

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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For all enquiries:

Email: maib@dft.gsi.gov.uk

Tel: 023 8039 5500

Fax: 023 8023 2459

SUMMARY

At about 2316 (UTC¹) on 31 January 2011, the French-registered stern trawler *Jack Abry II* (**Figure 1**) grounded on the Isle of Rum, in heavy weather, while on passage from Lochinver to her intended fishing grounds. Mallaig all-weather lifeboat (ALB) and Stornoway coastguard helicopter deployed, and the crew were airlifted off the vessel. Some oil pollution resulted and the vessel was subsequently declared a constructive total loss. There were no injuries.

¹ All times in this report are UTC, unless otherwise stated. The vessel was operating on UTC+1.

FV JACK ABRY II

Grounding on the Isle of Rum, 31 January 2011

The MAIB investigation established that the skipper, who had been alone on watch in the wheelhouse, fell asleep and failed to make a course alteration. He had joined the vessel in Lochinver on the day of the accident after travelling from his home in France. It is likely the skipper became fatigued through a combination of personal stress, a prolonged period without sleep and poor quality rest before leaving his home. The wheelhouse watch alarm was not used, nor was best use made of the available navigational aids and crew.

A recommendation has been made to the owner of *Jack Abry II* designed to enhance the safety management of its fleet by the provision of operational instructions and guidance, to its crews.

Image courtesy of www.trawlerphotos.co.uk

Figure 1



Jack Abry II

FACTUAL INFORMATION

Vessel and crew

Jack Abry II was a 46m French-registered stern trawler, owned and operated by the Brittany based company Scapêche SA. Built in 2005, she was one of three sister vessels used to trawl for demersal fish off Scotland and Ireland. The vessel was based in Lochinver, north-west Scotland and only returned to her home port, Lorient, once a year to complete maintenance and statutory surveys. Fishing trips generally lasted 9-10 days following which her catch would be landed, then transported from Lochinver to Lorient by refrigerated trucks. Crew changes were effected by the vessel's owners utilising a private plane which operated between Lorient and Inverness or Stornoway.

Jack Abry II was manned, in compliance with her safe manning certificate, with 14 crew. With the exception of a Senegalese and Polish deckhand, the crew were French nationals. The majority of the crew were employed on permanent contracts, but also received a "share" of the profits from the catch. Most were employed on the basis of working three trips on board the vessel followed by one trip spent on leave. The exception was the vessel's 2nd skipper (hereinafter referred to as the "mate") who worked two trips on, followed by two trips on vacation.

The skipper had 32 years' fishing experience and had obtained his "capitaine de pêche" professional qualification in 1992. He had worked for Scapêche SA for 10 years and oversaw the construction of *Jack Abry II*. He had been the vessel's permanent skipper since her delivery.

Narrative

After a 10 day trip at sea, *Jack Abry II* returned to Lochinver during the early hours of 31 January 2011 to land her catch and undertake a partial crew change. The mate was on watch with the relief skipper as the vessel arrived in port. Once the vessel was secured alongside, the mate supervised the discharge of the catch and, because the relief skipper was due to leave, began preparing the vessel for her next fishing trip.

The permanent skipper set off from his home in France early on the morning of 31 January to re-join the vessel. His journey involved a 3-hour drive to Lorient to catch the flight to Inverness, followed by a 2½-hour minibus transfer to Lochinver. By the time he arrived at the vessel at 1400, he had been awake for around 11 hours. He had slept for a total of about 14 hours over the previous 3 nights, including 4 hours during the night before his departure. The length and quality of this sleep had reportedly been affected by anxiety caused by domestic issues. Although he had recently commenced taking prescribed medication for an unrelated medical problem, he had reportedly suffered no side effects as a result.

On arriving on board, the permanent skipper immediately began to prepare for departure. He assessed the weather forecast, which was poor and likely to preclude fishing to the north-west of Scotland for the next 4 days. The forecast was, however, more favourable to the south of Ireland, and the skipper decided to undertake the 2-day passage south via the Irish Sea.

A formal passage plan was not prepared; the skipper's practice was to follow historical tracks on the chart plotters, without the use of waypoints or cross track error (XTE) alarms.

The usual quick turnaround having been completed, *Jack Abry II* departed Lochinver at 1430. The weather was reported as south-westerly winds of Force 10 to 11, later easing to Force 9. The sea was rough, with moderate visibility, reducing to poor in squally showers.

The skipper and mate were both in the wheelhouse for the departure, but after 30 minutes the mate went below leaving the skipper alone in the wheelhouse. A while later the skipper made a brief telephone call home, but this failed to reduce his anxiety about his domestic issues. At 1630 he was relieved by the mate to enable him to take a meal break. Two of the crew were celebrating their birthdays, and the skipper had two glasses of whisky with them before having his dinner. He returned to the wheelhouse at 1800 to take over the watch, although the mate remained talking with the skipper for about 2 hours before retiring to his cabin. At this time, the wheelhouse was warm and stuffy.

Between 2100 and 2200 the skipper undertook paperwork at the chart table and then sat in the wheelhouse chair (**Figure 2**). He was navigating on autopilot using two radars (set on 6 and 12 miles range respectively) and a chart plotter located in front of the seat. The plotter display was partially obscured as he was sitting with his feet resting on a protective bar placed in front of the screen; the owner had installed this bar after the display screen had previously been damaged by a watchkeeper resting his feet on it. A second chart plotter had been switched off at 2101 as the skipper was using this computer to listen to music.

Image courtesy of Scapêche SA

Figure 2



Wheelhouse, looking forward to port

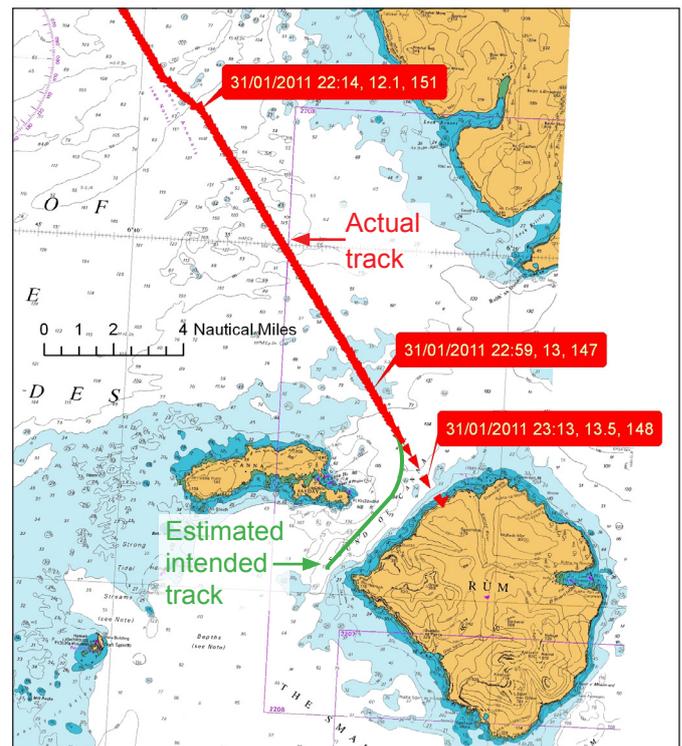
A wheelhouse watch alarm was fitted, as required by French regulations. This could be switched on/off with a key; the re-set button could be reached from the chair by rising and leaning aft. However, the alarm was switched off and was rarely used as it was considered an annoyance.

At 2207, the skipper made a small alteration to *Jack Abry II*'s course to pass another vessel, and he altered course back onto his intended track at 2214 (**Figure 3**). Although the skipper normally came off duty at 2300, he decided on this occasion to remain on watch for a while longer. Not only did he want to navigate the vessel through the Sound of Canna before handing over the watch, but he had also perceived that the mate was tired and would benefit from more rest. The only other person on duty was the 3rd engineer in the engine room.

With the vessel approximately 4 miles from the Isle of Rum, the skipper misinterpreted the radar display, which was showing extensive radar clutter from the squally showers. This caused him to lose situational awareness and believe that the island was further away than it actually was. His next recollection was of the vessel running aground on the Isle of Rum. The accident occurred around low water at about 2316 with the vessel making 13.5 knots (**Figure 3**).

Reproduced from Admiralty Chart BA 1795 by permission of the Controller of HMSO and the UK Hydrographic Office

Figure 3



Track of *Jack Abry II*

The skipper's initial instinct was to try to drive the vessel astern, but he then activated the engine's emergency stop and sounded the general alarm. He also sent DSC and Sat-C distress alerts. Stornoway coastguard deployed Mallaig ALB and Stornoway coastguard helicopter, while the French coastguard at Gris-Nez contacted the vessel by satellite phone and established that she was aground, with a slight port list but in no immediate danger.

The crew mustered and donned their immersion suits before moving to the forecabin. No damage assessment was conducted as the skipper considered it was too hazardous to send anyone below. The vessel's two 20-man liferafts were successfully deployed as a precaution.

At 0000 on 1 February, the skipper reported a 50° port list to Stornoway Coastguard. However, at 0013, a further conversation with Gris-Nez indicated the situation was no worse than initially reported. Mallaig ALB arrived on scene at 0030, at which time the vessel was partially afloat and rolling. At 0056, the ALB crew confirmed that fuel was leaking from the stern; 120 tonnes of marine gas oil was on board. The ALB crew offered to try and tow the vessel off the rocks, but the skipper declined.

At 0100, the helicopter arrived on scene (**Figure 4**) and winched all 14 crew safely off the vessel. Two of the crew (but not the skipper) were reported as smelling of alcohol. No alcohol or drug testing was conducted following their arrival in Stornoway at 0226.

By the time the ALB returned to the scene later that morning, *Jack Abry II* had settled a short distance along the coast (**Figure 5**). The ongoing poor weather led to further damage and the vessel was eventually declared a constructive total loss.

Figure 4



Stornoway coastguard helicopter on scene

Figure 5



Jack Abry II aground, 1 February 2011

Owner

Scapêche SA is part of the Mousquetaires Group, which operates a large number of retail outlets across Europe, including the Intermarché supermarket chain. Its fishing fleet was the largest in France; 10 of its 18 vessels operated from ports outside of Brittany. It employed around 220 fishermen and 30 shore-based staff.

Safety management

Apart from the provision of some basic emergency procedures, Scapêche SA provided no specific instructions or guidance regarding the vessel's safe operation, such as the use of lookouts, watch alarms and navigational equipment, or the conduct and frequency of drills. However, the company's code of conduct and employment contracts prohibited both drugs and alcohol on board.

The vessel's risk assessment had identified a hazard of watchkeeper fatigue leading to lack of vigilance. Implemented control measures were recorded as including: work/rest hours being managed; a watch alarm; and two "watchmen". A further control measure proposed that crew be employed as lookouts for 2-hour watches between their other duties. However, this was rarely followed despite six of the crew being certified as able to keep a lookout, the preference being for them to concentrate on their main duties.

As *Jack Abry II* spent most of the year operating from Lochinver, the managers of the vessel had limited oversight of onboard activities, and company representatives ordinarily only visited the vessel during the annual maintenance period in Lorient. The managers had, however, contracted IMP² in 2010 to undertake a fishing trip on each of its vessels to conduct a general audit of onboard safety and review the risk assessments. This was undertaken on *Jack Abry II* in June 2010. In accordance with French legislation, Scapêche SA also held quarterly meetings of its health and safety committee.

Scapêche SA had engaged external organisations to provide safety training for its crews. However there was no evidence that abandon ship drills had been conducted on *Jack Abry II* during the 7

² Institut Maritime de Prévention (IMP) is a non-profit making organisation which works with stakeholders in the French maritime sector to improve risk prevention on fishing and merchant vessels.

months prior to the grounding, despite a regulatory requirement for such drills to be carried out at least every 3 months.

Regulations and formal guidance

In accordance with French regulations, the crew were required to have 10 hours of rest in every 24 hours, divided into no more than two periods, of which one should be at least 6 hours duration. The normal working pattern for *Jack Abry II*'s watchkeepers complied with this requirement.

Brief, high-level guidance on various aspects of the safe operation of French fishing vessels, including the use of watch alarms is provided in the document *Sécurité Pêche fascicule aide-mémoire*, published by IMP; this document was available on board. Although not required to be carried on board *Jack Abry II*, more detailed guidance on navigational best practices for UK fishing vessels is provided in the MCA Marine Guidance Note, MGN 313 (F) *Keeping a Safe Navigational Watch on Fishing Vessels*. This includes guidance on the use of lookouts and navigational equipment, as well as watchkeeper fitness for duty.

Previous accidents

In 2001, the 38m stern trawler *Jack Abry*, operated by the same owner, ran aground on the island of North Uist, having departed Lochinver in good weather; the vessel's 2nd skipper had fallen asleep while alone in the wheelhouse. The owner subsequently indicated that it intended to fit a watch alarm to its vessels and use two watchkeepers, where possible.

Jack Abry II's permanent skipper had also been skipper of the French fishing vessel *An Orient*, which capsized and foundered in 2000. One of only three survivors, he was rescued by helicopter after several hours in the water. Eight of the crew lost their lives.

ANALYSIS

The cause of the grounding

Jack Abry II ran aground when the skipper, who was alone in the wheelhouse, failed to make the required course alteration to navigate through the Sound of Canna. No mechanical or navigational equipment problems were reported on the vessel. The skipper had lost situational awareness, both in

respect of position and time. His last recollection prior to the grounding was of the vessel being approximately 4 miles away from Rum. This would have been about 17 minutes prior to grounding. To follow the historical tracks on the chart plotter, he should have started to alter course 6 minutes later, with Rum at about 2.5 miles range. The evidence points to his having fallen asleep in his seat at some point after the course alteration at 2214.

Fatigue/sleepiness

The skipper was probably fatigued due to a lack of good quality sleep in the days leading up to the accident, combined with his ongoing personal stress. His fatigue was further exacerbated by his prolonged hours awake on the day of the accident, having travelled from France to re-join the vessel, and then being on watch for most of the time from the vessel's departure until the accident. The warm, stuffy wheelhouse, combined with the music being listened to, created a relaxing environment, countering both the available stimuli and the effects of the vessel movement in the poor weather. Sitting in the wheelhouse chair with his feet up increased the likelihood of the skipper falling asleep. Additionally, the time of the accident coincided with a natural dip in the human body's circadian rhythm.

Fatigue not only leads to an increased risk of falling asleep, but also a greater propensity for slowed reactions, errors, lapses and impaired decision making. It is possible that fatigue led the skipper to misinterpret the radar display and also to decide to remain on watch beyond the normal handover time. Although admirable in prioritising the mate's welfare, this again increased the likelihood of his falling asleep.

Had the skipper elected to use a lookout, as identified in the vessel's risk assessment, the likelihood of his falling asleep on watch would have been reduced. Although the skipper's onboard working hours on the day of the accident complied with the statutory requirement, this did not take account of his earlier travelling time. Had he recognised this, he could have delayed sailing or re-arranged the watches to ensure both he and the mate were adequately rested.

The consumption of alcohol during a meal break was not only in contravention of the company's alcohol policy, but also could have initially impaired the skipper's performance when he came back on

watch. However, by the time of the accident, about 6 hours later, it was unlikely to have contributed to his falling asleep.

Watch alarm

Despite the owner having fitted watch alarms to the company's vessels following the grounding of *Jack Abry* in 2001, and such alarms subsequently becoming a French statutory requirement, no company guidance was provided stipulating their use. The fact that the watch alarm on *Jack Abry II* was rarely used, despite being identified as a control measure in the risk assessment, was indicative of a poor attitude to risk.

Navigational practices – watchkeeping

No formal passage plan was prepared as the skipper's standard practice was to simply follow previous tracks on the chart plotters. The tendency for quick turnarounds in port reduced the available time to prepare for a forthcoming trip. A complacent attitude towards voyage planning and monitoring had developed with time and familiarity. By not making best use of the available watchkeeping and navigational aids, the skipper removed a number of stimuli that could have helped keep him alert. These stimuli included the watch alarm, and the waypoint and XTE alarms.

The ergonomics of the navigation position, with the active chart plotter display immediately in front of the seat, were also not ideal. The bar fitted on the console following previous damage to the display acted as a convenient foot rest. This led to the screen being partially obscured by the skipper's feet, and consequently only being periodically checked. Had the skipper more frequently corroborated the vessel's position both by radar and chart plotter, it is unlikely that he would have lost situational awareness.

The decision to switch off the second chart plotter and instead use the computer to listen to music further reduced the amount of information available to the skipper to monitor and ensure the vessel's safe navigation. However, even if XTE and waypoint alarms had been utilised on the active chart plotter, neither the software version nor the computer which it was loaded onto had the capability to provide audible warnings.

Best practice navigation principles are available in the IMP *Sécurité Pêche* document, and to a greater extent in the UK's MGN 313 (F). Had the

skipper been navigating in accordance with the guidance contained in the latter, the grounding could have been prevented.

Onshore safety management of vessel

Scapêche SA considered the vessel's risk assessment to serve as sufficient instruction for her safe operation. No specific company instructions or guidance were available on navigational watchkeeping practices, such as the use of lookouts and navigational equipment, or on the conduct and frequency of drills. Responsibility for the vessel's safe operation had been fully entrusted to the skipper, but specific company instructions and guidance would have provided a more effective framework to maintain the vessel's safety.

Although Scapêche SA had recently undertaken a number of positive initiatives to attempt to improve the safety management on its vessels, these all involved external organisations. The managers had little oversight of the operations on board the company's vessels. A greater level of management oversight would not only have helped ensure that the crew were adhering to its policies, risk assessments and regulatory requirements, but would also have helped enhance the onboard safety culture.

Post-grounding actions

Despite the skipper's ill-considered initial reaction to try to go astern on grounding, his subsequent actions in activating the engine emergency stop, sounding the general alarm, and seeking assistance by sending the DSC and Sat-C distress alerts, all helped to ensure the safety of his crew. Likewise, the mustering, donning of immersion suits and precautionary deployment of the liferafts were appropriate actions.

No damage assessment was attempted following the accident, as the skipper considered the vessel's condition too hazardous to send anyone below. It is possible that the skipper's previous experience during the traumatic loss of a vessel in 2000 affected his attitude to exposing the crew to risk in such circumstances. However, given that the vessel grounded on a rising tide and was found to have moved from its grounding position when it was visited the next day, it is possible that had the damage been assessed, the vessel could have been salvaged.

Although two of the crew reportedly smelled of alcohol during the evacuation, it is likely that they would have been off duty at the time of the accident. Nonetheless their response and effectiveness during an emergency situation could have been impaired.

CONCLUSIONS

- The skipper had travelled to the vessel on the day of the accident and was probably fatigued due to a combination of a lack of quality sleep, personal stress and extended hours awake.
- Despite the skipper's anxiety, the warm and stuffy wheelhouse, his seated posture with his feet up and the music he was listening to, created a relaxing environment and increased the likelihood of his falling asleep.
- Although the alcohol consumed by the skipper would have initially impaired his performance, this was some time before the grounding, and was unlikely to have contributed to his falling asleep.
- By not making best use of the available watchkeeping and navigational aids, the skipper removed a number of stimuli that could have helped keep him alert. These stimuli included the watch alarm, and XTE and waypoint alarms.
- Had the skipper more effectively managed the available crew resources, the likelihood of his falling asleep on watch would have been reduced.
- No specific company instructions or guidance were available on navigational watchkeeping practices or on the conduct and frequency of drills.
- A greater level of company oversight of the vessel's operations would not only have helped ensure that the crew were adhering to its policies, risk assessments and regulatory requirements, but would also have helped to enhance the onboard safety culture.

RECOMMENDATIONS

Scapêche SA is recommended to:

- 2011/126 Enhance the safety management of its vessels by:
- Providing specific operational instructions and guidance with respect to: the management of hours of work and rest, taking into account travelling time when changing crew; watchkeeping best practice, including passage planning and the appropriate use of navigational equipment, watch alarms and lookouts; and the conduct and frequency of drills.
 - Increasing onboard oversight to ensure compliance with its instructions and guidance, risk assessments, and statutory regulations.

SHIP PARTICULARS

Vessel's name	<i>Jack Abry II</i>
Flag	France
Classification society	Bureau Veritas
IMO number/Fishing number	9305049/LO 924831
Type	Fishing vessel
Registered owner	Scapêche SA
Manager(s)	Scapêche SA
Construction	Steel
Length overall	45.8 metres
Registered length	39.26 metres
Gross tonnage	840
Minimum safe manning	14
Authorised cargo	Not applicable

VOYAGE PARTICULARS

Port of departure	Lochinver, Scotland
Port of arrival	Fishing grounds, South of Ireland
Type of voyage	Coastal
Cargo information	None
Manning	14

MARINE CASUALTY INFORMATION

Date and time	31 January 2011 at about 2316 (UTC)
Type of marine casualty or incident	Very Serious Marine Casualty
Location of incident	Isle of Rum
Place on board	Not applicable
Injuries/fatalities	None
Damage/environmental impact	Constructive total loss/pollution
Ship operation	In passage
Voyage segment	Mid-water
External & internal environment	Wind south-westerly Force 9. Sea state rough. Visibility moderate to poor.
Persons on board	14