

Report on the investigation of the collision between
the bulk carrier
Alam Pintar
and the fishing vessel
Etoile des Ondes
15 miles north of the Cherbourg peninsula
on 20 December 2009
resulting in one fatality
and the loss of the fishing vessel

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Report No 11/2010
September 2010

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.

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GLOSSARY OF ABBREVIATIONS, ACRONYMS AND TERMS

AB	-	Able seaman
AIS	-	Automatic Identification System
ARPA	-	Automatic Radar Plotting Aid
BRM	-	Bridge Resource Management
BTM	-	Bridge Team Management
Cable	-	0.1 nautical mile
CoC	-	Certificate of Competency
COLREGS	-	The Convention on the International Regulations for the Prevention of Collisions at Sea 1972 (as amended)
CPA	-	Closest Point of Approach
CROSS	-	Centres Régionaux Opérationnels de Surveillance et de Sauvetage
DOC	-	Document of Compliance
DPA	-	Designated Person Ashore
DSC	-	Digital Selective Calling
DWT	-	Deadweight
EPIRB	-	Emergency Position Indicating Radio Beacon
ETA	-	Estimated Time of Arrival
FIM	-	Fleet Instruction Manual
FRC	-	Fast Rescue Craft
G	-	Ship's course as steered by Gyro compass
GMDSS	-	Global Maritime Distress and Safety System
GPS	-	Global Positioning System
GT	-	Gross tonnage
HDD	-	Hard disc drive

ICS	-	International Chamber of Shipping
IMO	-	International Maritime Organization
ISM	-	International Management Code for the Safe Operation of Ships and for Pollution Prevention
kts	-	knots
kW	-	kilowatt
m	-	metres
“Mayday”	-	International distress signal (spoken)
Mayday Relay	-	Carries the same importance as “Mayday” but is made on behalf of any station that is unable to broadcast for itself
MCA	-	Maritime and Coastguard Agency
MGN	-	Marine Guidance Note
MRCC	-	Marine Rescue Co-ordination Centre
MSN	-	Merchant Shipping Notice
nm	-	Nautical miles
No	-	Number
OOW	-	Officer of the Watch
PE	-	Preliminary examination
RNLI	-	Royal National Lifeboat Institution
SFIA	-	Sea Fish Industry Authority
SMC	-	Safety Management Certificate
SMS	-	Safety Management System
SN	-	Serial number
SOG	-	Speed over Ground
SOLAS	-	The International Convention for the Safety of Life at Sea, 1974, and its Protocol of 1988

STCW	-	The International Convention on Standards of Training, Certification and Watchkeeping 1978 (as amended)
TSS	-	Traffic Separation Scheme
VHF	-	Very High Frequency
VTS	-	Vessel Traffic Services
UK	-	United Kingdom
UNCLOS	-	United Nations Convention on the Law of the Sea
UTC	-	Universal Co-ordinated Time
VDR	-	Voyage Data Recorder
VHF	-	Very High Frequency
W	-	Watts

Times: All times used in this report are UTC unless otherwise stated

Figure 1



Alam Pintar

Figure 2



Etoile des Ondes

SYNOPSIS

At 1851 on 20 December 2009 the Singapore registered bulk carrier *Alam Pintar* was in collision with the UK registered fishing vessel *Etoile des Ondes* 15 nm north of the Cherbourg peninsula. As a result of the collision the fishing vessel sank; one of her four crew, Chris Wadsworth, tragically lost his life.

Alam Pintar was on an east-north-easterly course between the Casquets and the Dover Strait traffic separation schemes (TSS) on her way to Hamburg. The bridge was manned by an inexperienced officer and an unqualified deck cadet.

The officer of the watch (OOW) had seen *Etoile des Ondes* and realised there was a risk of collision, but his initial alterations of course to avoid collision were rendered ineffective when the fishing vessel also changed course to start shooting her pots. Finally, *Alam Pintar's* OOW ordered the wheel hard-a-starboard, but this was too late to be effective in preventing the collision.

The master and OOW of *Alam Pintar* were aware of the collision, but failed to stop. They made no attempt to confirm if *Etoile des Ondes* and her crew were safe, and failed to report the incident. There is evidence to suggest that the crew of *Alam Pintar* subsequently attempted to alter recorded contemporaneous data to mask the vessel's involvement in the accident.

Following the collision, three of the four crew from *Etoile des Ondes* managed to abandon the vessel and board their liferaft. Sadly, the fourth crew member was lost. The surviving crew fired two red distress rockets and activated their EPIRB. The flares were seen by at least three vessels and the sighting was promptly reported to Jobourg MRCC, as the nearest coastal authority, who then co-ordinated the search and rescue operation. Jobourg MRCC broadcast three "Mayday Relay" messages, but none of the other vessels in the area responded.

The crew of *Etoile des Ondes* were eventually rescued by the ferry *Norman Voyager*, which, upon sighting the flares, immediately proceeded to render assistance.

The MAIB has published separate Safety Flyers for the commercial shipping and fishing industries, which identify the key safety lessons from this investigation. Recommendations have also been made to the International Chamber of Shipping, and the major fishing federations, to promulgate the contents of the Flyers to their associates and membership highlighting to ship operators and fishermen the importance of effective bridge teams and the maintenance of proper navigational lookouts.

SECTION 1 - FACTUAL INFORMATION

1.1 PARTICULARS OF *ETOILE DES ONDES*, *ALAM PINTAR* AND ACCIDENT

Vessel details	<i>Etoile des Ondes</i>
Registered owner	: Etoile des Ondes Limited
Port of registry	: Weymouth
Flag	: British
Type	: Fishing Vessel, potter
Built	: France, 1957
Fishing number	: WH 696
Construction	: Wood
Registered Length	: 14.5 m
Gross tonnage	: 40.0
Other relevant info	: Just commenced shooting the last string of pots for the day
Accident details	
Time and date	: 1851, 20 December 2009
Location of incident	: Lat 49° 58' N Long 001° 54' W, 15 nm north of the Cherbourg peninsula
Persons on board	: 4
Injuries/fatalities	: 1 fatality 3 cases of hypothermia, cuts and bruising
Damage	: Vessel lost

Vessel details***Alam Pintar***

Registered owner	:	Alam Pintar Maritime Ltd
Manager(s)	:	PACCSHIP (UK) Ltd
Port of registry	:	Singapore
Flag	:	Singapore
Type	:	Post Panamax Bulk Carrier
Built	:	IHI Marine United Inc Yokohama, Japan, 2005
IMO number		9296858
Classification society	:	Lloyd's Register
Construction	:	Steel
Length overall	:	229.0 m
Breadth	:	36.50 m
Draught	:	14.14 m
Gross tonnage	:	46,982
Engine power and/or type	:	Sulzer 6RTA58T, 10,300 kW
Service speed	:	14.5 kts
Other relevant info	:	Fully loaded, on passage from Quebec to Hamburg

Accident details

Time and date	:	1851, 20 December 2009
Location of incident	:	Lat 49° 58' N Long 001° 54' W, 15 nm north of the Cherbourg peninsula
Persons on board	:	21
Injuries/fatalities	:	0
Damage	:	Minor cosmetic damage to the bow and port quarter areas

1.2 BACKGROUND

The 87,052 deadweight (DWT) Singapore registered bulk carrier *Alam Pintar* (**Figure 1**) was operating in the Atlantic Basin area between America / Canada and Europe at the time of the accident. On the evening of the collision she was transiting the English Channel, via the Casquets and the Dover Strait traffic separation schemes (TSS), towards her discharge port of Hamburg.

Etoile des Ondes (**Figure 2**) was a Weymouth-based potter. Her skipper had worked the fishing grounds north of the Channel Islands and Cherbourg for several years and was familiar with the demanding requirements of fishing this area. At the time of the collision, the crew had just commenced shooting the last string of pots for the day; on completion, the skipper intended to proceed to Cherbourg to land his catch and take on bait.

1.3 NARRATIVE

1.3.1 *Alam Pintar*

Alam Pintar left Quebec on 9 December 2009, giving an estimated time of arrival (ETA) at Hamburg for the morning of 22 December. Once clear of the Gulf of St Lawrence, the vessel proceeded to the south of Newfoundland Grand Banks before heading east across the North Atlantic towards the English Channel.

The crew settled into the trans-Atlantic watchkeeping schedule (**Annex 1**) after clearing the St Lawrence. The chief officer and the 4th officer were both assigned to the 0400 to 0800 watch, but the chief officer started a “day work”¹ routine, leaving the 4th officer alone on watch for the ocean passage. Able seamen (ABs) were available for lookout duties (**Annex 1**), but they were also assigned to “day work” and were not present on the bridge unless called.

¹ day work – ie a non-watchkeeping work routine which generally excludes night time duties.

On 20 December, the deck cadet joined the 4th officer on the 4-8 watch. This was partly to provide support for the 4th officer in anticipation of the increased navigational load that was expected during *Alam Pintar*'s transit of the English Channel, but was also viewed as a useful training opportunity. The deck cadet's duties included acting as a lookout when required.

Alam Pintar approached the Casquets TSS just after 1500 when the OOW submitted his situation report to "CROSS Jobourg"². She was steering 077° Gyro (G) using the autopilot at a speed of about 13.0 kts, and the OOW was plotting the ship's position on the chart at 30-minute intervals.

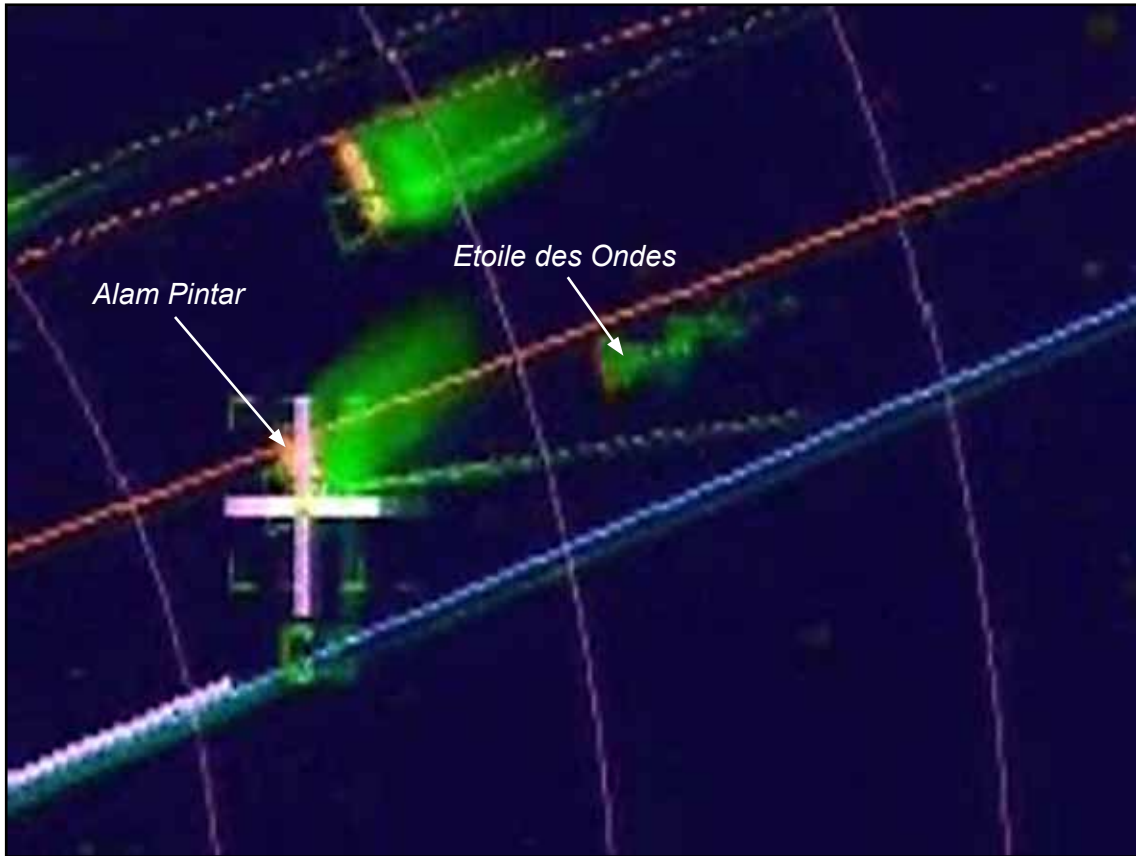
When the 4th officer and cadet came on watch at 1600, there was a significant amount of traffic proceeding in the same general direction as *Alam Pintar*, and complying with the TSS. The watch was uneventful, except for making a course adjustment for set, to 080° (G) at 1800, until at about 1835 the OOW sighted a cluster of bright lights almost dead ahead. He consulted the radar and saw a corresponding target about 3 to 4 nautical miles (nm) ahead.

When the target was acquired using the automatic radar plotting aid (ARPA) it showed a closest point of approach (CPA) of zero. He identified the cluster of lights as a fishing vessel and, as there was risk of collision, altered *Alam Pintar*'s course by 5° to starboard, to 085° (G), which placed the target on the vessel's port bow (**Figure 3**). This decision was based mainly on the ARPA information as he found it difficult to positively distinguish the fishing vessel's navigation lights visually, due to the glare produced by her deck working lights.

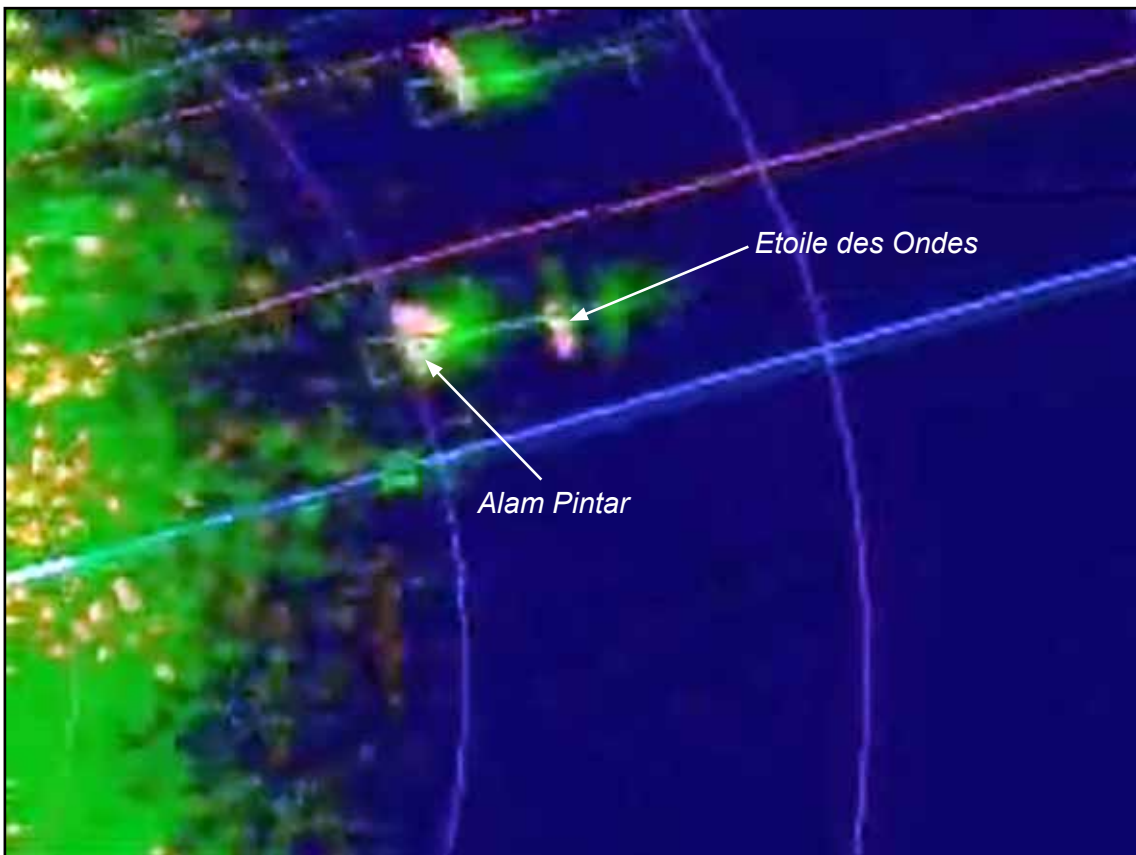
Initially, this action seemed to have been successful. However, as *Alam Pintar* drew closer, the fishing vessel's lights and radar target were observed to be tracking to starboard until, by 1846, the vessel had crossed over onto the starboard bow of *Alam Pintar* (**Figure 4**). At this time, the fishing vessel was less than 1 nm away.

Although the 4th officer was unsure about the actions of the fishing vessel, he did not consider using the whistle to warn the other vessel, nor did he call the master. Instead, he engaged manual steering, instructed the cadet to take the wheel, and then altered the course back to port onto a heading of 072° (G). This was intended to place the fishing vessel at a broader angle on the starboard bow. However, both the radar target and working lights remained ahead of *Alam Pintar* (**Figure 5**).

² CROSS – Centres Régionaux Opérationnels de Surveillance et de Sauvetage. Regional Operational Centres for Monitoring and Rescue. Marine Rescue Co-ordination Centre. CROSS or MRCC are used interchangeably to refer to Jobourg radio station.



Radar screen shot* showing *Etoile des Ondes* on *Alam Pintar*'s port bow



Radar screen shot* showing *Etoile des Ondes* fine on *Alam Pintar*'s starboard bow

*Note: Radar screen shots taken from a third party vessel's VDR

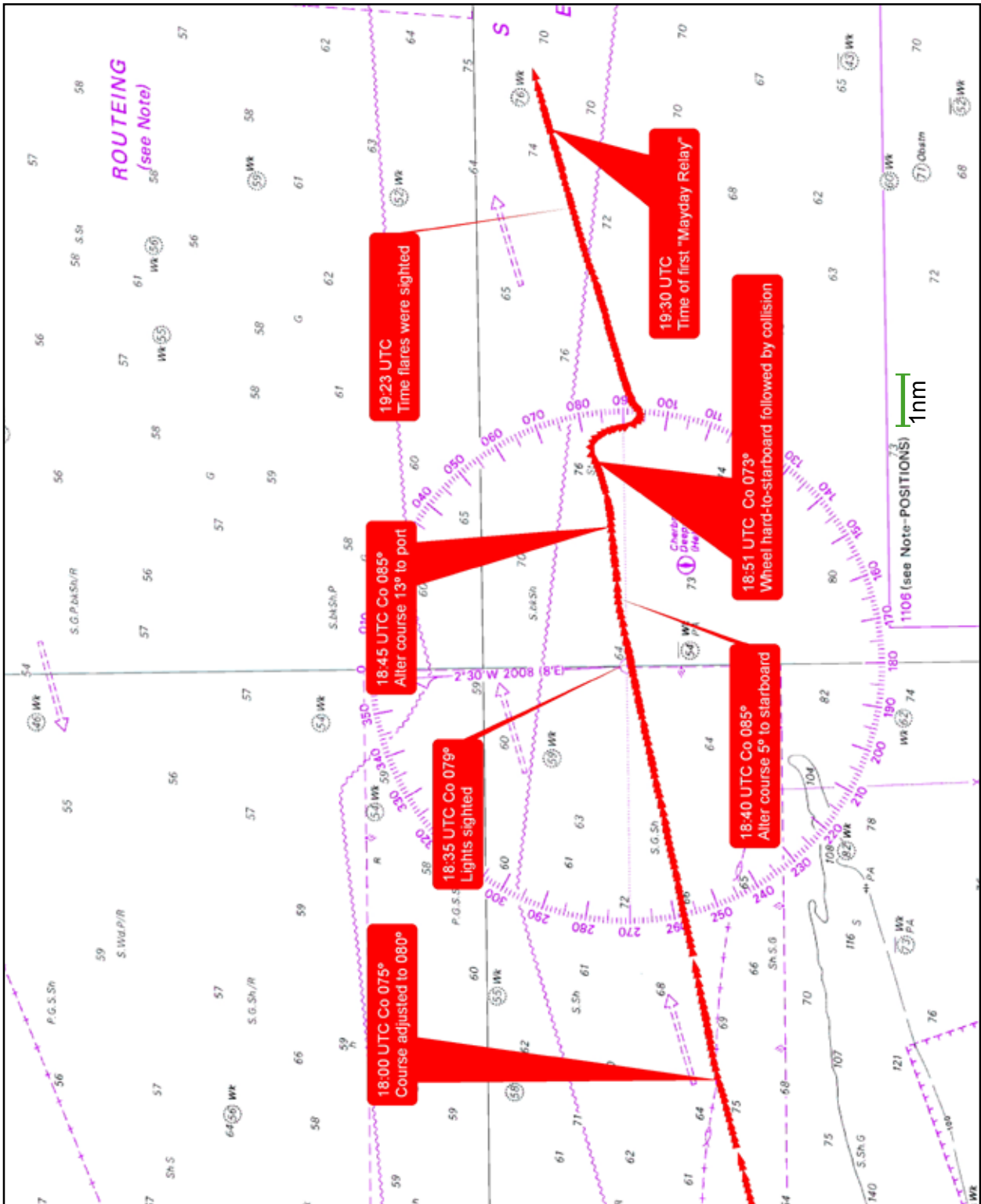


Radar screen shot showing *Etoile des Ondes* still ahead of *Alam Pintar* with a vector to the north

Note: Radar screen shot taken from a third party vessel's VDR

The 4th officer realised there was still a significant risk of collision, and ordered the cadet to put the helm hard over to starboard. However, *Alam Pintar*'s bow struck the port quarter of the fishing vessel before this action took effect. The fishing vessel was then observed passing closely down *Alam Pintar*'s port side and, as *Alam Pintar* swung rapidly to starboard, it was struck for a second time by the cargo vessel's port quarter.

The 4th officer then called the master, who was in his cabin, and advised him of the incident. The master ordered him to stop the main engines and proceeded to the bridge. However, the swing to starboard continued until *Alam Pintar* was on a southerly heading (**Figure 6**). The slowing down of the main engines also alerted engineer officers and other crew.



AIS record of the track taken by *Alam Pintar*

1.3.2 *Etoile des Ondes*

Etoile des Ondes left Weymouth at 2100 on Friday 18 December 2009 and arrived at her first fishing grounds, north of Cherbourg, early the next morning. The rest of the day was spent hauling and shooting 12 strings of pots after which, *Etoile des Ondes* proceeded to another fishing ground. It was the skippers' intention to return to the first fishing ground on Sunday afternoon and haul the pots he had just shot.

Because of the strong tidal stream present in this area, the skipper normally planned to haul pots around the time of the slack tides; this meant that he returned to the first fishing grounds late on Saturday afternoon. It was already getting dark when *Etoile des Ondes* arrived at the grounds, and she displayed the regulation lights for a vessel engaged in fishing. She also had six (2 x 500 Watt (W) plus 4 x 300 W) halogen deck working lights, switched on to illuminate the deck working area (**Figure 7**).

Hauling and shooting continued until about 1840 when, mid-way through hauling the last string of pots, the backrope³ parted. To bring the remaining pots on board, the skipper had to steam to the southerly marker buoy and pick up that end of the string. He then resumed hauling, heading north back towards the break.

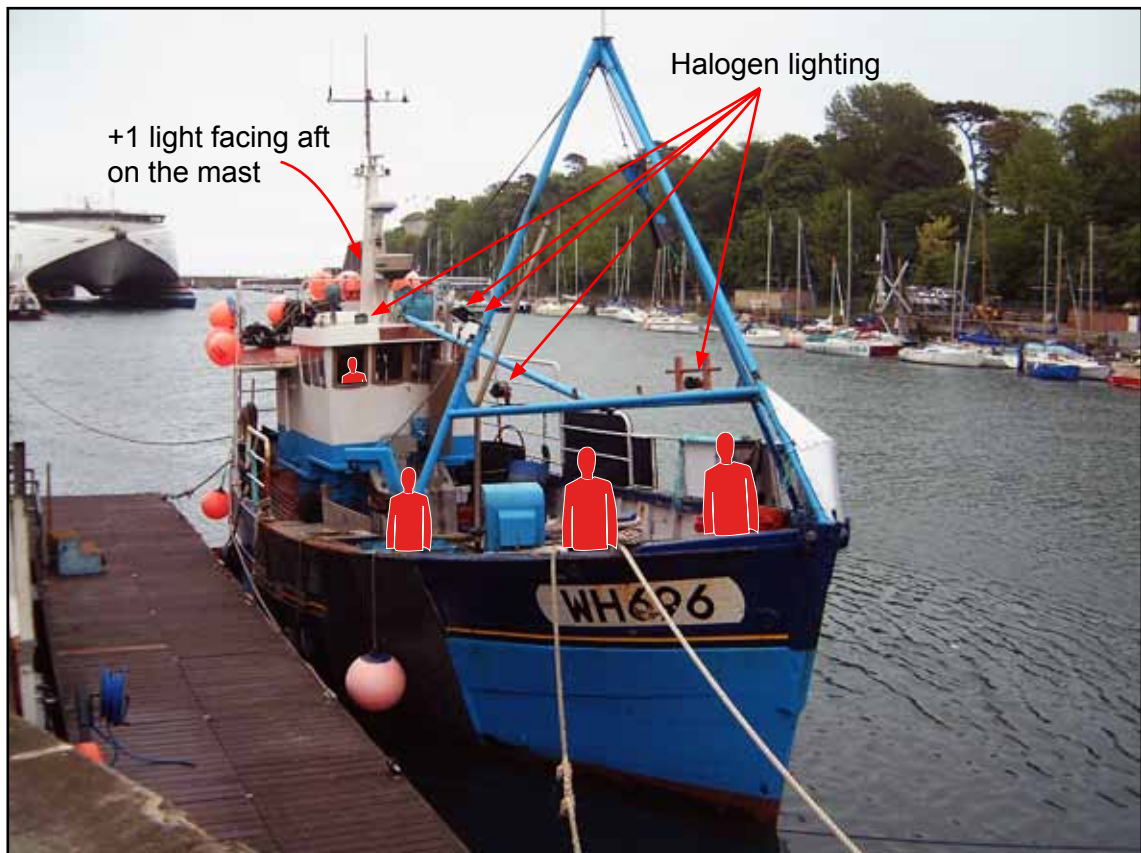
It was probably about this time that the OOW on *Alam Pintar* first sighted *Etoile des Ondes* at a range of 3 to 4 nautical miles and also when the skipper of *Etoile des Ondes* observed a target on his radar, which later proved to have been *Alam Pintar*. The skipper did not monitor or plot the target to see if there was any risk of collision.

When the last pot and the free end of the back rope were brought on board, one of the crew began splicing the broken ends of the rope together. At the same time, the skipper altered course towards the east-south-east, to reposition *Etoile des Ondes* ready for shooting.

Once in position, the skipper made a brief visual check for traffic and turned the vessel onto a northerly heading to begin shooting his last string. All the crew apart from the skipper were on deck; one guided the pots out, while the other two continued preparing and stowing the catch (**Figure 7**). Christopher Wadsworth (Chris) was sitting forward, next to a stowed string of pots, nicking⁴ crab claws.

³ The main rope to which the pots are attached.

⁴ Cutting the tendon in the claw to prevent them inflicting damage on themselves or other crabs when in the storage tank.



Etoile des Ondes - with halogen lighting and crew positions indicated
(whaleback omitted for clarity)

Before shooting, the skipper had seen the green side light of an approaching vessel on his port side, but was confident it would alter course to starboard and pass astern of his vessel. Once shooting began he concentrated solely on watching the pots going out and checking the electronic position plotter to make sure they were laid in the correct position.

Etoile des Ondes had been shooting for only a short period when the skipper looked up to see the same green light, very close by. He just had time to issue a warning to the crew before *Etoile des Ondes* was struck on her port quarter, turning her over onto her beam ends. The skipper managed to escape through the open wheelhouse window as the vessel lay over on her port side with water pouring into the wheelhouse. *Alam Pintar* then struck *Etoile des Ondes* a second blow with her port quarter as she passed by.

1.4 ACTIONS FOLLOWING THE COLLISION

1.4.1 *Alam Pintar*

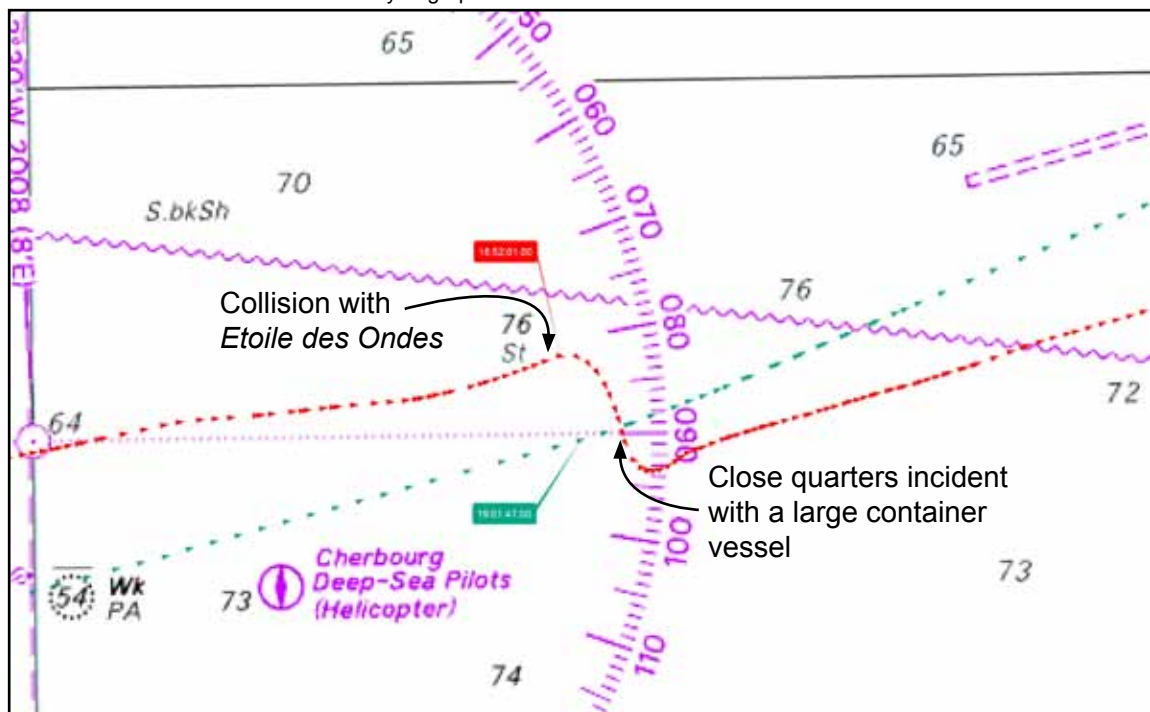
When *Alam Pintar*'s master, accompanied by the other deck officers, arrived on the bridge he found the vessel to be 90° off course, wheel amidships, and the engine telegraph set at "stop". He was told that his vessel had probably been in collision with a fishing boat, but that the fishing vessel had been seen after the

collision, still afloat and well lit. The master checked the radar and saw a target astern of *Alam Pintar*, which he assumed to be the fishing vessel. The target appeared to be moving, so he concluded the fishing vessel was safely afloat, and continued on his passage.

The main engine revolutions were increased to full sea speed, and the master ordered the helm hard-a-port, intending to return to the original course of 077° (G). He then noticed *Alam Pintar* had crossed the path of an overtaking vessel, and soon afterwards *Alam Pintar* was involved in a close quarters situation with a large container vessel as she passed by at a distance of 0.3 nm (**Figure 8**).

Reproduced from Admiralty Chart BA 2454 by permission of the Controller of HMSO and the UK Hydrographic Office

Figure 8



AIS track of *Alam Pintar* and a large container vessel

The senior engineer officers arrived on the bridge shortly after these alterations of course and speed, seeking to establish the reason for the abrupt manoeuvres. During the discussions that followed, distress flares were fired by the survivors of *Etoile des Ondes*. These flares would have been astern of *Alam Pintar*, although it is unclear if they were seen during the discussions. However, at 1930 Jobourg MRCC broadcast a “Mayday Relay”⁵ that was audible on the bridge VHF sets, indicating the fishing vessel required assistance.

⁵ The voice distress signal used to transmit a distress message on behalf of another vessel that is unable to transmit for itself. N.B - The use of the identifier “Mayday Relay” automatically makes these calls “All Stations” calls. Vessels receiving these calls have a legal duty to respond.

The master did not contact Jobourg MRCC to offer his assistance or confirm that his vessel had possibly been involved in a collision. Even after this broadcast was heard he decided to continue on passage. Shortly after the initial “all ships - Mayday Relay” Jobourg MRCC contacted *Alam Pintar* specifically to ask the master to confirm if he had heard the broadcast or seen the red flares which were near his position. The master assured Jobourg MRCC that he had not.

As *Alam Pintar* continued on passage to Hamburg, the ship’s documents and recordings, including those of the voyage data recorder (VDR), were altered or removed in an attempt to obscure any evidence suggesting a collision with *Etoile des Ondes*.

1.4.2 *Etoile des Ondes*

Etoile des Ondes was left semi-submerged in the water and laid over on her port side. Although her engine had stopped, the navigation and deck working lights were still lit as they were powered by batteries.

None of the crew wore any form of buoyancy aid. Emergency lifejackets were provided, stowed above the wheelhouse, but the crew received insufficient warning to reach them before being thrown into the water. When in the water, they were surrounded by loose gear and rigging from the boat, but were able to climb out and onto the hull.

When the skipper climbed out of the wheelhouse, he released the liferaft from its stowed position on top of it (**Figure 9**). Inflating it manually, he boarded along with the crew. It was at this time that they realised Chris was missing. Despite shouting and searching for him in the water, he could not be found.

The skipper then climbed back on top of the wheelhouse to release the EPIRB. On returning to the liferaft he cut the painter, cleared away other loose rigging, and paddled the liferaft a few metres clear of the vessel. They circled around the vessel, looking for Chris, but sadly he was not seen again.

When clear of *Etoile des Ondes*, the skipper fired two red parachute distress rockets and then huddled together with the rest of the crew attempting to keep warm. They could see the lights of several ships in the area and believed it would not be long before help arrived.



General overview of *Etoile des Ondes*' wheelhouse top and quarter deck (deck shelter omitted for clarity)

1.5 SEARCH AND RESCUE

1.5.1 Search and rescue response

The position of the collision was 15 nm north of the Cherbourg peninsula. Although this is in international waters, it falls within the Maritime Search and Rescue Region of Jobourg CROSS.

The OOW and lookout on a passing vessel, *Norman Voyager*, saw the red parachute flares and reported this to Jobourg MRCC at 1923. They estimated the position of the flares to be Lat 49° 55' N Long 001° 40' W and Jobourg MRCC tasked them to proceed to this position for further investigation.

At 1930 Jobourg MRCC issued a digital selective calling (DSC) alert (**Annex 2**) followed by a “Mayday Relay – Information No 1” broadcast on VHF channel 16. The transmission informed all vessels in the vicinity that flares had been sighted and gave the estimated position of the vessel in distress. All ships in the area were requested to keep a sharp lookout and to proceed to this area.

Norman Voyager was the closest of the responding vessels. However, three vessels that were closer to *Etoile des Ondes*, including *Alam Pintar*, failed to respond to the “Mayday Relay” broadcast.

A few minutes after the broadcast, *Manfred*, a vessel in the south west TSS, provided Jobourg MRCC with a corrected position of Lat 49° 58' N Long 001° 50' W for the distress and advised that the vessel had now altered course and was proceeding towards this position. The ferry *Barfleur*, and tanker *Delta Pioneer*, also responded and provided assistance.

Soon after *Norman Voyager* had altered course towards the area where the flare had been sighted, her master observed a small target on radar. Visually, a faint flashing white light was seen on the same bearing.

At 1943 Jobourg MRCC told the master of *Norman Voyager* that it had received an EPIRB alarm which had originated from a position close to the vessel. This information was also included in a second DSC alert and “Mayday Relay” broadcast on channel 16.

1.5.2 Rescue of survivors by *Norman Voyager*

Norman Voyager arrived on scene at 1947 and it was reported to Jobourg MRCC that a manned liferaft could be seen in the water. The Fast Rescue Craft was launched, and it recovered the liferaft with its three occupants. Once on board *Norman Voyager*, the surviving crew confirmed that Chris, one of their colleagues, was still missing. This was reported to Jobourg MRCC, and *Norman Voyager*, along with *Barfleur* and *Manfred*, was tasked to continue searching the area for him.

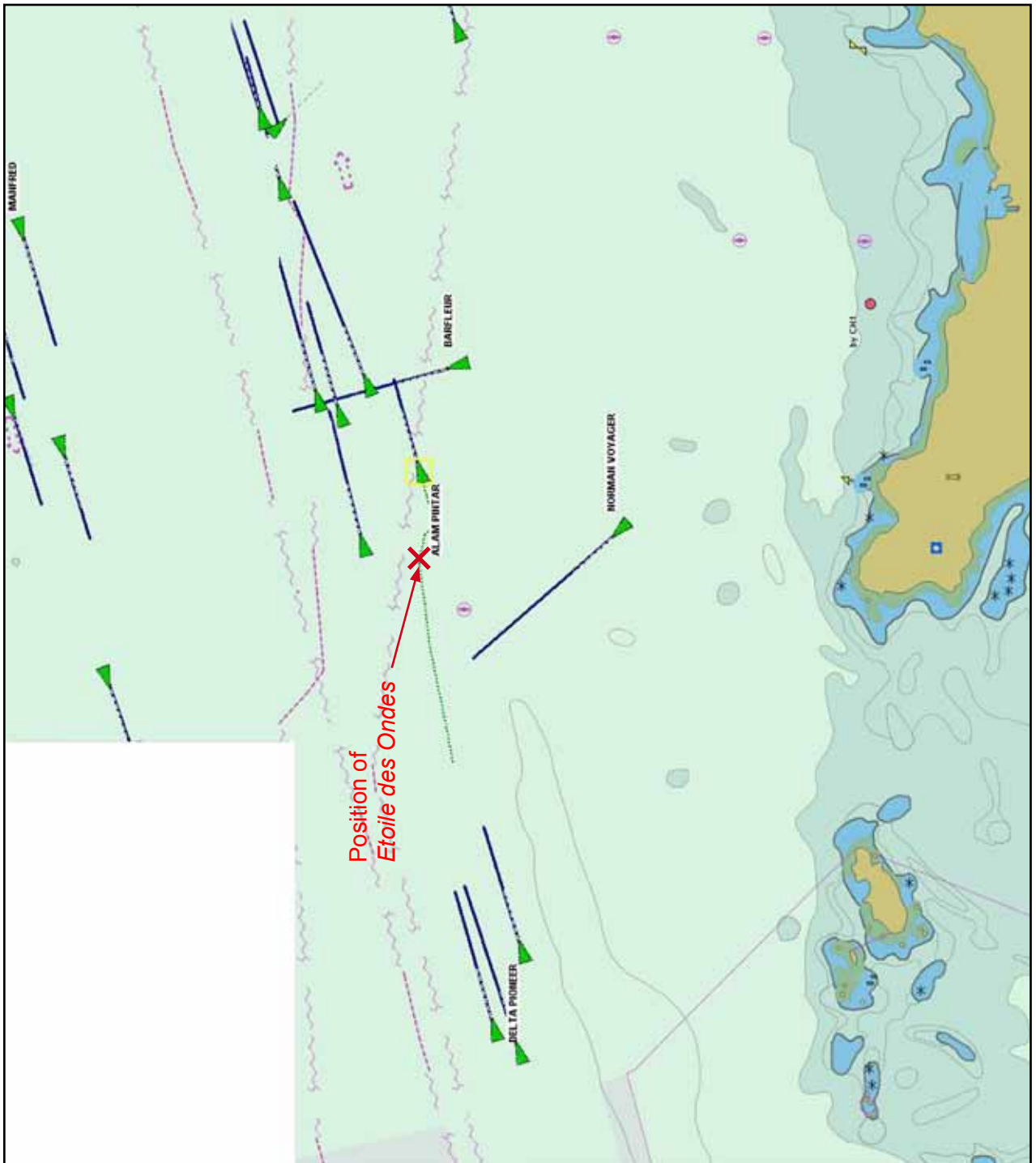
By 2100, the condition of the survivors on board *Norman Voyager* had deteriorated, and gave the master cause for concern. He decided to head towards Cherbourg, and arranged a rendezvous with a French coastguard helicopter. The survivors were then airlifted to hospital where they were treated for hypothermia.

At 2208, Jobourg MRCC released both *Barfleur* and *Manfred* from the search, allowing them to continue on passage.

1.5.3 Vessels in the general area of the distress

Several vessels were within 15 nm of the liferaft from *Etoile des Ondes* when her skipper fired the first of two red parachute distress flares (**Figure 10**). While it is not known how many actually saw the flares, they were seen by at least two vessels: *Norman Voyager* at 4.8 nm away, and *Manfred* at 14.6 nm away. Both these vessels reported the sighting to Jobourg MRCC and proceeded to render assistance.

Figure 10



General AIS positions of vessels in the area at the time flares were set off

Jobourg MRCC initiated the distress operation at 1929, when they broadcast an initial DSC alert. This was followed by a “Mayday Relay” message on VHF channel 16, by voice. Other vessels in the area failed to respond to either the distress flares or the “Mayday Relay” broadcast.

Jobourg MRCC made two further “Mayday Relay” broadcasts, at 1943 and 1951, updating details of the incident. They repeatedly requested all ships in the area to proceed to the position and to make contact with Jobourg MRCC. There was also sufficient associated radio traffic, following the initial distress signal, to signify that this was not a false alert or drill. However, no further vessels offered assistance or contacted Jobourg MRCC to seek clarification.

1.6 ENVIRONMENTAL CONDITIONS

At the time of the collision visibility was good, with the shore lights of France clearly visible from *Etoile des Ondes*. The wind and sea conditions were slight and there was a clear sky. Low water at Cherbourg was 1740 and the tide was setting westerly at around 0.8 kt, becoming slack.

The sea temperature was estimated to be 9° Celsius.

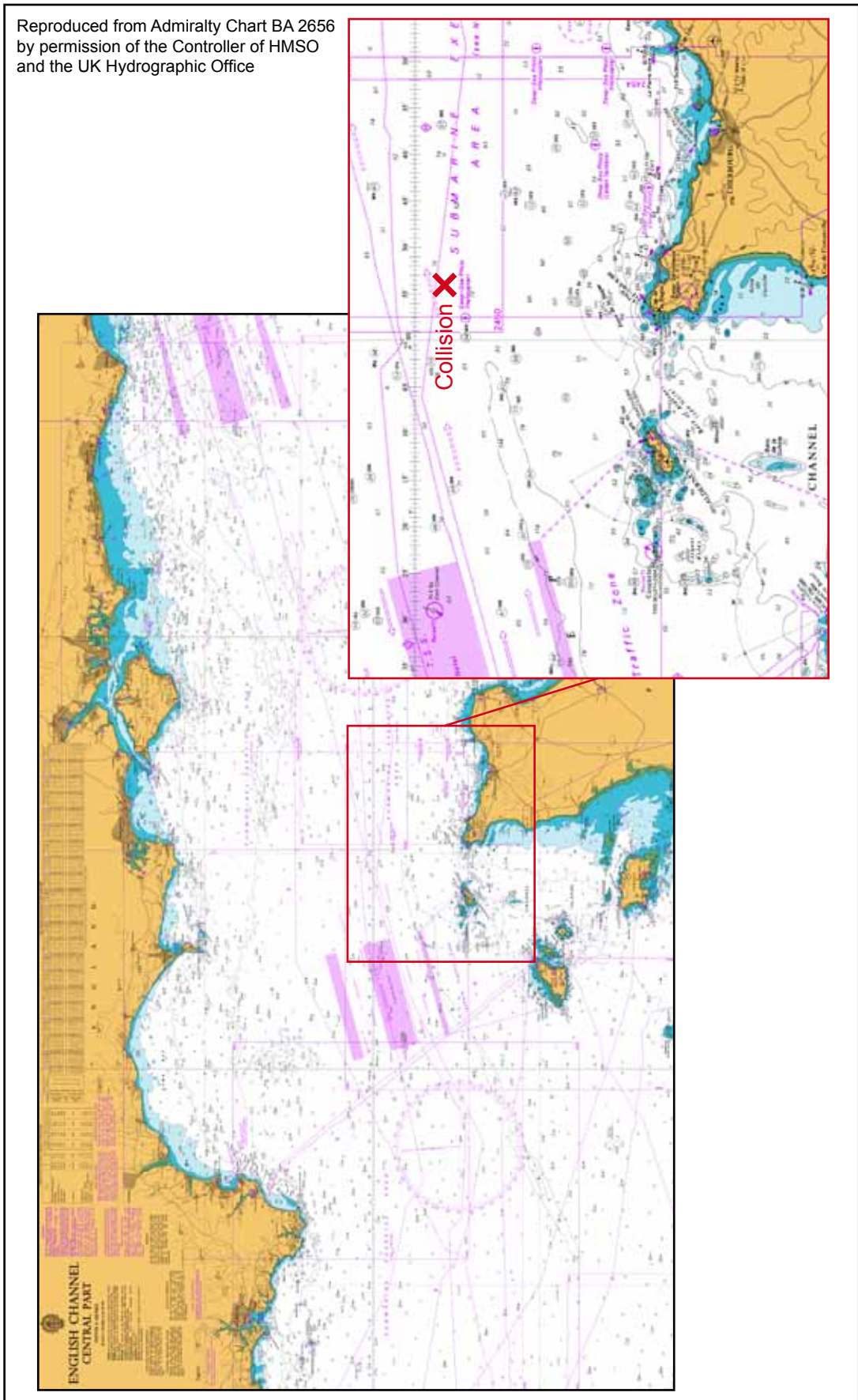
1.7 THE FISHING GROUNDS

The area north of Cherbourg was used regularly by the skipper of *Etoile des Ondes* (**Figure 11**). The area is deep, 75 to 80m, and subject to strong tidal streams, which effectively restricted shooting and hauling to around the turn of tide.

The seabed is rocky, with many pinnacles, which is a favoured habitat of crabs and lobsters. The nature of the seabed meant that, apart from potters, there were unlikely to be other types of fishing vessels in this area. However, it lay on the busy traffic route between Casquets and Dover Strait TSSs.

Etoile des Ondes fished with strings of 70 to 80 pots, each of which was about a mile long. On the day of the accident these strings were being laid out in a north to south pattern, which was across the general direction of traffic flow. Although the skipper had fished these grounds for several years, he had never conducted a risk assessment to identify the additional dangers posed by the heavy traffic in this area.

Figure 11



Overview chart of the fishing grounds and detail of the area of collision

1.8 **ALAM PINTAR**

Alam Pintar was owned by Alam Pintar Maritime Ltd and operated and managed by PACCSHIP (UK). This company managed a fleet of 14 ships manned by senior officers of several nationalities including Chinese, Polish, Romanian and Pakistani. At the time of the collision the majority of officers on *Alam Pintar*, including the master, 4th officer and cadet, were Chinese nationals.

1.8.1 **International Safety Management (ISM)**

PACCSHIP (UK) held a document of compliance (DOC) for the operation of “bulk carriers” and “other cargo ships, container ship”[sic], and had provided all company vessels with a set of Fleet Instruction Manuals (FIM). *Alam Pintar* had also been issued with a current safety management certificate (SMC).

The last ISM internal and external audits of the vessel had been carried out as required, with only minor non-conformities and observations noted.

Representatives from PACCSHIP (UK) visited their vessels regularly, at least twice each year, often sailing with vessels on the shorter sea passages. During these visits the performance of the officers, including the master, was noted. However, there were no formal appraisal procedures to record the performance of the master.

1.8.2 **Watchkeeping**

The FIM provided guidance on the bridge manning levels expected for a number of different navigational situations (**Annex 3**). An email sent by PACCSHIP (UK) to its fleet on 25 December 2009 (**Annex 4**) reiterated its instruction that the 4th officer was not to be allowed to keep independent watches, and explained its intention that the 4th officer should “assist a qualified OOW...for watchkeeping at sea and their performance appraised for suitability to keep an independent watch before making recommendation on their promotion to Crew Dept.” [sic].

Notwithstanding the above, at the time of the accident the bridge team of *Alam Pintar* consisted of the 4th officer, and a deck cadet who was not qualified to form part of the navigational watch.

1.8.3 **Cadet training**

The program for training cadets consisted of an initial 3-year period at college followed by 12 months sea going experience, which was usually completed on a single vessel. Cadets followed a training programme during this phase, which included practical seamanship, cargo operations, steering and watchkeeping (**Annex 5**). Having gained the required seagoing experience, cadets would then return to college to be examined for their initial CoC.

Upon successfully completing a cadetship and passing the examinations, cadets would be issued with a Class II/1 Deck Officer CoC, “Third Mate on ships of 3,000 GT or more” (**Annex 6**), and assigned to a vessel as an additional 4th deck officer in order to gain practical watchkeeping skills and experience.

1.8.4 Bridge Team Management (BTM) training

The company did not provide any formal training in BTM for its masters or deck officers. However, chief officers were sent on a bridge simulator course before taking their first command, but this was not a recognised BTM course.

1.9 ETOILE DES ONDES

1.9.1 History

Etoile des Ondes was one of two potting vessels owned and operated by Etoile des Ondes Limited. Her skipper and crew stayed mainly on one vessel, but there were times when crews would switch between the two.

In 2005 *Etoile des Ondes* had been the subject of an MAIB Preliminary Examination⁶ (PE) following the loss overboard of a crew member after shooting a string of pots. As a result of this PE the Chief Inspector of Marine Accidents wrote to the vessel's owner. In his letter he included a recommendation that the crew wear buoyancy aids while working on deck. For a while after that accident, crews on both boats did wear such devices. Unfortunately, by the time of this collision, most crew no longer wore them because of the perceived discomfort and the restriction of movement they caused.

However, Chris had grown used to wearing his "bib and brace" device, with an incorporated lifejacket (**Figure 12**). He wore it whenever he was working on deck until a recent incident where the lifejacket had accidentally inflated. This had caused him some distress and made it difficult for him to breathe. The lifejacket needed to be punctured to deflate it for removal. After this incident, he stopped wearing any flotation device.

During *Etoile des Ondes*' last refit her bow and quarter areas had been enclosed with ply board sheets to provide shelter to the crew when on deck (**Figure 13**). These modifications restricted the view astern from the wheelhouse and it now required the lookout to make a positive effort to look astern. This area was also used to stow any spare fishing buoys that were not deployed.

Etoile des Ondes was less than 15m in length, so was not required to carry an EPIRB. However, the owners had fitted one, and they had recently provided an additional unit as the batteries of the original EPIRB were close to expiry. Both EPIRBs were stowed on top of the wheelhouse, next to a six-person liferaft and a box containing six lifejackets (**Figure 14**). The vessel was not required to be fitted with an automatic identification system (AIS) unit, and did not carry this equipment.

⁶ A preliminary examination (PE) is the first stage of a full investigation. It identifies the causes and circumstances of an accident to establish if it meets the criteria required to warrant further investigation and a publicly available report. If it is decided the criteria have not been met, the MAIB will not continue the investigation and all parties involved will be notified.

Figure 12



Figure 13

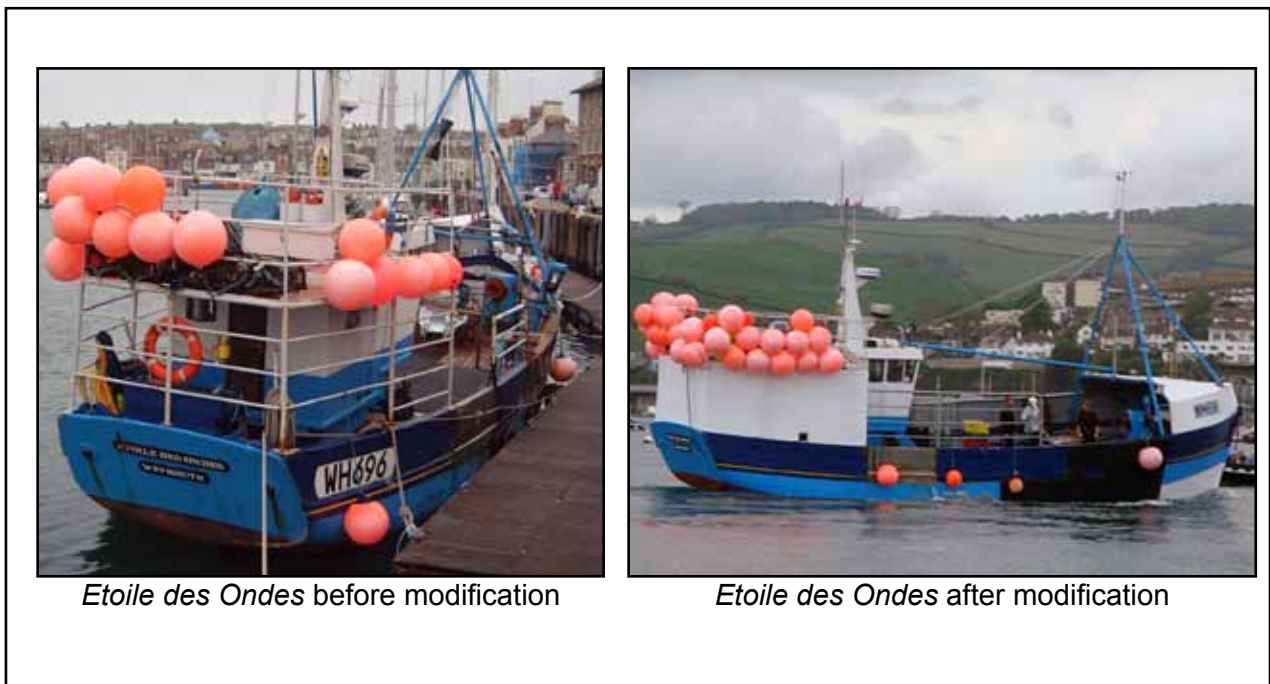
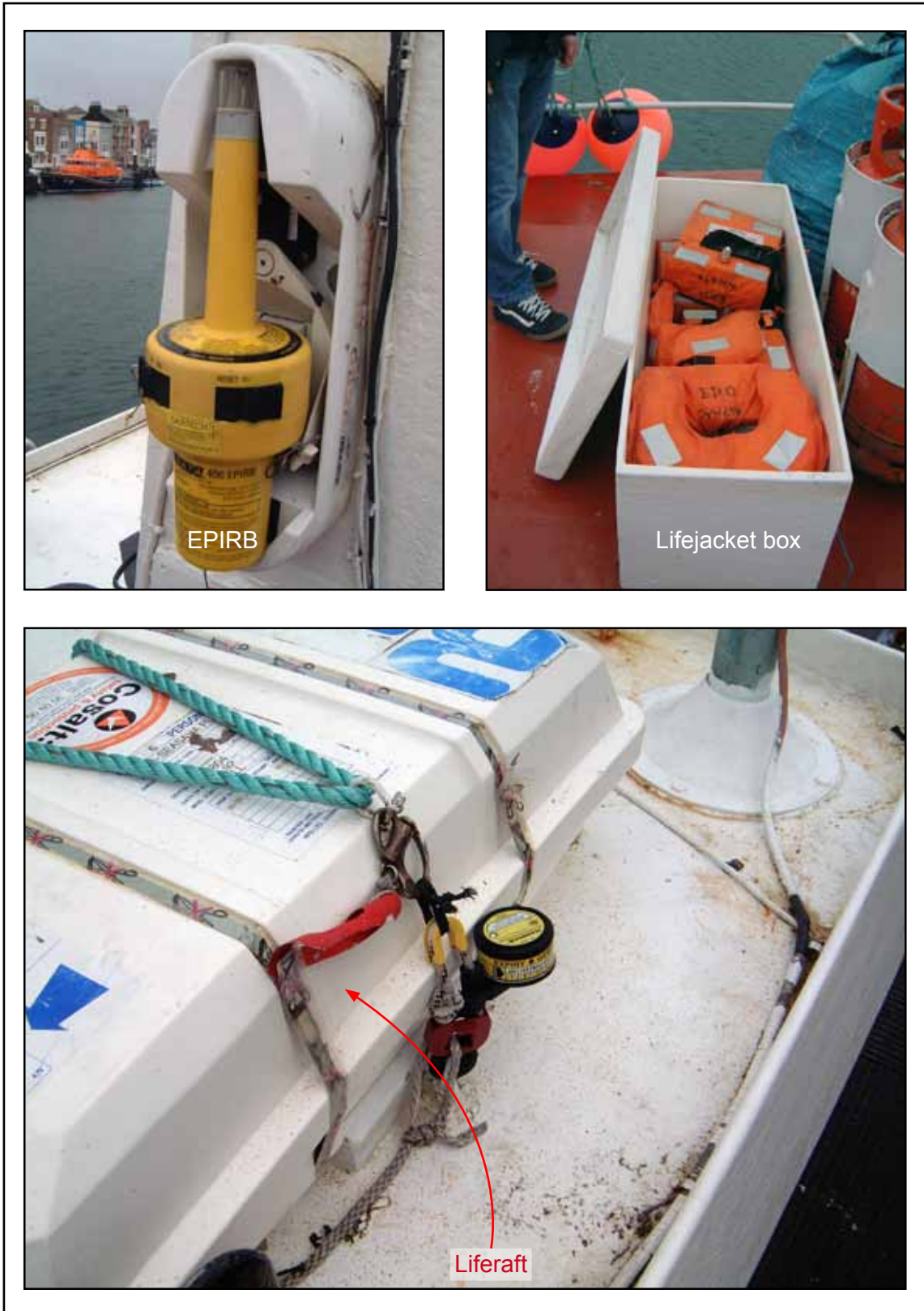


Figure 14



Etoile des Ondes' EPIRB, lifejacket box and liferaft

1.9.2 Fishing routines

The crew of *Etoile des Ondes* intended the trip to last about 21 days. Their work routine consisted of 3 to 4 days fishing, or until the vivier tanks were full, and then proceeding to Cherbourg to unload and take on bait and supplies. Each day's fishing started at around 0600 and continued until 1800 or 1900. During the night, watchkeeping duties were divided equally among the crew, enabling each crew member to take some rest.

The crew expected to complete this routine six to seven times before returning to Weymouth in time for the New Year celebrations.

1.10 SKIPPER AND CREW

1.10.1 The skipper

The skipper of *Etoile des Ondes* had 9 years' fishing experience, 4 of which were spent working as skipper on board potters. He had served as skipper for this owner on board both his boats, and had often fished in the area where the collision occurred. It was one of his preferred fishing grounds because the catch was often good and it was close to Cherbourg for landing. He was aware of the heavy traffic in the area and that the seabed was very rough. He knew that it took skill and concentration to lay and haul the pots without snagging or parting the strings.

He had attended the four required Sea Fish Industry Authority (SFIA)⁷ approved training courses in Sea Survival, Fire Fighting, Safety Awareness and First Aid. He had also attended a course in Intermediate Stability Awareness.

1.10.2 Crew

Crew member 1 had 4 years fishing experience on both of the owner's boats, and experience of working in this area. He had attended the four required SFIA approved training courses, and had also attended a course in Basic Stability Awareness.

Crew member 2 had 3 years fishing experience, of which the last 6 months were on board *Etoile des Ondes*. He had attended the Seafish approved training courses in First-Aid, Sea Survival and Fire Fighting, but not Safety Awareness. He had also attended a course in Intermediate Stability Awareness.

⁷ The Sea Fish Industry Authority (Seafish) was established under the Fisheries Act 1981. The main activities of Seafish are to:

- (a) promote efficiency in the UK seafood industry, including the marketing and consumption of Seafish and Seafish products in the United Kingdom;
- (b) provide or assist in the provision of training; and
- (c) carry out and give advice on research and development in respect of any matters relating to the Seafish industry.

Christopher Wadsworth - Chris had started fishing 4 years before the accident, but had drifted in and out of the industry, spending periods ashore between trips. He had attended two of the four required SFIA approved training courses: Sea Survival and Health and Safety.

1.11 ALAM PINTAR - ARRIVAL AT HAMBURG

1.11.1 Evidence gathering

It became apparent to MAIB inspectors boarding *Alam Pintar* on her arrival at Hamburg, that the vessel's records had been altered, or adjusted to obscure any evidence of the actions taken around the time of the collision with *Etoile des Ondes*.

During initial interviews, crew accounts of the night of the accident conflicted with incontrovertible AIS and radar information already available to the inspectors; documents presented by the vessel appeared to support the crew's claims that their vessel had not been involved in a collision. After patient investigation, the truth emerged and was verified.

1.11.2 Damage to *Alam Pintar*

While alongside in Hamburg, *Alam Pintar*'s hull was inspected at close range from a mooring boat, for signs of contact. Cosmetic damage and traces of blue paint were found on the bow (**Figure 15**) and on the port quarter (**Figure 16**). As her hull was black, these blue paint traces were a strong indication of contact with another vessel.

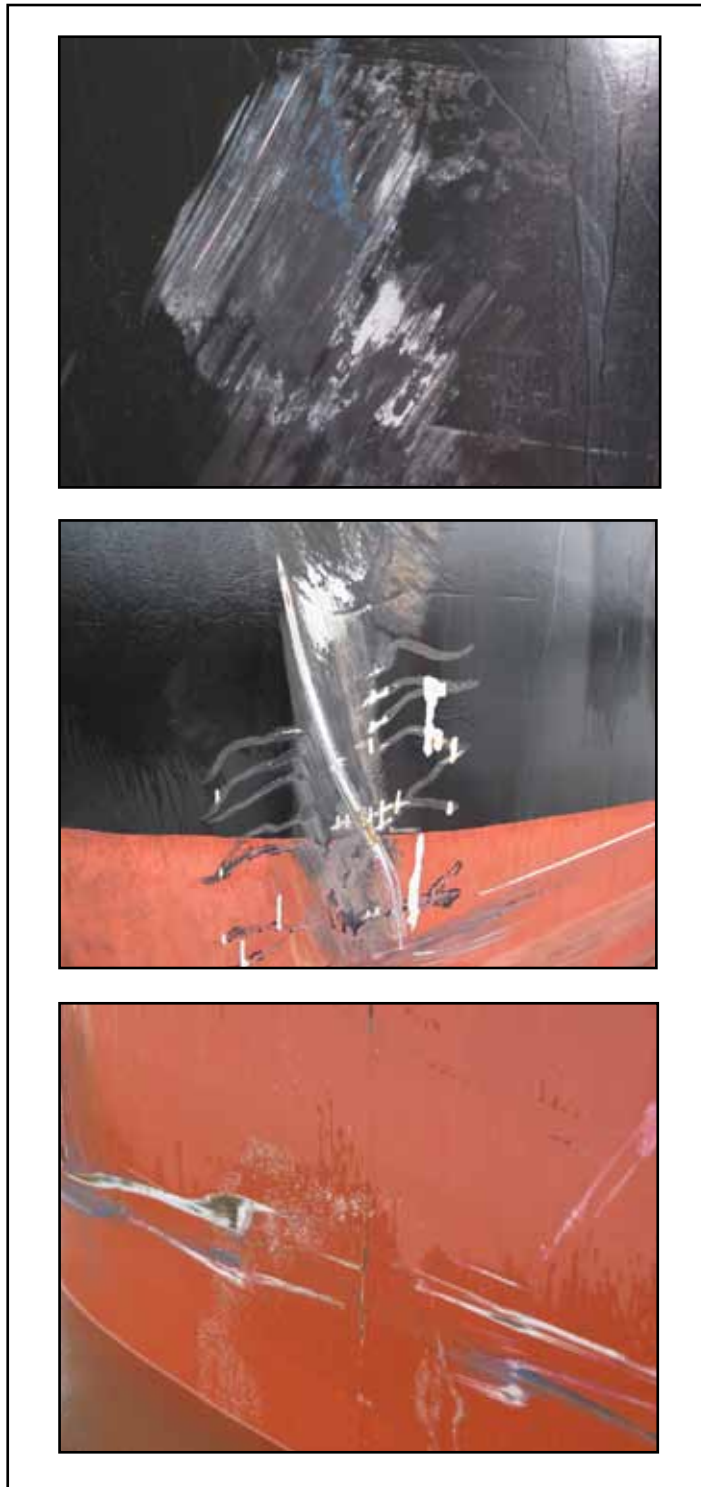
1.12 SIMILAR ACCIDENTS

Since 1991 MAIB has been notified of 145 collisions involving fishing vessels and merchant vessels. These collisions involved UK registered vessels or occurred within UK waters. Of these, 20 were collisions where the merchant vessel did not stop, or failed to make proper checks on the safety of the fishing boat and her crew.

In 11 collisions where the merchant vessel failed to stop, the OOW or master did not realise there had been a collision. However, in five cases the master and OOW of the merchant vessel were aware that their vessel had been involved in a collision, but decided to continue on passage without stopping or making any checks to ensure the safety of the fishing vessel and its crew.

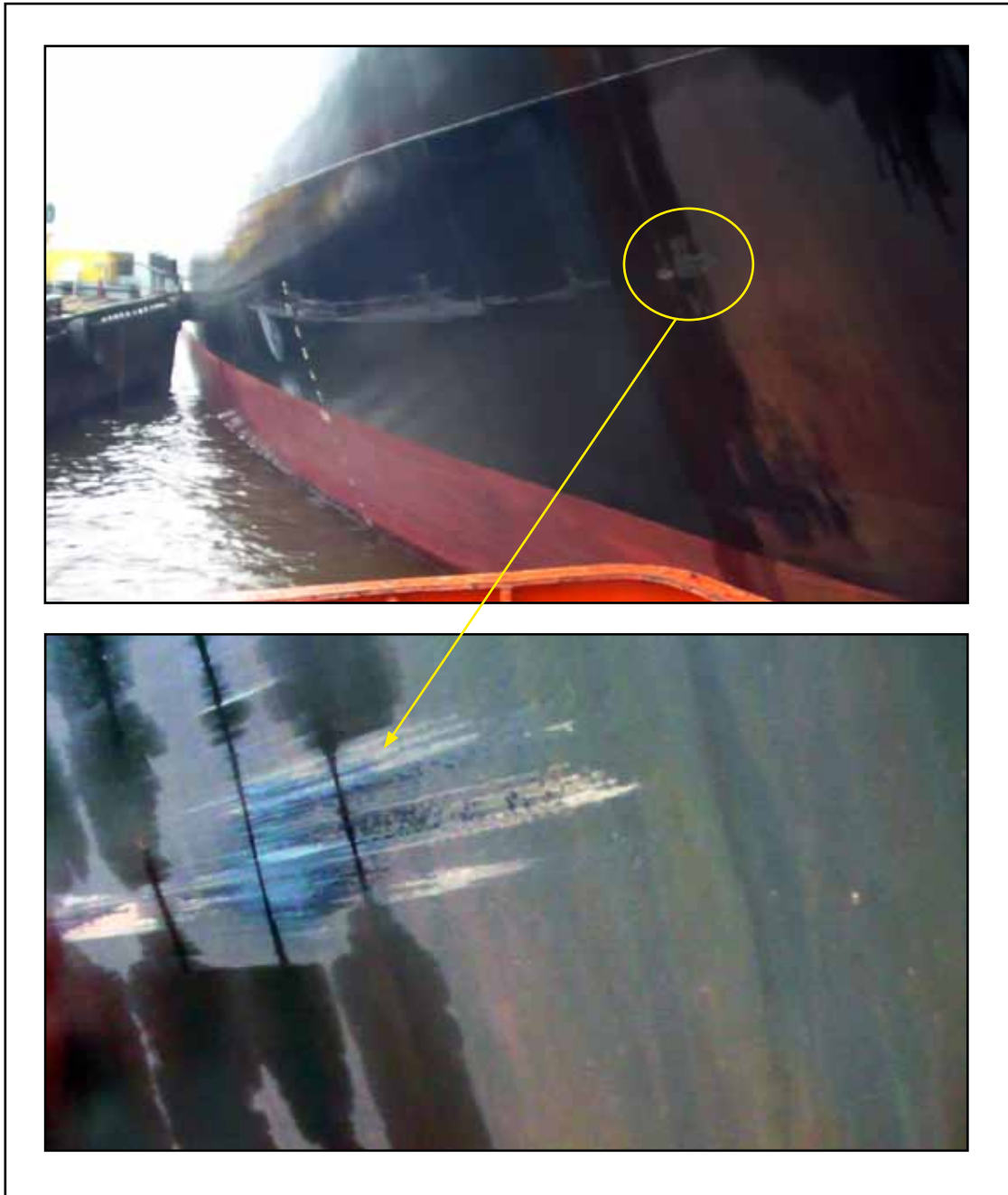
There were four further cases where the master and OOW knew their vessel had been involved in a collision and attempted to make contact with the fishing boat. However, on receiving no reply and seeing the vessel still afloat, it was assumed that the other vessel was safe, and they resumed passage.

Figure 15



Photographs of *Alam Pintar's* bow indicating contact and showing traces of blue paint

Figure 16



Further indication of contact and traces of blue paint with close-up detail

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 FATIGUE

The hours of work records of *Alam Pintar's* crew were examined and found to be in accordance with the ILO Hours of Work Convention C180 which ensures that seafarers receive a minimum of 10 hours rest in any 24 hour period, and a minimum of 77 hours rest in any 7 day period. The working arrangements on *Etoile des Ondes* were discussed with the crew and, although they worked intensively during the day, they were all able to get sufficient, good quality rest overnight.

Fatigue is not considered a contributory factor in this accident.

2.3 THE FISHING GROUNDS

The fishing grounds north of Cherbourg are fruitful. However, the grounds lie on the most direct route between the Casquets and Dover Strait TSS. This discourages some skippers, who consider the heavy passing traffic poses too great a risk.

The rocky nature of the seabed that made this area a good fishing ground contributed to the need for constant vigilance during shooting or hauling. Unfortunately, the level of concentration needed when fishing might have led to less attention being paid by the crew of *Etoile des Ondes* to keeping a good lookout.

2.4 ACTIONS OF ALAM PINTAR

The OOW on *Alam Pintar* first saw the lights and radar target of *Etoile des Ondes* at a range of between 3 and 4 miles, on his starboard bow. After acquiring the radar target, using the ARPA, he realised there was a risk of collision and made a small alteration to starboard of 5°, which placed *Etoile des Ondes* on the vessel's port bow. The bearing of *Etoile des Ondes* opened to port as the fishing vessel continued on her northerly heading while hauling her pots (**Figure 3**).

The OOW later noticed that the target had once again drawn ahead (**Figure 4**). At this time, *Etoile des Ondes* had probably picked up the end of the string and was heading east-south-east, repositioning for shooting. The OOW then made a second alteration, of 10° to port, to place her on his starboard bow. However, this action probably coincided with *Etoile des Ondes* resuming shooting on a

northerly heading, which made the action ineffective (**Figure 5**). Once again the lights drew ahead and the OOW's subsequent emergency action of a large alteration to starboard was too late to be effective in avoiding the collision (**Figure 6**).

2.5 ACTIONS OF *ETOILE DES ONDES*

2.5.1 Before the collision

Prior to the collision, *Etoile des Ondes* had been hauling pots while proceeding on a southerly heading when the back rope parted. This meant she had to stop hauling and head to the southern end of the string and pick up the marker buoy. She then turned and resumed hauling on a northerly heading until, after hauling for about 0.5 nm, the free end of the back rope was reached and brought on board. The skipper then headed east-south-east towards the position at which he intended to resume shooting (**Figure 3**). This was probably the point at which *Alam Pintar's* OOW first saw the fishing vessel ahead, and made a 5° alteration to starboard.

It would have been difficult for the skipper to have seen what actions *Alam Pintar* was taking to avoid *Etoile des Ondes*, and her subsequent alteration back to port might have gone unnoticed, at least partially, as a result of his restricted vision due to the modifications to the stern.

On arriving at the desired position, the skipper resumed shooting without comprehensively assessing if it was safe to do so. He took a quick look around prior to setting off towards the north, and began shooting the pots (**Figure 5**). When he saw the green side light of *Alam Pintar* he was confident there was still time for the approaching vessel to alter course. However, after her alteration to the north, *Etoile des Ondes* was heading across the path of *Alam Pintar*.

A quick visual check, without referring to the radar, was insufficient to fully appreciate how close *Alam Pintar* now was. It is evident that the skipper had not monitored *Alam Pintar's* position during the recovery of his gear and the repositioning, so he was unaware of the actions already taken on board the other vessel to avoid him.

2.5.2 Was *Etoile des Ondes* “Engaged in Fishing”?

It could be argued that *Etoile des Ondes* was not actually “engaged in fishing” during the period after hauling the free end of the string on board until she reached the position where shooting was resumed. She was not hampered by any outlying gear (COLREGS Rule 3 – **Annex 7**). However, as she was then being overtaken, she should still have been afforded the protection of COLREGS - Rule 13 (**Annex 7**), and *Alam Pintar* was still required to keep clear of her.

In this case, it would have been the fishing vessel's responsibility to switch off her fishing lights, and as many of her deck lights as practicable, and maintain her course and speed (COLREGS Rule 26 – **Annex 7**). This would have helped *Alam Pintar's* OOW to make a better assessment of her actions.

The decision to resume shooting was based on the assumption that *Alam Pintar* would alter to starboard, and was ill considered. Once a fishing vessel reaches her shooting position there are no rules regarding when fishing can, or can not, be commenced. If the approaching *Alam Pintar* had been seen, or its close proximity appreciated, it might have been prudent to delay shooting until it had been established that there was no risk of collision.

2.5.3 Abandonment

All four crew would have improved their chances of survival had they continued the practice of wearing flotation devices while working on the deck.

The collision with *Alam Pintar* highlights the lack of time available in an emergency to locate and don a lifejacket. Their stowage position, in a locker on top of the wheelhouse, was carefully considered and known to the crew, but once it became apparent that a collision was imminent there was simply no time to retrieve them.

The abandonment of *Etoile des Ondes* also demonstrated the effectiveness of both liferaft and EPIRB units. As *Etoile des Ondes* was less than 15 metres in length she was not required to carry an EPIRB, however the owner had taken the prudent step to do so. The surviving crew were able to board the liferaft within a few minutes of the collision and successfully activate the EPIRB. This raised an alert 18 minutes after the flares were sighted and provided confirmation to Jobourg MRCC that a bona-fide distress was in progress.

2.6 THE COLLISION

Alam Pintar's initial alteration of 5° to starboard to avoid collision was not substantial enough to be apparent to the skipper of *Etoile des Ondes*, even if he had been keeping an effective lookout. It is possible the OOW did not take more substantial action as he was concerned not to stray across the path of other vessels navigating alongside his vessel. In such a case, and remembering his lack of experience, it would have been entirely reasonable, even at this early stage, for him to have called the master.

Initially, the alteration did seem to be effective, but it was subsequently counteracted by (from the perspective of the OOW) random changes of course by *Etoile des Ondes*. The OOW also found it difficult to identify the fishing vessel's navigation lights against the high powered halogen deck lights.

Etoile des Ondes' powerful deck lights probably impaired the skipper's night vision. Glare from the working lights could have reduced the distance from which other vessels could be identified. It is for these reasons that merchant shipping vessels go to great lengths to ensure the bridge is blacked out effectively during the hours of darkness, thus ensuring that watchkeepers maintain good night vision.

Alam Pintar's next alteration of course, of 13° to port, was still not sufficient to be readily observable by the skipper of *Etoile des Ondes*. As the OOW waited to see if this action had been effective, it was counteracted by *Etoile des Ondes* also changing her course. By the time the OOW realised there could be a collision, it was too late for him to take further, effective, avoiding action.

The actions taken by the OOW of *Alam Pintar* indicate a lack of appreciation of what could be expected from a vessel engaged in fishing. These vessels are given a special status for a reason. By the nature of the gear used for fishing, they are unable to substantially deviate from the courses needed to complete the fishing operation. These courses may not be a steady course or speed and there may be abrupt changes of course depending on the kind of fishing they are engaged in. It is therefore important that action taken to avoid collision is early, substantial and closely monitored for effectiveness.

2.7 SIMILAR ACCIDENTS

In all of the similar accidents considered in Section 1.12 there was evidence of poor lookout procedures, on both the fishing vessels and the merchant vessels. There are also indications that action taken to avoid fishing vessels is frequently insubstantial and left until the vessels are very close to each other.

If action had been taken in accordance with COLREGS Rule 16 (**Annex 7**) the majority of these collisions would not have happened. Watchkeepers on merchant vessels should be aware that a vessel engaged in fishing may make sudden changes of course and speed, depending on the stage of the fishing operation. These changes could cancel out insubstantial actions to avoid collision, especially if taken too late, when there is little chance to take additional action.

2.8 FAILURE TO ASSIST *ETOILE DES ONDES*

Mariners have a legal and moral obligation to assist others who may be in distress. In the case of *Alam Pintar* this is enshrined in the following international convention (among others⁸).

2.8.1 SOLAS Chapter V, Safety of Navigation

REGULATION 33 - Distress messages: Obligations and procedures

1 *The master of a ship at sea which is in a position to be able to provide assistance on receiving a signal from any source that persons are in distress at sea, is bound to proceed with all speed to their assistance, if possible informing them or the search and rescue service that the ship is doing so. If the ship receiving the distress alert is unable or, in the special circumstances*

⁸ Similar references can also be found in:

- International Convention on Salvage, 1989 (London, 28 April 1989) – Article 10
- Convention for the Unification of Certain Rules of Law respecting Assistance and Salvage at Sea (Brussels, 23 September 1910) – Article 11

of the case, considers it unreasonable or unnecessary to proceed to their assistance, the master must enter in the log-book the reason for failing to proceed to the assistance of the persons in distress, taking into account the recommendation of the Organization, to inform the appropriate search and rescue service accordingly.

- 2 *The master of a ship in distress or the search and rescue service concerned, after consultation, so far as may be possible, with the masters of ships which answer the distress alert, has the right to requisition one or more of those ships as the master of the ship in distress or the search and rescue service considers best able to render assistance, and it shall be the duty of the master or masters of the ship or ships requisitioned to comply with the requisition by continuing to proceed with all speed to the assistance of persons in distress.*
- 3 *Masters of ships shall be released from the obligation imposed by paragraph 1 on learning that their ships have not been requisitioned and that one or more other ships have been requisitioned and are complying with the requisition. This decision shall, if possible be communicated to the other requisitioned ships and to the search and rescue service.*
- 4 *The master of a ship shall be released from the obligation imposed by paragraph 1 and, if his ship has been requisitioned, from the obligation imposed by paragraph 2 on being informed by the persons in distress or by the search and rescue service or by the master of another ship which has reached such persons that assistance is no longer necessary.*
- 5 *The provisions of this regulation do not prejudice the Convention for the Unification of Certain Rules of Law Relating to Assistance and Salvage at Sea, signed at Brussels on 23 September 1910, particularly the obligation to render assistance imposed by article 11 of that Convention.*

2.8.2 United Nations Convention on the Law of the Sea (UNCLOS)

The UNCLOS also requires the master of any ship involved in a collision to stand by and offer assistance to the other vessel:

Article 98 - Duty to render assistance

1. *Every State shall require the master of a ship flying its flag, in so far as he can do so without serious danger to the ship, the crew or the passengers:*
 - (a) *to render assistance to any person found at sea in danger of being lost;*
 - (b) *to proceed with all possible speed to the rescue of persons in distress, if informed of their need of assistance, in so far as such action may reasonably be expected of him;*
 - (c) ***after a collision, to render assistance to the other ship, its crew and its passengers and, where possible, to inform the other ship of the name of his own ship, its port of registry and the nearest port at which it will call.***

The law, therefore, requires a master to lend assistance where his vessel has been in collision or where it becomes apparent that another vessel is in distress.

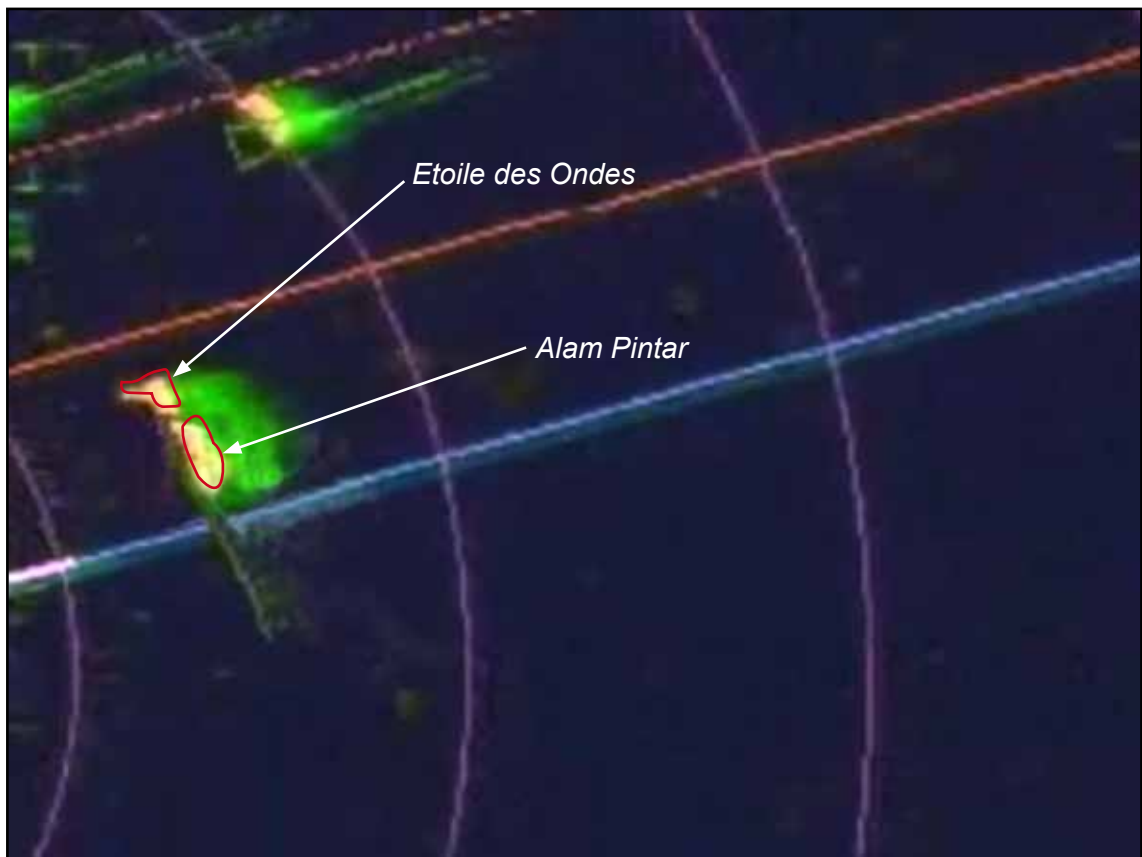
2.8.3 Decision to proceed

After the collision, *Alam Pintar*'s master was informed by his OOW that there had 'probably' been a collision and that the lights of the fishing vessel had since been observed still lit. When the master looked at the ARPA he saw a target, which he assumed to be *Etoile des Ondes*.

As the master had only uncorroborated information that the vessel and her crew were safe, he should have, at least, tried to contact them by VHF to verify their situation. It is the master's responsibility to the other vessel, under the UNCLOS, to "ascertain that it has no need of further assistance". This does not mean "hoping" or "assuming" the other vessel is safe; it means establishing for certain, before continuing on passage.

The master, by assuming *Etoile des Ondes* was still afloat, and deciding to continue, was in disregard of his responsibilities. However, once he had reason to believe that *Etoile des Ondes* and her crew were not safe, his action in ignoring the "Mayday Relay" and continuing on passage was illegal, immoral and against all the traditions of the sea.

Figure 17



Screen shot (enhanced) showing *Etoile des Ondes* left astern of *Alam Pintar*

Note: Radar screen shot taken from a third party vessel's VDR

2.9 ACTIONS OF OTHER VESSELS IN THE AREA

2.9.1 Duty to respond

The master of any vessel receiving a “Mayday”, or “Mayday Relay”, has a duty to reply and offer assistance; not to await selection. This requirement is stated in SOLAS Chapter V Regulation 33 and also in UNCLOS Article 98.

Jobourg MRCC issued three VHF Channel 16 “Mayday Relay” broadcasts, each preceded by a GMDSS DSC alert (**Annex 2**) requesting vessels in the area to proceed to the distress position. The area between Casquets and Dover Straits TSS is a busy traffic lane, and at the time of this accident there were several vessels in the area that would have received these messages (**Figure 10**).

The procedure used to select ships has not been altered since the introduction of AIS, and even though ships can now be easily identified by name, the master’s obligation to contact the MRCC to offer assistance has not changed. It is then for the MRCC to decide which of the responding vessels are best suited for use in the distress operation. This decision will be made based on the type of vessels available and the operational requirements.

Even if, in the master’s opinion, it is unreasonable or unnecessary for him to respond to a distress, he still has the duty of noting this, along with reasons to support his decision, in the GMDSS and ship’s logbooks.

2.9.2 Action of *Norman Voyager*

Exemplary seamanship was demonstrated by the actions of the officers and crew of *Norman Voyager* in immediately reporting the flares to Jobourg MRCC and then proceeding, without question, to the assistance of the vessel in distress. The conduct of the rescue was safe, efficient and in the best traditions of the merchant navy.

2.9.3 Failure to respond

All of the owners of vessels known to be in the area at the time of the collision and which failed to respond to the distress, were contacted by the Chief Inspector of Marine Accidents. They all conducted internal enquiries to establish the reasons for their vessel’s actions during the evening. The responses fell into the following three categories.

2.9.3.1 The master expected to be contacted by the MRCC

SOLAS Chapter V Regulation 33 clearly places the responsibility on the master of the vessel to either respond or, in special cases, if the master considers it unreasonable or unnecessary, to enter his reasons in the logbook. There is no provision for the MRCC to contact vessels in the area individually.

Some masters assumed that if their vessel was required to assist in the SAR operation, they would be contacted directly by Jobourg MRCC and asked to provide assistance. This assumption was made even though each “Mayday Relay” specifically stated:

All ships in this area are requested to have a sharp lookout, to proceed to this area - to make contact and report any information, to Jobourg MRCC co-ordinating this operation, by their ship on channel 16 [sic]

2.9.3.2 The OOW did not inform the master

The master is the person who has the - non delegable - responsibility to make the decision to respond to a distress. The OOW does not have, and cannot assume, this responsibility. On several of the vessels, owners’ investigations found the OOW had received the DSC alert, and heard the “Mayday Relay” broadcast, but had not informed the master. Companies and masters must emphasise to their OOWs, through clearly documented procedures, that the OOW must not, indeed legally cannot, take a decision not to respond on behalf of the master.

2.9.3.3 Other issues

Vessels are required to keep VHF radio watches to ensure important or urgent messages are clearly heard when broadcast. This includes intership broadcasts.

On one vessel, the OOW claimed not to have heard the VHF broadcast. It is probable that the volume of the receiver had been reduced to such a level that the broadcast was inaudible as no fault was found with the VHF equipment and these broadcasts were clearly heard on the other vessels. Additionally, the preceding DSC alert should have prompted the OOW to monitor the VHF for a following broadcast.

2.10 RISK ASSESSMENT

Risk assessment is a vital part of any undertaking, but unfortunately is a task that does not come easily to many owners or skippers of fishing vessels.

The additional risks and dangers of fishing in the area where the collision occurred were not considered when deciding where *Etoile des Ondes* would fish. If the risks had been considered, the dangers posed during times of high traffic density might have been highlighted, and the need for increased vigilance should have been recognised.

The Seafish *Fishing Vessel Safety Folder*⁹ provides help and guidance to owners and skippers on the preparation of risk assessments, but does not specifically cover the inherent risk posed by the fishing area itself. As different areas have different characteristics, this is worth considering, especially if specific hazards are present, such as heavy traffic or a seabed that makes the laying of pots especially challenging.

⁹ Sea Fish Industry Authority *Fishing Vessel Safety Folder Issue 2 (Rev May 2007)*

Although fishing vessels like *Etoile des Ondes* are not required to fit AIS, skippers and owners should seriously consider its benefits, both in identifying other traffic and enabling other traffic to identify them. The fitting of AIS would have made it easier for the skipper of *Etoile des Ondes* to positively identify passing traffic. He would have been provided with a readout of the distance off, speed and closest point of approach of each vessel. This would have been especially useful in this area of high traffic density, during periods when he had to concentrate intently on fishing.

A risk assessment should also be conducted whenever structural modifications to vessels are being planned. Although there were valid reasons for enclosing both the bow and stern areas of *Etoile des Ondes* (**Figure 13**), ie protection of the crew, they were made without considering the effect of the modification on the visibility from the wheelhouse. The ability to keep a good, all round lookout should be considered before undertaking any changes.

2.11 ETOILE DES ONDES – FLOTATION DEVICES

2.11.1 Previous recommendations

In 2005 *Etoile des Ondes* was subject to an MAIB Preliminary Examination following a manoverboard accident. As a result, a recommendation was made to the owners:

2005/173 - Consider adopting the policy of providing permanent wear lifejackets or buoyancy aids, for the crews of your vessels and to positively encourage their use.

The owners responded positively to this recommendation by changing operational procedures and providing flotation devices for crew to use. Subsequently, however, the owners did little to actively encourage the crew to wear these devices, and individuals had the option of whether or not to use them.

Initially, while the loss of their colleague was still fresh in their minds, many crew members elected to wear the flotation devices. But as memories of the accident faded, so too did the recognition of the devices' benefits. Perceived discomfort and restriction to movement resulted in most of the crew opting not to wear them.

Ironically, the only crew member to continually wear a flotation device, of the "bib and brace" type (**Figure 12**), was Chris. He used a "Guy Cotton" unit until a few weeks before the collision, and only stopped wearing it because it had accidentally inflated, which restricted his breathing, causing him distress.

2.11.2 Flotation devices

There are several manufacturers of “bib and brace” type devices, and they have a lot to commend them (**RNLI Lifejacket study - Potting, Annex 8**).

The device used by Chris was designed to operate automatically. When immersed in water, a soluble tablet dissolves and causes the unit to inflate. Accidental inflation incidents are not unheard of, but should not cause the wearer any distress. As part of the routine maintenance of the unit, the manufacturers recommended these tablets be replaced at regular intervals as they can degrade over time in a marine environment.

After the device inflated it should not have caused Chris any breathing restriction. However, if he had been wearing a standard fishing smock over the bib, this would have contained the inflating lifejacket and caused a significant restriction around his neck. To avoid this, only a smock specifically designed to be compatible with a lifejacket should be worn. These smocks are fitted with expansion gussets that open as the lifejacket inflates.

2.12 SAFETY MANAGEMENT SYSTEM

2.12.1 The rank of 4th officer

PACCSHIP (UK) had been proactive by introducing the bridging rank of 4th officer between that of cadet and 3rd officer. The 4th officer was expected to use the opportunity to familiarise himself with his duties as an OOW, and PACCSHIP had provided the master with detailed instructions (**Annex 9**) to ensure the officer gained the most benefit from this period. Although these instructions required the master to send monthly reports to the crewing department on the 4th officer's progress, no reports had been submitted. This was due to an undocumented change to the procedure which required the master to submit an “end of period” report on the officer's readiness for promotion.

2.12.2 Watchkeeping and lookout

Although PACCSHIP (UK), as the ISM Code DOC holders, had provided *Alam Pintar* with an approved safety management system, there was evidence of non conformance in relation to the formation of effective bridge teams and the use of lookouts. The absence of an effective lookout was noted during a port state inspection on the vessel's arrival in Hamburg on 20 December 2009 (**Annex 10**), but had not been identified during earlier routine SMS audits.

Companies should ensure that:

- The importance of effective bridge resource management is reflected in their SMS documentation.
- Their employees receive training and guidance to establish and maintain such systems on board.
- Internal audits accurately measure the extent of compliance.

2.12.3 Appraisal procedures

The master of a vessel is the owner or manager's representative on board, and his conduct affects the entire operation of the vessel. However, PACCSHIP (UK) had no formal system in place to monitor or appraise the performance of its masters.

Instead, PACCSHIP (UK) relied on an absence of negative reporting from third parties, such as agents or charterers, to provide feedback on the performance of its masters.

Negative reporting should not be relied upon to monitor employees' performance, especially the day to day performance of a master. Companies should ensure there are robust, defined systems in place to confirm that masters are operating the vessel to the required standard.

2.13 BRIDGE TEAM AND LOOKOUT

2.13.1 Bridge Resource Management (BRM)

The need to maintain an effective bridge team at all times is one of the key themes of the Bridge Procedures Guide, issued by the International Chamber of Shipping¹⁰. The guide states that, inter alia:

At all times, ships need to be navigated safely in compliance with the COLREGS and also to ensure that protection of the marine environment is not compromised.

An effective bridge organisation should manage efficiently all the resources that are available to the bridge and promote good communication and teamwork.

The need to maintain a proper look-out should determine the basic composition of the navigational watch. There are, however, a number of circumstances and conditions that could influence at any time the actual watchkeeping arrangements and bridge manning levels.

Effective bridge resource and team management should eliminate the risk that an error on the part of one person could result in a dangerous situation

2.13.2 Complement of the bridge team

The decision to allow *Alam Pintar's* 4th officer to stand as the officer in charge of a navigational watch indicated a disregard for explicit company instructions to the contrary (**Annex 4**). At the time of the accident the bridge was manned by an inexperienced 4th officer, with 2 months in rank, and an unqualified first trip cadet. The 4th officer held a Class II/1 CoC, but the cadet had no qualification to stand as a formal part of a watch.

This was compounded by the practice of not appointing a lookout while on the ocean passages.

¹⁰ ICS Bridge Procedures Guide, Fourth Edition, 2007

2.13.3 Requirement to maintain a lookout

The requirement for maintaining a lookout is widely promulgated; officially by regulation¹¹ and additionally by industry bodies¹². There is no evidence that PACCShip (UK) was aware of, or condoned, the practice on *Alam Pintar* of redirecting lookouts for the purpose of daywork. However, more thorough checks, for example through internal audits, could have revealed this practice. The master of *Alam Pintar*, recognising his vessel was entering an area that required increased vigilance, appointed a deck cadet to the role of lookout prior to entering the English Channel. However, this use of an inexperienced officer with an unqualified cadet indicated poor judgment.

The need to maintain an effective lookout, with qualified personnel should determine the basic composition of the navigational watch as outlined in IMO Res A.285(VIII) (**Annex 11**). The emphasis should be to post a lookout on the bridge at all times as an integral part of the bridge team.

2.14 ATTEMPTS TO DESTROY EVIDENCE

2.14.1 Changes to documentation

When MAIB inspectors boarded *Alam Pintar* in Hamburg they were presented with several items of recorded evidence, purporting to be a true record of the vessel's passage. It became apparent that these records had been systematically altered to indicate that the vessel had not been involved in an incident during the evening of 20 December.

The consequences and ramifications of these actions are outside the scope of this report and are the subject of separate investigation by the vessel's flag state.

2.14.2 Tampering with the VDR

Although the master claimed to have saved the VDR data when instructed to do so by Dover Coastguard, no data was found on the Furuno VDR removable hard disc drive (HDD) that related to the collision. The only record on the HDD, other than a commissioning data track, indicated the VDR had been switched on at 0216 on 21 December 2009. For this to be true, the unit would have to have remained switched off since the last annual performance check by a Furuno systems engineer. This is unlikely as the VDR should be left operational after the annual check has been completed.

There was known to be one spare HDD on board *Alam Pintar*. However, when this was examined, it also contained no data relating to the collision.

¹¹ STCW, COLREGS, IMO Res A.285(VIII)

¹² ICS Bridge procedures Guide, Fourth Edition 2007

After *Alam Pintar* sailed from Hamburg, the owners arranged for a manufacturer's technician to attend at the next port and conduct operational tests of the VDR unit. During this examination, the procedure to save data was followed and the VDR was found to be operating, and recording correctly.

Several scenarios were proposed to explain this lack of data, in consultation with the manufacturers. The most likely explanation involved the removal of the HDD in use and replacing it with a spare disk held on board. As there were no records of the serial numbers of disks supplied to the vessel, this could not be verified.

2.14.3 Detection

Attempts to alter or destroy evidence are both illegal and foolish. Accident investigators have a mass of information, both on board and elsewhere, which will rapidly identify such actions. Most technical recording devices will record all attempts to tamper with the evidence. Such attempts serve purely to turn an accident into a crime.

SECTION 3 - CONCLUSIONS

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

1. The additional dangers of the fishing grounds were not adequately “risk assessed” so there were no additional precautions taken to closely monitor traffic in the area. [2.3, 2.10]
2. The actions of *Etoile des Ondes* were erratic. However, as she was engaged in fishing this should not have been unexpected. [2.4, 2.5.1, 2.6]
3. The actions taken by *Alam Pintar* to avoid collision with *Etoile des Ondes* were ineffective. Although the initial action was in good time it was not substantial. [2.4, 2.6]
4. The decision taken by *Etoile des Ondes* to resume shooting pots, on a course that would result in a close quarters situation, was ill considered. Had the situation been properly assessed the skipper should have realised how close *Alam Pintar* was and delayed shooting until she was passed and clear. [2.5.1, 2.5.2]
5. The effect of the modifications on rearward visibility was not fully assessed and probably made it difficult for the skipper to see the actions taken by *Alam Pintar*. [2.5.1, 2.10]
6. The standard of lookout on *Etoile des Ondes* was poor. Although *Alam Pintar* had been seen, her actions were not monitored, so it was not appreciated what actions had been taken to avoid *Etoile des Ondes* or how close she was prior to shooting the pots. [2.5.1, 2.5.2]
7. The crew of *Etoile des Ondes* no longer wore “flotation devices”. Despite recommendations following the 2005 accident the perceived discomfort was felt to outweigh the safety benefits. [2.5.3, 2.11]
8. The OOW on *Alam Pintar* lacked experience and was unsure about the actions of *Etoile des Ondes*, however he did not consider calling the master for assistance. [2.6]
9. The bridge team on *Alam Pintar* was inexperienced and did not comply with the requirement to keep a lookout or with PACCSHIP (UK) SMS instructions on the use of the 4th officer. [2.6, 2.12.1, 2.12.2, 2.13.1, 2.13.2, 2.13.3]

10. The actions of many vessels in the area of the distress were not appropriate or in accordance with SOLAS Ch V, and other conventions. Masters or OOWs assumed that they would be contacted if required, so passed by without assisting. It is the master's clear and un-delegable duty to offer his vessel in a distress situation. [2.8, 2.9]
11. The actions taken by the master to establish the wellbeing of *Etoile des Ondes* and her crew after the collision were not sufficient to positively confirm they were safe. [2.8.3]
12. After the collision the master of *Alam Pintar* failed to report the collision and denied knowledge of the incident to authorities. On arrival at Hamburg, documents and records were found to have been falsified or destroyed. [2.8.3, 2.14, 2.15]
13. VHF radio is still used in distress operations and the volume selected must not be reduced to such a level that broadcasts become inaudible. [2.9.3]
14. Fitting of AIS, although not required on fishing vessels less than 15m, should be considered by owners as an aid to quickly assessing the distance off and CPA of passing vessels, especially in an area of high traffic density. [2.10]
15. Safety management system non conformities, with respect to the formation of effective bridge teams and the use of lookouts, had not been identified during internal audits on board *Alam Pintar*. [2.12.2, 2.13.3]
16. PACCSHIP (UK) did not have a system of formal appraisal for its masters. [2.12.3]

SECTION 4 - ACTIONS TAKEN

4.1 THE MARINE ACCIDENT INVESTIGATION BRANCH

- The MAIB has issued Safety Flyers to both the shipping and fishing industries (**Annex 12 - 13**):
 - Providing details of the accident and reminding owners to ensure masters are fully aware of their responsibility to respond to distress broadcasts, and highlighting the importance of establishing an effective bridge team.
 - Warning fishermen of the dangers of fishing in areas of high traffic density.
 - Reminding both masters and skippers of the absolute need to keep a good standard of lookout in case the actions of the other vessels are ineffective in avoiding collision or close quarters situations.
- The Chief Inspector of Marine Accidents has written to the operators of seven vessels which failed to offer assistance following the accident. They were asked to explain the actions of their vessels and what they intended to do to ensure that, in the future, vessels under their control comply fully with the requirements of SOLAS Chapter V, Regulation 33.

4.2 THE MCA, SEAFISH AND THE RNLI

Have conducted a high profile publicity campaign to encourage fishermen to wear lifejackets while working. Called "Lifejackets - useless unless worn" it makes a powerful case for the use of lifejackets while working on deck.

4.3 THE MCA

- Has produced MGN 313 (F) which explains the need for fishing vessels to maintain a proper navigational watch at all times (**Annex 14**) and refers to watchkeeping on fishing vessels.
- Is in the process of revising the codes of practice for the safe operation of fishing vessels. This revision will include the requirement for 12-15 metre fishing vessels to carry EPIRBs.

4.4 SEAFISH

Intends to revise the Fishing Vessel Safety Folder Risk Assessment proforma to include the risks encountered resulting from the area where the vessel intends to fish.

4.5 THE RNLI AND SEAFISH

Have conducted an extensive study into working wear lifejackets (**Annex 8-potting section only**).

Entitled *RNLI/Seafish Lifejacket trials 2005-2006*, the full report can be found at: www.rnli.org.uk/fishingsafety

4.6 PACCSHIP (UK)

Conducted an internal investigation into the collision, resulting in the following actions:

- Letters have been sent to all its masters reminding them of their obligations to follow the '*International regulations for the prevention of collisions at sea*' and the relevant sections of the company SMS, and in particular those sections concerning navigation at sea, watchkeeping levels and collision avoidance.
- Sections of the Crewing Manual have been revised to make clear that the '**additional watch keeper**' mentioned does not refer to the 4th Officer but to a suitably qualified and experienced officer.
- Masters have been instructed to give **verbal** and **written** instruction to their bridge watchkeeping teams about the use of the engine for collision avoidance.

4.7 OWNERS OF *ETOILE DES ONDES*

- Have fitted an AIS unit to their remaining vessel.
- Strongly recommended all crew members to wear flotation devices while on the deck, and now insists on their use during shooting or hauling of pots.

4.8 OWNERS OF OTHER VESSELS IN THE AREA

Have responded positively to the letter from the Chief Inspector of Marine Accidents and conducted independent investigations into their vessels' failure to respond to the distress broadcasts. They have all instigated measures to ensure their vessels comply with the requirements of SOLAS Chapter V, Regulation 33, in the future.

4.9 MARITIME AND PORT AUTHORITY OF SINGAPORE

As flag state authority for *Alam Pintar* is conducting an investigation of this incident in accordance with Singapore regulations.

SECTION 5 - RECOMMENDATIONS

The **International Chamber of Shipping**, the **National Federation of Fishermen's Organisations**, the **Welsh Federation of Fishermen's Associations Ltd**, the **Anglo-North Irish Fish Producers Organisation** and the **Scottish Fishermen's Federation** are recommended to:

2010/126 Promulgate to their respective associates and members the MAIB Safety Flyers accompanying this report.

Marine Accident Investigation Branch
September 2010

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