.

The chambers were fitted with anodes to provide cathodic protection against corrosion, as well as heating coils to prevent icing up and cooling difficulties when the vessel was operating in cold climates.

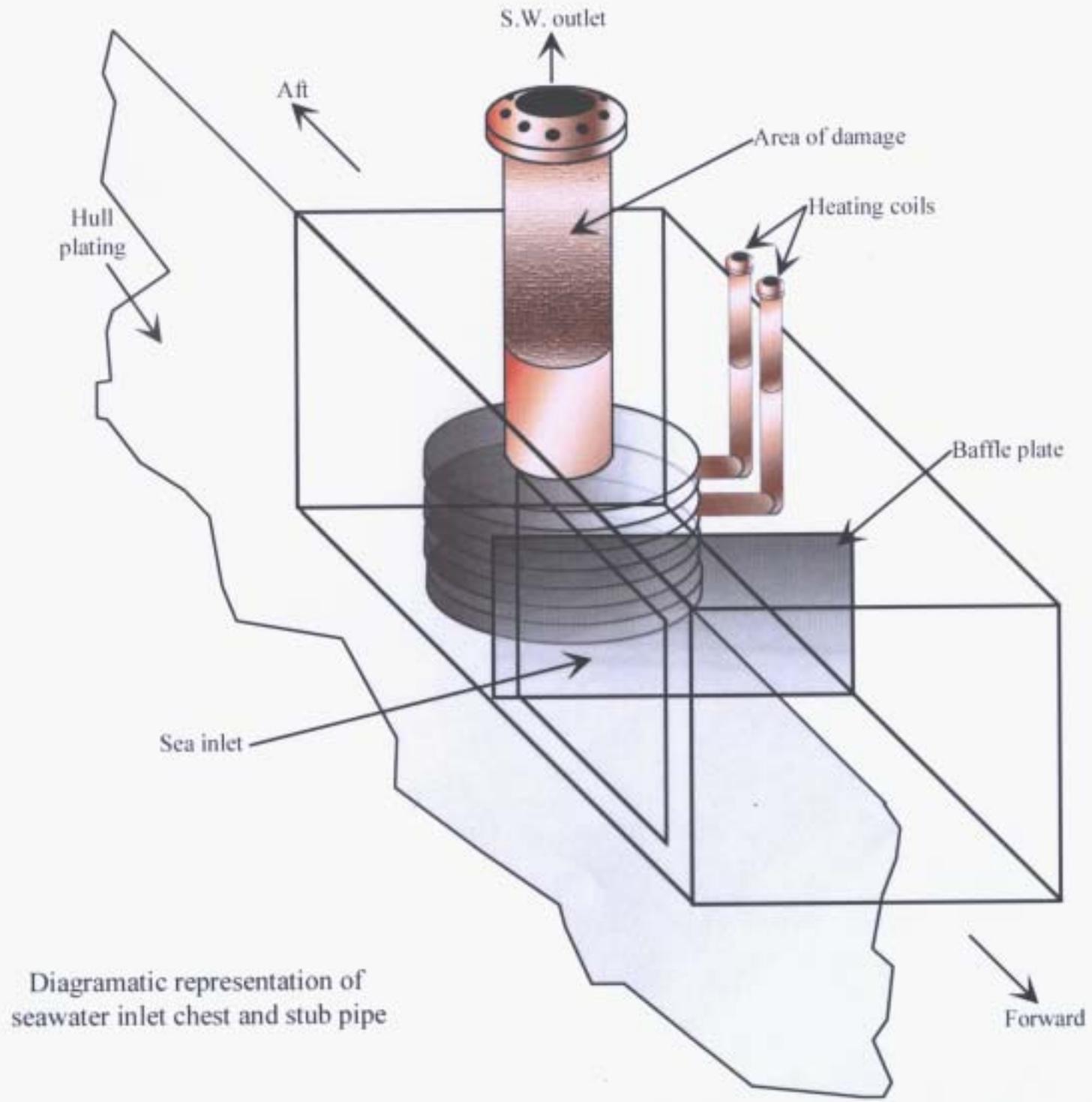
Direct access to the inner chamber was restricted due to the swash plate. A very limited inspection of the chamber could be made using the stub pipes welded to the sea chest for pipe connections.

1.6.2 The corroded stub pipe to which an engine room seawater cooling line had been attached, consisted of 440mm high, 262 bore, steel pipe, 7mm thick, welded on to the top of the sea chest. Three support knees, 7mm thick, and at 120° to each other, were welded to the stub pipe to provide additional vertical support. The top flange, 38mm outside diameter and drilled to receive 14 fitted bolts, provided the attachment for the right-angled isolating valve.

Access to the stub pipe and isolating valve was via the tank tops. Only the valve spindle and valve handle projected above the floor plates.

1.7 OPERATION AND MAINTENANCE

1.7.1 The present owners purchased *Sonia* in July 1998, but she was not registered in St Vincent and the Grenadines until September 1998. In November that year, she arrived in Piraeus to dry dock and to carry out repair work. The survey status document, issued on 23 March 1999, showed that, after that repair period, there were no outstanding defects. No details of the survey, or what work was carried out during this period, was available, other than the class record stating that a bottom survey had been carried out. No comments were recorded. The records show that the owner had chosen not to enter



Diagrammatic representation of seawater inlet chest and stub pipe

Figure 1

the vessel on a Continuous Ship and Machinery (CSM) survey routine but would continue to operate on a standard five-year repair cycle.

1.7.2 The maintenance system practised on this vessel was one based on the chief engineer's experience and manufacturers' recommendations. The chief engineer operated a daily and monthly workbook routine, which took into account the work required by the owner's superintendent. No formal maintenance procedure was followed, other than those listed under the owner's reporting requirements. These were:

- Maintenance & outstandings report (this was the general state of engine room).
- Main engine crankcase deflections.
- Main engine and component running hours.
- Main engine stuffing box ring clearances.
- Diesel generator and component running hours.
- Diesel generator crankcase deflections.
- Chief engineer's report of work carried out.

1.7.3 On 29 January 1999, the company started to develop a maintenance management system involving a job description for the chief engineer, as well as a more formal spares and condition monitoring system for the vessel. A copy of this latest development is in **Annex 1**.

The Port State Control Inspection record of *Sonia* since 1994, shows no detentions, but records a number of defects over the years, mainly connected with her communications equipment. When inspected at Immingham in February 1999, this pattern of communication defects was continuing, three minor problems being identified. These were rectified before she sailed. Although old, her condition was generally good and gave no cause for concern.

1.8 MCA - DIRECTORATE OF MARITIME OPERATIONS

HM Coastguard

1.8.1 Although the flooding incident had started before *Sonia* anchored in Sandown Bay at 0525 on Wednesday morning, 1 September 1999, the master had felt it unnecessary to inform the coastguard. It was only when he asked the coastguard to arrange a link call to the vessel's agents at 1514 that the MCA became aware of the incident.

Once it had been established that the engine room was flooded, and hence the vessel was incapable of moving under her own power, emergency cover was organised.

1.8.2 Southampton VTS, the Queen's Harbourmaster, Portsmouth, and the MCA Counter Pollution Branch were advised of the incident and that the vessel's situation could result in a salvage situation developing. Bembridge lifeboat and a rescue helicopter were initially tasked to investigate. Tugs and other craft subsequently became involved.

With the situation ongoing, and flooding still unchecked, MRSC Solent declared SOLFIRE B at 1626. This level of emergency response is defined as:

“An incident that can be dealt with by the resources readily available where the initiating authorities need some assistance from one or more land based emergency service. No significant impact is anticipated on other land based authorities but they should consider themselves alerted.”

Although negotiations over tug and salvage contracts were continuing between the various parties, by 1800 they had made no positive decisions or indications as to how to handle the salvage. MRSC Solent therefore decided that the Head of Operations, MCA, should be informed. With *Sonia*'s engine room continuing to flood, the failure to take positive salvage steps was increasing the chances of the vessel eventually sinking. With 500 tonnes of bunker fuel and 100 tonnes of diesel oil on board, there was a significant pollution risk to an area close to a marine conservation area and high amenity beaches.

Once informed, the MCA became increasingly involved in the decision making process. Although MRSC Solent retained immediate control of the situation and the resources, the MCA put steps in hand to activate the intervention powers as outlined in Section 137 of the Merchant Shipping Act 1995, Part II (as amended).

Survey & Inspection Branch

- 1.8.3 At about 1800, and having been told of the situation, the Head of Operations, MCA, telephoned the owner's superintendent and expressed concern about the deteriorating situation on the vessel. Local Emergency planning officers were contacted and warned of the possibility of pollution, while the Head of Operations and the Chief Scientist of MCA's Counter Pollution Branch made arrangements to travel to Solent MRSC. At about 2200, a salvage control unit, chaired by the Head of Operations, MCA, was established at the Solent Coastguard station to monitor and control the salvage attempts. The preferred MCA salvage plan was for the vessel to be pumped out and taken to port.

A further telephone conversation was held with the owner's superintendent at about 2135, urging him to appoint salvors to take charge of what appeared to be a deteriorating situation and appoint a salvage master to take charge of the salvage.

An environmental group was also convened at Solent MRSC to consider the environmental impact of the possible pollution risk and what contingency plans should be put in place.

With no agreement apparently reached, the MCA appointed a principal surveyor as marine casualty officer (SOSREP representative) to board *Sonia* and assess the situation. He boarded at 2234 and formally took over responsibility for on-scene operations at 2306.

At 2245, following an update of the situation on board *Sonia*, a formal letter was passed to the owner's agents. This advised them that as the MCA considered the

owners had taken insufficient action to date, “*the powers of intervention for and on behalf of the Secretary of State may be exercised as your vessel is posing a risk of significant pollution to UK waters and coastline. I urgently request you to formally state your intentions*” (see **Annex 2**).

- 1.8.4 Despite this formal letter, the salvage situation remained unresolved due to an apparent difficulty in obtaining underwriters’ approval during out-of-office hours. With the situation continuing to deteriorate, at 0430 the following morning, 2 September, the MCA issued a “General Direction” to the owner’s local agents. This stated that:

We hereby direct you to put to Mr John Garner, Head of Operations, Maritime and Coastguard Agency, specified salvage measures to be taken for the salvage of the vessel or its cargo, including any proposals they have to prevent or minimise pollution and to obtain agreement to any such plans before they are put into effect or such action is taken.

A copy of this directive is in **Annex 3**.

At 0709, MCA put in place a surface exclusion zone of 0.5 mile round the casualty. This enabled them to control press intrusion and sightseers.

At 1030, a Lloyd’s Open Form 95 salvage agreement was agreed between owners and the salvors, Titan Maritime UK.

Salvage equipment, which had been drawn from the MCA salvage and counter pollution store in Milford Haven, arrived by road at about this time. This equipment, which included three independently driven large capacity pumps and hoses, was transhipped out to the casualty on the *Will Carry* and *Murius*. The first load of equipment arrived alongside *Sonia* at about 1130 with the first pump in operation by 1215.

SOSREP then issued a further “General Direction” to the salvors at 1700 on 2 September, instructing them to submit their salvage plans. Attached to this letter was a further note formally cancelling the General Directive issued to the owners at 0430 earlier that day (see **Annex 4**). At 1800, LOF was formally signed by the master with a copy faxed to the owners via the agent.

- 1.8.5 Further discussion between the various parties then took place, resulting in SOSREP issuing an agreed Casualty Passage Plan at 2130 later that day. The plan covered general conditions during transit and monitoring requirements while under way (see **Annex 5**).

The intention was that the vessel, with a temporary repair in place, would be towed into Southampton starting at 0900 on the morning of 3 September during slack water. Two tugs would be in attendance, with the pumping equipment remaining on *Sonia*, including 100% pumping redundancy. The vessel was expected to arrive at her berth at 1500.

At 1519, *Sonia* was berthed alongside in Southampton. Shortly after this, at 1555, the Head of Operations, MCA revoked the direction issued to salvors, Titan Maritime thereby cancelling all intervention orders (see **Annex 6**). At 1700, a detention order was placed on the vessel pending repair and full inspection.

1.9 FOLLOW-UP ACTION BY *POLSKI REJESTR STATKÓW*

- 1.9.1 After this incident, the Polish Classification Society PRS, advised that, prior to this, its guidance to surveyors did not include specific instructions for a thorough close up survey of the sea water piping system. This, it advises, is common to all classification societies.

It acknowledges that this is a weakness in the current Classification Regulations and Instruction for Surveyors and proposes to include a new section in its PRS Instruction for Surveyors, Vol 1 Ch II B-2 paragraph 1.8.

- 1.9.2 This new paragraph will read as follows:

Where bottom and side fittings are not connected directly to the sea chest but with a spool pipe, then this pipe is to be dismantled and the fittings are to be reassembled to the sea chest directly.

If, due to special circumstances, e.g. increasing of sea chest volume for additional sea water supply, such as a spool pipe to be fitted upon PRS acceptance only.

Such a spool pipe is the subject of close up examination in dismantled condition during each Class Renewal Survey.

1.10 SALVAGE NEGOTIATIONS

- 1.10.1 Once the coastguard was aware of the situation, it contacted the agents and was assured that both agents and owners were aware of the problem and that Andark Divers had been requested and were scheduled to be on site at about 1830 on 1 September. With water ingress on the increase, tugs with salvage pump capacity were being sought, and as part of that enquiry, QHM Portsmouth, and VTS Southampton along with others, were contacted.

Southampton VTS reported that it would send a tug from Esso Fawley dependent on the results of negotiations between owners and agent. The QHM Portsmouth reported that it was talking to SERCO, the tug contractor within HM Dockyard, but it would not proceed unless an LOF contract was made with the owner.

The QHM intercepted the message from *Sonia* to coastguard concerning an apparent increase in the rate of ingress of water and immediately sent the tug *Powerful* to the scene, together with a pilot vessel. This message was subsequently corrected down to the original figure of about 25 tonnes per hour. Regarding the divers, the coastguard organised a helicopter lift for the divers once they had assembled at Netley.

- 1.10.2 By 1717, the tug *Powerful* was alongside, but the master refused to accept the salvage master or the pilot on board without authority from the owners. *Powerful* also had not been authorised to start any salvage pumping by her contract managers until the question of a contract had been settled. At 1734, the master was still awaiting instructions from his owners, and declined to accept pilot or salvage master on board.

The Andark divers arranged by the agent had arrived on board *Sonia*, but they were unable to dive immediately, due to strong tides. A support barge had also been arranged by the agents.

The MCA, who was concerned about the possibility of the vessel sinking, had by this time started to assume control of the situation, and instructed *Powerful* to use her pumps to control the flooding. With neither the pilot nor MoD salvage master being allowed on board *Sonia*, plus doubts about the pumping ability of *Powerful*, the QHM stated that he was being advised to withdraw his vessels. At about the same time, Southampton VTS advised that no Fawley or dock tugs were available, but it would continue looking for some.

- 1.10.3 Discussions were held between *Sonia*, MoD salvage officer, pilot and *Powerful*'s master over the current situation and possibility of beaching the vessel in Sandown Bay, but no firm decision was made. Although *Bustler* was sent to help, the QHM advised that all future actions/movement would have to be under the instructions of MCA, with MCA accepting all costs etc.

At 2044, the agents advised Solent Coastguard that the owners would be sending instructions to the master to co-operate fully with the coastguard and carry out all recommendations. During the next hour, efforts were made to locate and obtain either gas cutting equipment or a grinder. In most cases it was either not available or the equipment was too specialised and required a trained operator.

The agent spoke to Samuel Stewarts (Brokers) in London at 2235 regarding salvors etc, confirming with the owners shortly afterwards that arrangements were in hand. Cutting gear was eventually located and arrived on board at 2254. Half an hour later *Will Carry* arrived alongside with a salvage pump and hose. The MCA principal surveyor boarded at about 2230 and assumed control of the flooding situation.

- 1.10.4 At 2355 Samuel Stewarts were asked by the MCA on behalf of the owners to find and negotiate with salvors regarding the salvage of *Sonia*. At 0045, Samuel Stewarts advised that Titan might have an interest and would inform owners. The brokers continued searching the market, eventually at 0218 saying that they had found two potential salvors but, due to their insistence that the SCOPIC (Special Compensation P&I Clause) should be included in the contract, it was unlikely that a salvor could be formally appointed until 0800. This was confirmed at 0325 when Titan stated that they would require the underwriters' permission before becoming involved with the casualty. At 0405, the brokers advised that Titan had made an offer on salvage involvement to owners. At 0430, Head of Operations, MCA, acting in the role of SOSREP, issued a Directive to the owners to appoint salvors. This was acknowledged by owners at 0750.

While the MCA continued to monitor and control the flooding, efforts were being made to finalise the salvage agreement. At 1028, the agents advised that salvage operators were being appointed, and they were just awaiting the owner's confirmation. Jan van Delaan was to be the LOF salvor. Titan was appointed at 1030 but required written acceptance from insurers. This was received at 1215. The Titan salvage personnel plus owner's representative left Portsmouth for the casualty at 1535 with the party boarding *Sonia* at about 1630 on 2 September 1999.

After the salvage master had carried out an inspection of the engine room and discussed the situation with the MCA, *Sonia*'s master signed the LOF at about 1700 with a copy faxed to the agents.

SECTION 2 - ANALYSIS

2.1 PIPE FAILURE

- 2.1.1 The flooding of the engine room was caused by the failure of a stub pipe forming part of the forward port sea chest. The steel stub pipe, shown on a sketch, subsequently prepared by the Russian shipyard as originally being 10mm thick, was measured as about 7mm thick at the time of the incident. The pipe had suffered corrosion throughout its length with particularly severe corrosion at the top end, some 5 to 6mm below the bolted flange. The material had corroded away round almost two-thirds of the circumference, and it was only the flange and vertical knees that prevented a total collapse of the stub pipe (**Photographs 8 to 10 and Figure 2**).

Although the initial failure was recorded as a small round penetration of the pipe wall, it can be seen that corrosion was at such an advanced state, that repair was impossible. It was fortunate that the initial leak occurred close to land and with emergency services in the immediate vicinity.

- 2.1.2 This level of corrosion indicates that the protection afforded by galvanisation of the steel pipe had long since been lost, with any galvanic protection offered by anodes within the sea chest being ineffective. An examination of the stub pipe, after it had been removed from the sea chest, showed no evidence of a protective paint either inside the pipe or externally. Further metallurgical analysis carried out on behalf of the owners and the P&I Club, established that the severe corrosion found adjacent to the valve flange was the result of galvanic action. This occurred because a bronze alloy isolation valve was fitted directly on to a mild steel stub pipe.

During a dry docking, it is usual to remove the external inlet grids from the ship's hull, inspect the internals of the sea chest, and then apply a coat of preservative before replacing the grid. The isolation valve fitted on top of the stub pipe is opened up, and the valve seat examined. It is unlikely, however, for the valve body to be removed to allow the internals of the stub pipe to be examined in detail. Access to the inner section of the sea chest is not only difficult due to the swash plate, but is complicated by the presence of heating coils. Under those conditions, the surveyor's ability to examine the stub pipe internals from inside the sea chest is severely restricted. Given that scenario, the likely path of corrosion was from the inside outwards, although some external corrosion was evident. It is not possible to project any accurate time-scale as to how long this corrosion had been progressing, although for unprotected steel, an approximate rate in seawater of 26 mg/dm²/day has been quoted. It is usual however, to suggest that the life of galvanised steel seawater pipes is in the order of seven years. Even this is dependent upon various other considerations such as water speed, water temperature, inclusions in both seawater and material, mechanical damage and stressing etc.

This corrosion had probably been progressing for some years, and certainly well before the last dry docking. The Russian shipyard has suggested that the original thickness of the stub pipe was 10mm. Yet the 400mm long stub pipe, when measured, showed a more or less uniform thickness over the lower 320mm of between

Photograph 8



General view of pipe after being removed from top of sea chest

Photograph 9



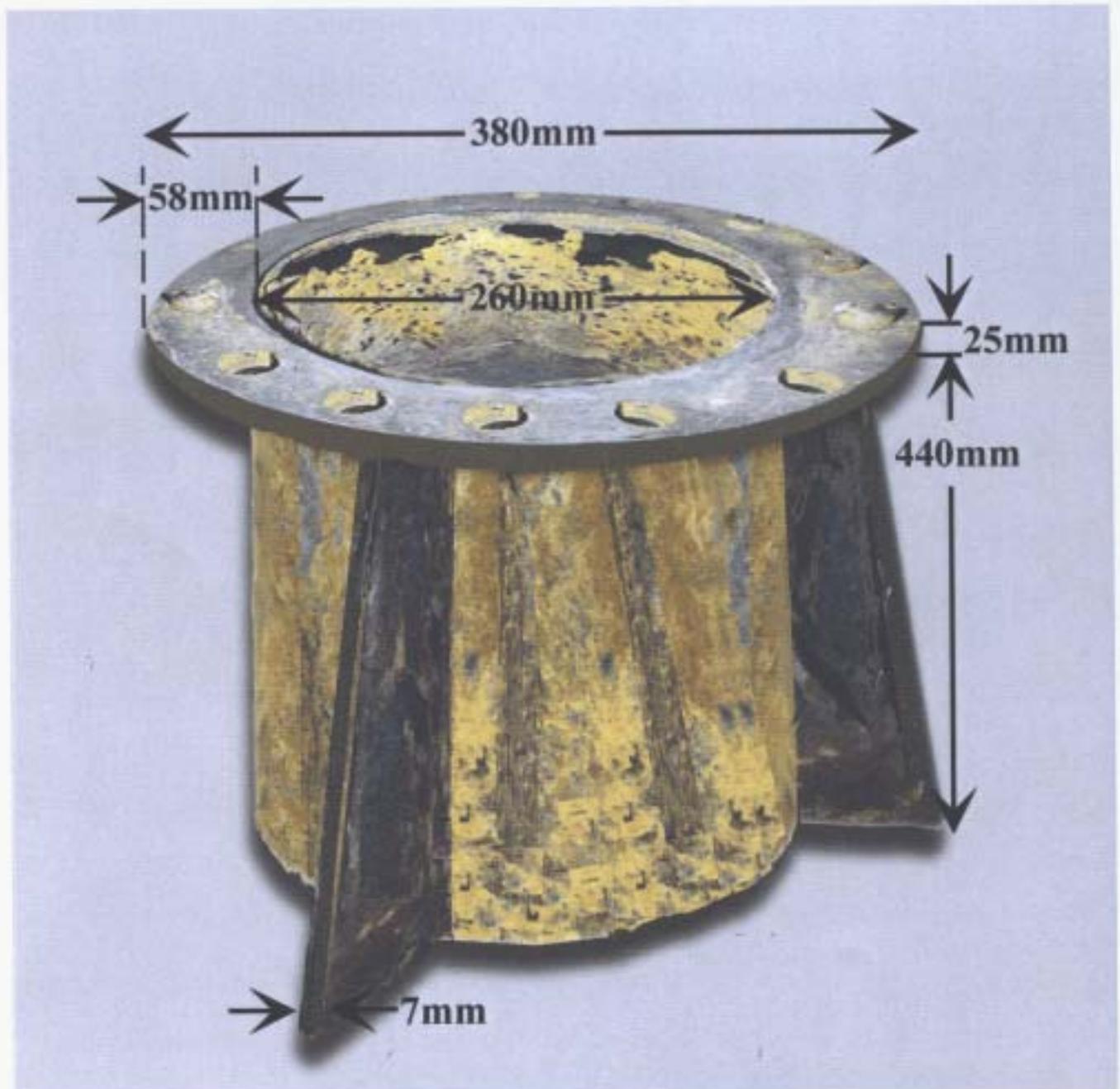
Extent of corrosion

Photograph 10



Extent of corrosion on sea inlet pipe.
Isolating valve sat on flange.

Diagram showing the sea water inlet pipe (not to scale)



N° of bolts = 14

Size of bolt holes = 20mm

N° of side supports = 3

Thickness of sea chest top plate = 14.7mm

Pipe wall thickness = 7mm

5.6mm and 6.8mm. If this stub pipe was originally 10mm thick, a uniform loss of thickness of between 3.2mm and 4.4mm from corrosion is very unusual. The accelerated galvanic corrosion at the top, near the flange is not disputed, but a general uniform loss of material over the rest of the pipe cannot be explained by corrosion alone. It is more likely that the pipe had been replaced since the vessel was built, and that the replacement pipe was in the order of 7mm thick. The stub pipe should have been of similar thickness to the hull plating around 10-12.5mm thick (the top plate of the sea chest was 14.5mm). Although a new owner would probably not have been aware of the history of this particular piece of pipe, it is technically an extension of the hull, and an area that requires special attention during surveys.

In a 31-year old vessel, areas such as this are potentially high risk points and it is difficult to understand how successive owners and/or inspecting surveyors failed to detect this progressive corrosion. It is more surprising, however, that the dry dock survey undertaken by Class in November 1998, which should have included the underwater fittings, also failed to discover this corroded pipe.

2.2 CREW RESPONSE

2.2.1 The master and crew's initial response to this emergency was prompt, and remedial measures were well thought out.

Immediately the leak was discovered, the chief engineer was called and the potential effects of the leak conveyed to the master. Repairs were attempted, but it rapidly became apparent that the leak was more serious than at first thought. Although the engineers fitted a deflector in place and sought to build a seal, the water pressure was too great. Attempts were made to seal the sea chest using a collision mat, but were unsuccessful.

What was not correct, however, was the master's failure on two occasions to tell the coastguard of the true nature of the situation:

- a. There was a period of about 2½ hours between the onset of the flooding and when the master told Southampton VTS that he was returning to carry out repairs;
- b. A further 10 hours elapsed between the time of anchoring and when the coastguard became aware that the repairs were more difficult than originally thought. It was only after the coastguard had further questioned the master that the true nature of the repairs and the extent of the flooding became known.

2.3 OWNER'S RESPONSE

2.3.1 The owner's response to the developing emergency initially was rather slow, and appeared to be dominated more by commercial considerations than the threat to the safety of the vessel and potential environmental damage. The owner only became aware of the incident at about 1400 on 1 September 1999 and was advised by the

agent that the master was endeavouring to effect repairs using local facilities. A tug with pumping facilities was being sought to control the flooding, while divers would seal the sea inlet temporarily. The agent experienced difficulties in obtaining suitable tugs, not only on availability but also as some contract managers were asking for a salvage agreement.

Despite the worsening situation in the engine room due to flooding, the master, presumably under guidance from his vessel's owners as to possible salvage claims, stated at 1734 that he did not require either a pilot or salvage. This stand-off situation continued, with the master refusing to allow either the pilot or salvage master to board *Sonia*, and it was only at about 2000 that the MoD salvage master was allowed on board to assess the situation. Once the seriousness of the situation had been explained to the owner at about 2044, the agents said that owners were advising the master to co-operate with the salvage operation.

This was about three hours after Head of Operations, MCA, acting in the role of SOSREP, had initially spoken to the superintendent about the seriousness of the situation.

- 2.3.2 Over the next couple of hours, the situation continued to change. Pumping equipment was being assembled while sealing externally, using divers, was still considered a possibility. Once it became apparent that the situation had deteriorated to a salvage operation, the owners instructed the agents to contact a broker to start the search for a suitable salvor. To add urgency to the request, the owner also asked the MCA to speak to the broker on his behalf.

Difficulty was experienced in finding salvors who were interested, and even when one was found, the question of the SCOPIC was raised. This clause, (SCOPIC stands for Special Compensation P&I Clause) was endorsed by members of the International Salvage Union in November 1998, and had only recently started to come into use. It was this clause which caused further delay in appointing salvors. This clause is relatively new in salvage and the impact on the financial settlement of LOF contracts is still being evaluated – hence the reluctance by owners to sign contracts without first getting the support of the P&I Clubs.

- 2.3.3 Despite the owner's initial reluctance to co-operate with the emergency services, the delay did not prevent Portsmouth Harbour authorities and the MCA from mobilising their own contractors, salvage experts, equipment, barges etc, and placing on site the necessary equipment and salvage vessels. Early detailed knowledge of the extent of the flooding would have clarified the situation, but it is unlikely that such knowledge would have materially affected the outcome.

2.4 MCA RESPONSE & ACTIONS

Due to the deteriorating situation and the delay in appointing salvors, the MCA invoked intervention powers at 0430 on 2 September 1999. MCA's response was in accordance with that recommended in Lord Donaldson's *Review of Salvage and Intervention and their Command and Control*, the draft revision of the *National*

Contingency Plan, and was in compliance with the requirements of the *Merchant Shipping Act 1995, Chapter 21*.

The coastguard watch manager had been made aware of *Sonia*'s difficulties, and her response to both the flooding and efforts of the salvage and emergency teams. After due consideration of these factors, he advised Head of Operations, MCA, who acted in the role of SOSREP, of the situation and that, in his opinion, the "trigger" for the use of intervention powers had been reached. From then on, SOSREP accepted and took forward responsibility for the operation.

The actions taken proved to be successful and kept the vessel afloat for about 24 hours before salvors were appointed. She was subsequently safely towed to a berth in Southampton.

2.5 GENERAL OBSERVATIONS

2.5.1 A study of the coastguard communication log shows that some confusion existed as to what the actual requirements were, regarding the use of divers at the outset of the incident. Divers had been ordered by the agent without detailing their likely duties, ie welding/cutting under water. It was only when the divers were already waiting for the airlift, that a check showed that they were divers only, not welders.

This suggests that there was, certainly in the early stages, a lack of appreciation as to what repair work was likely to be required. This situation may well have arisen due to language difficulties and the master's reluctance to communicate with the emergency services.

2.5.2 Another cause for concern was the failure of many of the "out of hours" contact points. The MCA did make direct contact with a number of tug and equipment suppliers, but they either felt that their equipment was not suitable, or did not wish to take on commercial salvage. The delay to the salvage operation was due to a number of factors:

- a. Initially, the owners were reluctant to enter into a salvage contract and were trying to negotiate a service agreement with local tug owners.
- b. With salvors wishing to incorporate the SCOPIC in the salvage agreement, owners wished to have underwriters' support before signing the LOF.
- c. Underwriters were contacted via the "out of hours" contact, but the lead underwriter support was not available until 0800.

The coastguard does maintain a register of local companies and has access to various data listing both tug owners and the vessels available within its area. Regular updating and checking of that register is necessary, as was highlighted by the difficulty in obtaining cutting equipment and tugs fitted with salvage pumps. In an emergency situation, contact failures or difficulties lead to an unnecessary rise in pressure and tension on the emergency services and every effort should be made to avoid this.

- 2.5.3. One of the difficulties that created tension between owners, authorities, and salvors in the early hours of 2 September, was the inclusion of the SCOPIC in the LOF agreement.

The SCOPIC has been described as designed to encourage salvors to go to the assistance of ships which threatened damage to the environment, secure in the knowledge that even if the salvage failed, they would not be out of pocket. Furthermore, one of the essential features of this clause is that as soon as the SCOPIC is invoked, the owner must provide, within two working days, a guarantee for US \$3 million.

The implications of including this clause were not fully understood at the time by all parties involved in the salvage contract negotiations, and for that reason everybody was checking back to their respective lawyers and insurers before agreement could be reached. This obviously caused a delay in reaching the final agreement.

A study of the communications between the various sections of the MCA and the vessel suggests that they also were not aware of the effect the SCOPIC would have on the salvage operation, or on the speed at which a salvage contract could be agreed.

SECTION 3 - CONCLUSIONS

3.1 FINDINGS

- 3.1.1 *Sonia* was correctly registered, licensed, and manned by an experienced and qualified crew. [Ref: 1.4, 1.5.4]
- 3.1.2 The PSC inspection record of *Sonia* since 1994 shows no detentions. Her last inspection at Immingham in February 1999, produced only three minor defects connected with her communications equipment. [Ref: 1.7.3]
- 3.1.3 Following discovery of the leak, *Sonia* contacted Southampton VTS at 0437 and arranged to anchor on a bearing of 245°, five miles from the Nab Tower to carry out repairs. She anchored at 0525 on 1 September 1999. [Ref: 1.3.3]
- 3.1.4 Attempts were made to effect a repair using an external collision mat and the fitting of internal plugs. Neither was successful. [Ref: 1.3.2, 1.3.3, & 1.3.4]
- 3.1.5 The Solent Coastguard only became aware of the incident at 1514 on 1 September when asked to arrange a link call on channel 67. [Ref: 1.3.4]
- 3.1.6 Due to the deteriorating situation and the delay in appointing salvors, the MCA invoked intervention powers at 0430 on 2 September 1999. These followed the lines recommended in Lord Donaldson's *Review of Salvage and Intervention and their Command and Control*, and was in compliance with the requirements of *the Merchant Shipping Act 1995, Chapter 21*. [Ref: 1.3.9, 1.8.2, 2.4]
- 3.1.7 A Lloyd's Open Form 95 salvage contract between owners and salvors was agreed at 1030 on the morning of 2 September 1999. [Ref: 1.3.10, 1.10.4]
- 3.1.8 The 7mm-thick wall of the stub pipe had suffered severe corrosion almost two-thirds of the way round the circumference, at a point 5 to 6mm below the bolted flange to the isolating valve. [Ref: 2.1.1]
- 3.1.9 There was no evidence of any protective coating either inside or outside the stub pipe. Further metallurgical analysis carried out on behalf of the owners and the P&I Club established that the severe corrosion found adjacent to the valve flange was the result of galvanic action. This occurred because a bronze alloy isolation valve was fitted directly on to a mild steel stub pipe. [Ref: 2.1.2]
- 3.1.10 This corrosion had been progressing for some years, certainly well before the last dry dock inspection, and, given the age of the vessel, should have been considered a suspect area by both owners and the inspecting surveyor. [Ref: 2.1.2]
- 3.1.11 The master failed to inform Solent Coastguard that *Sonia*'s engine room was flooding until about 12½ hours after the incident occurred. [Ref: 2.2.1]

- 3.1.12 Initially the owner's response to the developing emergency was rather slow, and appeared to be dominated more by commercial considerations, than the threat to the safety of the vessel and the potential environmental damage. [Ref: 2.3.1]
- 3.1.13 A study of the coastguard communication log shows that during the early stages of the emergency, there was some confusion as to what repair work was likely to be required. [Ref: 2.5.1]
- 3.1.14 Contacting insurance underwriters and other equipment sources was made more difficult due to no "out of hours" telephone numbers or a failure to respond. This gave rise to unnecessary pressure on the emergency services. [Ref: 2.5.2]
- 3.1.15 Despite the owner's initial reluctance to co-operate with the emergency services, the delay did not prevent Portsmouth harbour authorities and the MCA from mobilising their own contractors, salvage experts, equipment, barges etc and placing on site the necessary equipment and salvage vessels. [Ref: 2.3.2]
- 3.1.16 The delay to the salvage operation was due to a number of factors:
- a. Initially, the owners were reluctant to enter into a salvage contract and were trying to negotiate a service agreement with local tug owners.
 - b. With salvors wishing to incorporate SCOPIC in the salvage agreement, owners wished to have underwriters' support before signing the LOF.
 - c. Underwriters were contacted via the "out of hours" contact, but the lead underwriter support was not available until 0800. [Ref: 2.5.2]

3.2 CAUSE

The cause of the flooding on *Sonia* was progressive pipe wall failure of a stub pipe connecting a seawater isolating valve to a sea chest.

The failure of this mild steel pipe was due to a combination of general internal and external corrosion over the pipe length with localised galvanic corrosion within an annular zone adjacent to the bronze isolation valve.

A major contributory factor was the failure of successive owners and/or inspecting surveyors to detect this progressive corrosion. Internal access was difficult, but external access for inspection was possible.

SECTION 4 - RECOMMENDATIONS

The Maritime and Coastguard Agency (MCA) is recommended to:

Regularly review the contact list of the various agencies and/or companies offering tugs, services and salvage equipment within the Solent area.

The managers, BALTHELLAS CHARTERING SA, is recommended to:

Advise the masters of all vessels it manages, that, in the interests of marine safety, the local coastguard should, at all times, be informed of any significant defect that will affect the safe operation of their vessels or is likely to cause environmental pollution.

The International Association of Classification Societies (IACS) is recommended to:

Follow the lead of the Polish Classification Society (PRS) in issuing a new paragraph in its PRS Instructions for Surveyors, Vol 1 Ch II B-2 paragraph 1.8. This will read:

Where bottom and side fittings are not connected directly to the sea chest but with a spool pipe, then this pipe is to be dismantled and the fittings are to be reassembled to the sea chest directly.

If, due to special circumstances, e.g. increasing of sea chest volume for additional sea water supply, such as a spool pipe to be fitted upon PRS acceptance only.

Such a spool pipe is the subject of close up examination in dismantled condition during each Class Renewal Survey.

GLOSSARY OF TERMS

- Collision mat - Thrum mat, about 3 - 4 metres square, which can be hauled under the ship's bottom to cover collision damage resulting in a leak. Kept in place by lowering line, bottom line and two fore and aft ropes.
- Medium frequency - Main radio frequency.
- Securité message - A radio telephone message prefix indicating that a message concerning the safety of navigation is about to be made.
- SCOPIC Clause - It is described as being designed to encourage salvors to go to the assistance of ships which threatened damage to the environment, secure in the knowledge that even if they might fail, they would not be out of pocket.

ANNEX 1

1. Maintenance Management System – January 1999



TO ALL MASTERS AND CHIEF ENGINEERS 29 / 01 / 1999

SUBJ CHIEF ENGINEER'S JOB DESCRIPTION

DEAR SIRS

IN ORDER TO FACILITATE AND DEFINE CH. ENGINEER'S RANGE OF DUTIES AND RESPONSIBILITIES PLEASE FIND ATTACHED A COMPREHENSIVE DESCRIPTION OF ABOVE MENTIONED DUTIES / RESPONSIBILITIES.

I DO NOT WISH TO DISTURB THE EQUILIBRIUM OF RELATIONS ON THE VESSELS BUT COOPERATION AND UNDERSTANDING OF EACH OTHER IS REQUESTED. ALL OF US WORK FOR THE SAME PURPOSE.

FOR ANY REMARK PLEASE DO NOT HESITATE TO COMMUNICATE WITH ME.

YOU ARE KINDLY REQUESTED TO SIGN THE COPY OF THIS LETTER AND FORWARD TO THE OFFICE INDICATING SAFE RECEIPT / AKNOWLEDGMENT FOR ALL THE ABOVE.

MY BEST REGARDS AND THANKING YOU FOR YOUR COOPERATION

A KALOULIS

A handwritten signature in black ink, consisting of several loops and a long horizontal stroke at the bottom.



JOB DESCRIPTION

<u>JOB TITLE</u>	CHIEF ENGINEER
<u>PURPOSE</u>	THE EFFECTIVE MANAGEMENT OF TECHNICAL AND ASSOCIATED RESOURCES ON BOARD AND THEIR MAINTENANCE.
<u>REPORTING TO</u>	MASTER, SUPERINTENDENT IN CHARGE
<u>SENIOR TO</u>	2nd ENGINEER, ELECTRICIAN, CHIEF MATE.
<u>LIAISON WITH</u>	THE COMPANY'S MANAGEMENT, TECHNICAL DEPT.

DUTIES / RESPONSIBILITIES

- 1 TO ENSURE THAT THE TECHNICAL CONDITION OF THE VESSEL MEETS OR EXCEEDS AT ALL TIMES THE REQUIREMENTS OF THE COMPANY'S SAFETY MANAGEMENT SYSTEM, AS WELL AS THE REQUIREMENTS OF THE CLASSIFICATION SOCIETY, FLAG AND PORT STATE ADMINISTRATIONS.
- 2 TO DEVELOP AND CONTROL PLANS FOR THE MAINTENANCE OF TECHNICAL INSTALLATIONS AND EQUIPMENT ON BOARD THE SHIP.
- 3 TO PARTICIPATE IN THE SHIP'S MANAGEMENT.
- 4 TO MONITOR HIS OWN PERFORMANCE.
- 5 TO DIRECT THE DEPLOYMENT OF THE WORK FORCE IN CLOSE CONSULTATION WITH THE CHIEF MATE AND SECOND ENGINEER.
- 6 TO APPRAISE THE PERFORMANCE AND THE POTENTIALS OF THE ENGINEERING STAFF IN ACCORDANCE TO PROCEDURES
- 7 TO OVERSEE THE FAMILIARISATION AND TRAINING OF E/R STAFF.
- 8 TO ENSURE THAT THE VESSEL IS ADEQUATELY BUNKERED WITH FUEL LUBRICANTS AND FRESH WATER FOR THE VOYAGE.
- 9 HE IS IN CHARGE OF BUNKERING THE VESSEL AND FOLLOWING THE PRESCRIBED CHECK LISTS ISSUED BY COMPANY.

SPECIAL RESPONSIBILITIES

- 1 TO ADVISE THE MASTER ON MATTERS PERTAINING TO SEAWORTHINESS OF THE VESSEL WITH SPECIAL REGARDS TO THE TECHNICAL INSTALLATIONS AND EQUIPMENT.
- 2 TO ENSURE AT ALL TIMES THE SAFETY OF THE PERSONNEL
- 3 TO TAKE CHARGE PERSONALLY IN EMERGENCIES INVOLVING MACHINERY.
- 4 TO ENSURE, IN CONJUNCTION WITH THE MASTER, THAT THE VESSEL ONLY LEAVES THE PORT IN A SEAWORTHY CONDITION AND FULLY PROVIDED AS NECESSARY.
- 5 TO BE FULLY FAMILIAR WITH THE CONDITION OF THE HULL AND MACHINERY.
- 6 TO MAINTAIN ANY PLANNED MAINTENANCE SYSTEM UP TO DATE AND COMPLETE ALL RELEVANT DOCUMENTATION. INFORMATIONS TO ALL THE CONCERNED PARTIES FOR ANY PROGRESS TO FOLLOW .
- 7 TO CARRY OUT PERSONALLY [WHEN HE IS AUTHORISED] ANY SURVEY WORK ACCORDING TO THE CLASSIFICATION SOCIETY'S REGULATION.
e.g CONTINIOUS MACHINERY SURVEY
- 8 TO ENSURE OPTIMUM EFFICIENCY IN THE USE OF FUEL, LUBRICATING OIL AND STORES

9 TO ENSURE THAT ALL LOCAL , NATIONAL AND INTERNATIONAL LAWS IN RELATION TO THE SAFETY AT SEA AND THE PREVENTION OF POLLUTION OF THE ENVIRONMENT ARE COMPLIED WITH.

10 TO ENSURE THAT ALL PERSONS ENGAGED IN MAINTENANCE WORK ARE USED TO THE OPTIMUM ADVANTAGE AND FOLLOW SAFE WORKING PRACTICES.

11 TO PREPARE ANY TECHNICAL DOCUMENTATION AS PER COMPANY'S PROCEDURES

CHIEF ENGINEER'S PRIMARY RESPONSIBILITY MUST ALWAYS BE THE SAFE OPERATION OF ALL MACHINERY , SAFE WORKING PRACTICES WITHIN HIS DEPARTMENT AND IN GENERAL THE SAFETY OF THE SHIP. HE IS RESPONSIBLE FOR THE WELL BEING , TRAINING AND DISCIPLINE OF ALL MEMBERS OF HIS DEPARTMENT. ALSO HE MUST ENSURE THAT THE COMPANY'S INSTRUCTIONS AFFECTING THE ENGINE DEPARTMENT ARE CARRIED OUT.

THE CHIEF ENGINEER WILL ADVISE THE MASTER ON THE PLANNING REQUIREMENTS FOR THE ENGINE DEPARTMENT AND MACHINERY MAINTENANCE.

SPECIAL DUTIES

THE CHIEF ENGINEER IS TO BE PRESENT IN THE ENGINE ROOM WHEN THE SHIP IS ENTERING OR LEAVING PORT , IN CONFINED WATERS OR WHEN WORKING UNDER ORDER FROM THE BRIDGE.

THE CHIEF ENGINEER IS RESPONSIBLE FOR THE PROPER OPERATION AND THE REPAIRS OF THE MAIN ENGINE ; PROPELLER , BOILERS AND AUXILIARIES , DECK MACHINERY , INCLUDING WINCHES , WINDLASS AND VENTILATION FANS , AIR CONDITIONERS , CARGO PUMPING PLANT [IF ANY] AND ALL ELECTRICAL EQUIPMENT EXCEPT RADIO AND NAVIGATIONAL AIDS . IN ADDITION , HE IS RESPONSIBLE TO MAINTAIN IN GOOD WORKING ORDER ALL LIFEBOAT MOTORS GALLEY AND PANTRY EQUIPMENT , STEAM , ELECTRICAL OR FUEL CONNECTIONS AND / OR MACHINERY , REFRIGERATING MACHINERY AND DOMESTIC REFRIGERATORS .

WHERE OPERATIONAL DIFFICULTIES OCCUR AFFECTING THE MACHINERY PERFORMANCE , A DETAILED REPORT OF THESE AND THE REMEDIAL ACTION TO BE TAKEN , MUST BE FORWARDED TO THE COMPANY AS SOON AS POSSIBLE. THE CHIEF ENGINEER IS TO EXERCISE THE UTMOST CONTROL OVER MAINTENANCE , REPAIRS AND THE ORDERING OF SPARES / STORES , IN ORDER TO EFFECT THE MAXIMUM ECONOMY CONSISTENT WITH SAFE AND EFFICIENT OPERATIONS.

UPON JOINING THE VESSEL , THE CHIEF ENGINEER , MUST ISSUE HIS OWN STANDING ORDERS AS SUPPLEMENT TO THE COMPANY'S INSTRUCTIONS PERTAINING IN CIRCULARS.

SUCH STANDING ORDERS SHALL INCLUDE , BUT ARE NOT LIMITED TO , WATCH KEEPING , OIL TRANSFER PROCEDURES , CARE OF SPARES , STORES AND RECONDITIONED PARTS AND SPECIAL REQUIREMENTS / FEATURES OF THE VESSEL.

CORRESPONDING SUPPLEMENTS [FORMS , INSTRUCTIONS ETC.] FOR THE PROPER ADJUSTMENT WITH ALL THE ABOVE ARE ALREADY AT YOUR DISPOSAL , THROUGH CIRCULARS.



TO ALL MASTERS AND CHIEF ENGINEERS 15/12/98
SUBJ PROCEDURES FOR CHANGE OF VESSEL'S COMMAND

DEAR SIRS

WHENEVER CHANGE OF VESSEL'S COMMAND TAKES PLACE,
YOU ARE KINDLY REQUESTED TO PASS OVER YOUR VESSEL'S E/R
COMMAND TO THE NEW CH. ENGINEER IN DETAILED MANNER AND
MORE OVER TO MAKE HIM AWARE FOR THE FOLLOWING

1 SHIP'S PERFORMANCE.

UPDATE THE NEW CH. ENGINEER ABOUT VESSEL, SEA PERFORMANCE
IN LOADED / BALLAST CONDITION AS SPEED ,RPM ,DAILY CONSUMPTION
FOR FUEL , DIESEL , LUBS , FRESH WATER AS WELL RELATIVE CONSUMPTION
WHILE VESSEL AT PORT. INDLE OR UNDER OPERATIONS.

2 BUNKERS , LUBRICANTS , FRESH WATER.

DELIVER TO THE NEW CH ENGINEER A STATEMENT INDICATING QUANTITIES
OF BUNKERS , LUBRICANTS , FRESH WATER REMAINS ON BOARD UPON TIME
OF CHANGE OF COMMAND.

3 PREPARE UPDATED INVENTORY LISTS FOR YOUR DEPARTMENTS AND
HAND TO THE NEW CH. ENGINEER.

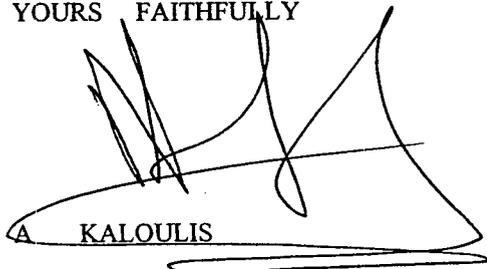
4 DELIVER ALL COMPANY'S CIRCULARS ,INSTRUCTIONS AND EXPLAIN TO
THE NEW CH. ENGINEER WAY OF COMPANY'S POLICY.

5 BOTH OF CH. ENGINEERS TO CARRY OUT A SUPERFICIAL INSPECTION OF
PRESENT E/R CONDITION. IF ANY OUTSTADING REMARK/REPAIR ARE IN
PROGRESS, NEW CH. ENGINEER TO BE ADVISED ACCORDINGLY.

6 FOR ALL THE ABOVE A COVER LETTER TO BE ISSUED STATING ,
ANALYTICALLY, ALL THE PREDISCRIBED PROCEDURES AND TO BE
SIGNED BY BOTH CH. ENGINEERS .RELEVANT COPIES TO BE FORWARDED
TO THE OFFICE.

YOU ARE KINDLY REQUESTED TO SIGN THE COPY OF THIS LETTER AND
FORWARD TO THE OFFICE INDICATING SAFE RECEIPT AND
AKNOWLEDGMENT OF ALL THE ABOVE.
MY BEST REGARDS AND THANKING YOU FOR YOUR COOPERATION.

YOURS FAITHFULLY



A KALOULIS

09-06-98

BALTHELLAS CHARTERING SA

TO ALL MASTERS AND CHIEF ENGINEERS

SUBJ SUBMITTAL OF SPARES REQUISITION

DEAR SIRS

PLEASE FIND ENCLOSED REQUISITION LIST FORM THAT HAS TO BE FILLED WHENEVER YOU WANT TO ORDER SPARES FOR M/E OR ANY AUXILIARY EQUIPMENT.

PLEASE START, UPON RECEIPT OF THIS CIRCULAR, TO PROVIDE OFFICE SPARES REQUISITION AS PER THE ENCLOSED FORMS.

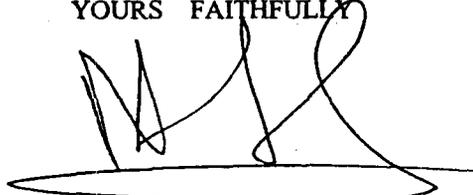
ALSO ENUMERATION OF REQUISITION FORMS IS ESSENTIAL IN ORDER YOURS AND OURS FILES TO BE UPDATED CORRECTLY.

ALL MENTIONED DETAILS/SPECIFICATIONS IN FORMS MUST BE CAREFULLY COMPLETED IN ORDER WE PREVENT MISTAKES.

PLEASE SIGN THE COPY OF THIS LETTER AND FORWARD TO THE OFFICE INDICATING SAFE RECEIPT AND AKNOWLEDGEMENT OF ALL THE ABOVE.

HOPING TO YOUR COOPERATION.

YOURS FAITHFULLY



A KALOULIS

05-06-98

BALTHELLAS CHARTERING S A

TO ALL MASTERS AND CHIEF ENGINEERS
REF M/E AND D/G FORMS AND STANDING INSTRUCTIONS FOR
BUNKERING PROCEDURES

DEAR SIRS

PLEASE FIND ENCLOSED VARIOUS FORMS ENABLING YOU TO FACILITATE
SUBMISSION OF MONTHLY REPORTS ACCORDING TO ABOVE FORMS.
IN PARTICULAR, FORMS ARE AS FOLLOWING.

1 D/Gs CRANKSHAFT DEFLECTION REPORT.
ABOVE FORM TO BE COMPLETED AND SENT TO OFFICE EVERY TWO
MONTHS INCLUDING ANY COMMENTS , IF ANY.

2 M/E CRANK SHAFT DEFLECTION.
ABOVE FORM TO BE COMPLETED AND SENT TO OFFICE EVERY THREE
MONTHS. PLEASE PAY PARTICULAR ATTENTION TO VESSEL'S CONDITION
WHILE CARRYING OUT DEFLECTION.

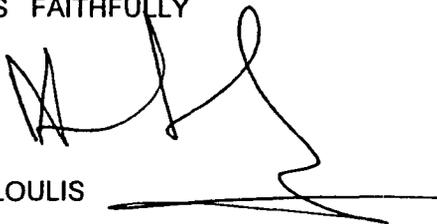
3 MAIN ENGINE AND COMPONENTS RUNNING HOURS AS WELL AS D/GS
RUNNING HOURS.
ABOVE FORMS TO BE FILLED AND SEND TO OFFICE ON MONTHLY
BASIS.

4 OWNERS STANDING INSTRUCTIONS FOR BUNKERING.
DUE TO RECENT DISCREPANCIES OF BUNKERS WHILE RECEIVING ,WE
KINDLY REQUEST YOU TO COMPLY WITH ENCLOSED CHECK LISTS
BEFORE /DURING /ON COMPLETION OF BUNKERING.

PLEASE SIGN THE COPY OF THIS LETTER AND FORWARD IT TO OUR
OFFICE INDICATING SAFE RECEIPT AND AKNOWLEDGMENT OF ALL THE
ABOVE. HOPING TO YOUR COOPERATION .

YOURS FAITHFULLY

A KALOULIS



2. Intervention Powers – Initial Notification

Maritime and Coastguard Agency
Spring Place
105 Commercial Road
Southampton
SO15 1EG

Fax To: Marinet (Ship Agencies) Ltd

Attn: Simon Rowe

Fax No: 01703 338780

Date & Time: 1 September 1999 2345

Please relay urgently to owners of MV SONIA attention Mr Kaouis of Balthellas Shipping Company.

As Head of Operations of The Maritime and Coastguard Agency for and on behalf of The Secretary of State formally advise Marinet as agents and Balthellas Shipping Co as owners of MV SONIA that we have the greatest concern for the safety of this vessel which is currently taking water into the engine room and in danger of sinking.

I have personally contacted Mr Kaouis on two occasions this evening at approximately 1800 hrs and then again at 2135 hrs expressing the deep concern of the Maritime and Coastguard Agency for the safety of this vessel. On both these occasions owners have been urged to urgently appoint salvors to take charge of the salvage of this vessel. To date owners have ignored this request, whilst the condition of the vessel continues to deteriorate.

As The Maritime and Coastguard Agency for and on behalf of UK Government we have sent two tugs to assist the vessel and are currently putting on board a duly appointed officer of the Maritime and Coastguard Agency to assess the situation. A salvage officer from the Royal Navy is also assisting. The two MOD Salvage tugs on scene are assisting out of goodwill and require to leave soon due to other commitments. It is necessary for you to appoint tugs and Salvors immediately

It is our opinion that owners have not taken sufficient action to date and I must formally advise you that the powers of intervention for and on behalf of the Secretary of State may be exercised as your vessel is posing a risk of significant pollution to UK waters and coastline. I urgently request you formally state your intentions.



John Garner
Head of Operations
Maritime and Coastguard Agency
Tel: 01705 559007
Fax: 01705 551763

3. Intervention Powers – General Direction

Maritime and Coastguard Agency
Spring Place
105 Commercial Road
Southampton
SO15 1EG

Fax To: Marinet (Ship Agencies) Ltd

Attn: Simon Rowe

Fax No: 01703 338780

Date & Time: 2 September 1999 0530

**INTERVENTION AFTER A MARINE ACCIDENT: GENERAL DIRECTION
MV SONIA**

The Secretary of State in exercise of the powers conferred on him by Section 137 of the Merchant Shipping Act 1995 (as amended) hereby directs the owners or master of the ship MV SONIA, which has had an accident and which in the opinion of the Secretary of State may cause significant pollution in the United Kingdom or UK Waters. We hereby direct you to put to Mr John Garner, Head of Operations, Maritime and Coastguard Agency, specified salvage measures to be taken for the salvage of the vessel or its cargo, including any proposals they have to prevent or minimise pollution and to obtain agreement to any such plans before they are put into effect or such action is taken.

Failure to comply with any requirement of this Direction is an offence under the above mentioned Act. This Direction shall remain in force until cancelled.

For and on behalf of the Secretary of State

A handwritten signature in black ink, appearing to read 'J. P. Garner', with a long horizontal stroke extending to the left.

John Garner
Head of Operations
Maritime and Coastguard Agency
Tel: 01705 559007
Fax: 01705 551763

4. Intervention Powers – Request for Salvage Plans



Maritime and Coastguard Agency

Maritime and Coastguard Agency
Spring Place
105 Commercial Road
Southampton
SO15 1EG

Tel: 01703 329510
Fax: 01703 329531

To: Titan Maritime Industries, UK being salvors in Possession of MV SONIA

[1800] ^{Hours} 2 September 1999

INTERVENTION AFTER A MARINE ACCIDENT: GENERAL DIRECTION

The Secretary of State in exercise of the powers conferred on him by Section 137 of the Merchant Shipping Act 1995 (as amended), hereby directs the salvors of the MV SONIA, which has had an accident and which, in the opinion of the Secretary of State may cause significant pollution in the United Kingdom or UK Waters, to put to me John Garner Head of Operations Maritime and Coastguard Agency any plans they have for the salvage of the vessel or its cargo, including passage plans, or any other proposals that they have to prevent or minimise pollution, and to obtain his agreement to any such plans before they are put into effect, or such action is taken.

Failure to comply with any requirement of this direction is an offence under the above mentioned Act.

This direction will remain in force until cancelled.

For and behalf of the Secretary of State.

John Garner
Head of Operations Maritime and Coastguard Agency





Maritime and Coastguard Agency

Maritime and Coastguard Agency
Spring Place
105 Commercial Road
Southampton
SO15 1EG

Tel: 01703 329510
Fax: 01703 329531

To: Marinet (Ship Agencies) Ltd

[1800 HOURS]
[1800] 2 September 1999

INTERVENTION AFTER A MARINE ACCIDENT : GENERAL DIRECTION

A Lloyds Open Form 95 having now been signed between the Master of MV SONIA and Titan Maritime UK for the salvage of the MV SONIA, the general direction issued by myself John Garner, Head of Operations Maritime and Coastguard Agency, at 0530 : 2 September 1999 to Marinet (Ship Agencies) Ltd and directed to the owners or masters of the MV SONIA, for and behalf of the Secretary of State in exercise of the powers conferred on him by Section 137 of the Merchant Shipping Act 1995 (as amended), is cancelled.

A general direction under Section 137 of the Merchant Shipping Act 1995 (as amended) has been issued for and behalf of the Secretary of State to Titan Maritime UK as salvors of the MV SONIA to put to John Garner, Head of Operations maritime and Coastguard agency, any plans that they have for the salvage of the vessel or its cargo, including passage plans, or any other proposals that they have to prevent or minimise pollution, and to obtain his agreement to any such plans, before they are put into effect, or such action is taken.

For and on behalf of the Secretary of State

John Garner
Head of Operations maritime and Coastguard Agency



5. Intervention Powers – Salvage and Passage Plan



Maritime and Coastguard Agency

02 September 1999

To: Mr. Dave Miller, Salvage Master
Mr. Richard Polley, Salvage Manager
Mr. Steven Young, Deputy Harbour Master Southampton
Commander Chapman Andrews, QHM Portsmouth
Solent MRSC

CASUALTY "SONIA"
PASSAGE PLAN

GENERAL CONDITIONS

1. To depart position from Sandown anchorage. Vessel to be in sound condition.
2. No risk of marine pollution.
3. A satisfactory passage plan from current position in U.K waters to the berth at Southampton to be conducted to Pilots advice. This is approved by the Maritime and Coastguard Agency.
4. Maximum sea state 4 (force 5) and not less than 2000 metre visibility.
5. Free surface to be reduced to a minimum before transit.



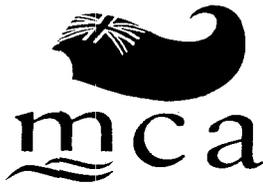
PASSAGE PLAN

1. Casualty "SONIA" to be towed by two tugs with sufficient towage capability.
2. During passage ship will not have any power.
3. Any difficulties during passage are to be reported to Southampton VTS and QHM Portsmouth as appropriate.
4. Passage to be made in daylight.
5. Southampton pilot is to be on board from NAB tower area.
6. Harbour master requires "SONIA" under tow to be given "clear channel" at Thorn Channel.

J. P. Garner 2230

John Garner
Head of Operations
Maritime and Coastguard Agency

6. Intervention Powers – Cancellation



Maritime and Coastguard Agency

To: Titan Maritime Industries UK being the Salvors in possession of MV SONIA

3 September 1999 Time: 1555

INTERVENTION AFTER A MARINE INCIDENT GENERAL DIRECTION - MV SONIA

A Direction issued by me, John Garner, Head of Operations, Maritime and Coastguard Agency, acting for and on behalf of the Secretary of State in exercise of the Powers conferred on him by Section 137 of the Merchant Shipping Act 1995 as amended, on 1800 hours, Thursday 2 September 1999.

This directed the salvors of the vessel SONIA, which had an accident and which, in the opinion of the Secretary of State may cause significant pollution in the United Kingdom or UK Waters, to put to me any plans to salvage the vessel or its cargo, including Passage Plans, for approval.

The safety requirements have been fully discussed and agreed between Titan Maritime (UK) Ltd and the Maritime and Coastguard Agency throughout the Salvage operation. Additionally, a Passage Plan has been put in place with the full knowledge of the Deputy Harbour Master, Southampton and QHM Portsmouth. The Passage Plan therefore has the approval of the Maritime and Coastguard Agency.

As such the Direction issued by me for and on behalf of the Secretary of State to the Salvors, Titan Maritime, of the vessel SONIA is hereby revoked at 1555 hours on 3 September 1999.

J. P. Garner

John Garner
Head of Operations
Maritime and Coastguard Agency
3 September 1999

