

Report of the Investigation
of a man overboard fatality from
mfv Opportune (WK171)
35 miles east of Wick
on 23 February 2000

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Report No 33/2000

**Extract from
The Merchant Shipping
(Accident and Reporting and Investigation)
Regulations 1999**

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

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GLOSSARY OF ABBREVIATIONS

C	Centigrade
CPR	Cardiac Pulmonary Resuscitation
CWBE	Constant Wear Buoyancy Equipment
gt	gross tonnage
MAIB	Marine Accident Investigation Branch
MCA	Maritime and Coastguard Agency
MGN	Marine Guidance Note
MOB	Man Overboard
oa	overall
reg	registered
UK	United Kingdom
UTC	Universal Co-ordinated Time



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SYNOPSIS

On 23 February 2000 the Marine Accident Investigation Branch (MAIB) was notified of an accident 35 miles east of Wick, on board the fishing vessel *Opportune*. An investigation began that day.

There were no eyewitnesses, but the crewman is believed to have fallen overboard while trying to retrieve part of a net which had gone over the side after he loosened it in preparation for shooting. The vessel was rolling in the stormy conditions and heavy swell at the time. He was in the water for an estimated 15 minutes before he was missed.

A full air and sea search was then co-ordinated by the coastguard, and an hour after the search and rescue (SAR) began the crewman was recovered from the water by helicopter. He was rushed to Caithness hospital, but was pronounced dead on arrival.

Contributory causes of the accident were: the victim probably climbed on to the net, thereby placing himself in immediate danger; he was not wearing an available working-type lifejacket; and he did not inform his colleagues before trying to retrieve the net. A risk assessment had not been carried out on board *Opportune* to identify the risks involved, and the appropriate control measures to be taken.

The MAIB makes no recommendations.

Figure 1



Opportune (WK 171)

Figure 2



VESSEL AND ACCIDENT PARTICULARS

Name	:	<i>Opportune</i>
Type	:	Fishing Vessel (Seine Netter)
Port of Registry	:	Wick
Fishing Number	:	WK 171
Built	:	1979 Campbeltown
Construction	:	Steel
Owners	:	Bremner Fishing Co Ltd Wick Caithness
Gross tonnage	:	201
Length	:	25.90 (oa) 24.04 (reg) metres
Breadth	:	7.22m
Depth	:	3.8m
Propulsion	:	478kW Callesen Diesel Single Screw Shaft
Crew	:	Seven
Position of Accident	:	58° 33' N 002° 03' W
Date and Time	:	23 February 2000 1601 UTC
Casualties	:	1 fatality
Damage	:	None

SECTION 1 - FACTUAL INFORMATION

1.1 Description of vessel

Opportune was built of steel and incorporated a traditional Campbeltown design with one deck above the waterline.

Below the main deck the fish hold was situated forward, separated by watertight bulkheads from the forepeak and engine room spaces, with the crew accommodation aft of the engine room.

The main deck was enclosed by a three-quarter-length shelterdeck, which ran from the stem to a position approximately 2m aft of the wheelhouse. Entry under the shelterdeck was by means of a watertight door on the port side of the main deck aft.

Seine net, rope reels and winch were housed under the shelterdeck. Access to the fishroom was also from under the shelterdeck.

Both the wheelhouse and galley/messing area were set aft of amidships.

Three adjacent longitudinal fixed net storage bins of welded steel construction were at the aft end of the vessel.

The aft freeboard of the vessel was approximately 2.5m.

Opportune held a valid UK Fishing Vessel Certificate.

A regular crew operated *Opportune* and she had been owned by Bremner Fishing since being built in 1979.

1.2 Background to the voyage

Opportune operated with a regular crew, spending up to ten days at sea followed by two to three days in harbour after landing the catch.

At the time of the accident the vessel was working the fishing grounds off the north-east coast of Scotland.

1.3 Type of fishing

Opportune was engaged in seine netting, a method of fishing using a seine net, which is similar to a trawl, but without the use of otter boards and trawl warps.

The spread of the net is achieved by the vessel first shooting a number of coils of seine net rope from one of the rope reels positioned on each side of the vessel to which one end of the net is then attached. Before being shot, the net is streamed astern of the vessel from a net drum. The ropes on the opposite side are then clipped on, and the release mechanism is

operated, freeing the net from the drum. Once this has been done an equal amount of rope as that on the first side is then shot.

The coils of rope and net are shot with the vessel steaming in a triangle, eventually returning to her starting point. To retrieve the catch, the rope end which was shot first is marked with a dhan buoy which is retrieved back on board, and, together with the rope end from the opposite side which is kept on board, both ropes are towed and hauled simultaneously by the vessel until the net is hauled on board.

1.4 Layout and description of fishing gear

Both the port and starboard rope reels held 13 coils of rope. Each coil was 240m long.

The coils of rope on both reels varied in colour, the first and third coils on the port side reel were coloured white.

Part of the seine net in use at the time of the accident was stored in the port side bin at the aft end of the vessel. This section was stored with the cod end on top ready for shooting. The first wing of the net to be shot was laid on the deck of the centre bin. The remaining part of the net was wound on to the net drum.

To prevent the net spilling out of the bin when the vessel rolled it was lashed down with two ropes. The crew untied these ropes in preparation for shooting the net when one coil of rope was left on the reel.

1.5 The crew

Opportune carried a crew of seven. Under *The Fishing Vessel (Certification of Deck Officers and Engineer Officers) Regulations 1984*, the vessel was required to carry at least one holder of a Deck Officer Certificate of Competency (Fishing Vessel) Class 2 and one holder of a Deck Officer Certificate of Competency (Fishing Vessel) Class 3.

The skipper was an experienced fisherman having been employed in the fishing industry for over 30 years. He had worked on board *Opportune* as skipper since 1986, and was the holder of a Deck Officer Certificate of Competency (Fishing Vessel) Class 1.

The mate, also an experienced fisherman, had been employed on board *Opportune* for over 10 years and was the holder of a Deck Officer Certificate of Competency (Fishing Vessel) Class 1 (limited).

The remaining crew were also experienced fishermen, having served on board *Opportune* and other vessels for several years. The deceased crewman held a Skipper (limited) Certificate of Competency.

All crew members had undergone training in basic sea survival, fire-fighting and first-aid at sea.

1.6 Environmental Conditions

The weather reported throughout the incident was a southerly wind of force 4 increasing to force 6 to 7. There was a 2 to 3m swell and the visibility was 3 to 4 miles, reducing in rain showers. The sea surface temperature was 10°C.

1.7 Narrative of events

Opportune sailed from Wick harbour at 2300 on Monday 21 February 2000, bound for the fishing grounds 50 miles north-east of Wick. She began fishing the following day, and by the Wednesday was about 35 miles east of Wick.

At approximately 1515 the crew began shooting the fishing gear for what would have been their fifth haul of the day.

The skipper was in the wheelhouse, the casualty and two other crewmen were in the fishroom storing the catch from the previous haul. The remaining three crewmen were on deck, forward, monitoring the port side ropes as they were being shot.

After three or four coils of rope had been shot, the three crewmen in the fishroom climbed out of the fishroom to join their colleagues on deck. One of them, the engineer, went down to the engine room to carry out some maintenance.

When eight coils of rope had been shot, the skipper changed course from north-west to north-east to shoot the remaining five coils. The vessel was rolling heavily.

At approximately 1550, after three of the remaining five coils had been shot, the engineer returned from the engine room and made his way aft. Having done so, he discovered that the cod end and bag of the net had fallen outboard and was trailing in the water. He immediately shouted to his colleagues, who were still under the shelterdeck and informed the skipper in the wheelhouse.

The skipper slowed the vessel, one of the crewmen forward applied the brake to the reel and then, along with the others, hurried aft to haul the net back into the bin. The two ropes that had held the net in the bin had been untied.

Once the net was back in the bin the skipper increased speed, and the crew began shooting the remaining two coils, followed by the net. Only when everybody, apart from the skipper who was in the wheelhouse, was aft, and the net was streaming astern in the water, did they realise one crewman was missing.

One of the crewmen on deck informed the skipper, while the remainder searched *Opportune*. Unable to find the missing crewman, they realised he must have fallen overboard.

The skipper instructed the crew on deck to haul the net back on to the net drum as the quick release mechanism had not yet been operated. He made this decision in the fear that the casualty might become entangled in the net.

At 1601, while the rest of the crew were hauling the net, the skipper contacted Pentland Coastguard and reported a man overboard (MOB). In turn, Pentland Coastguard transmitted a “Mayday Relay” broadcast initiating a full air and sea search.

At 1603, coastguard rescue helicopter R137 was scrambled from Lossiemouth and tasked to the scene. At 1605, Wick lifeboat and *Opportune*’s sister vessel *Boy Andrew* were also tasked to the scene. Various other vessels responded to the broadcast and some were asked to assist in the search.

It took approximately 15 minutes for *Opportune*’s crew to haul the net back on board. Once this was done the port rope was unclipped and let go. The skipper then made an emergency turn, brought the vessel to half-speed on a reciprocal course, and began searching with the remainder of the crew positioned at vantage points on board.

Coastguard rescue helicopter R137 arrived on scene at 1645 and, at 1705, recovered the casualty from the water. He was not wearing a lifejacket. All other units were stood down.

The casualty was airlifted to Caithness general hospital in Wick. Cardiac pulmonary resuscitation (CPR) was performed by the helicopter crew en route.

At about 1745, on arrival at Caithness hospital, a doctor pronounced the casualty as dead.

1.8 The casualty

The casualty was an experienced fisherman aged 41 years.

The postmortem examination showed that he died from drowning.

1.9 Lifesaving appliances

Opportune was equipped with the mandatory lifesaving appliances for a vessel of less than 24.4m registered length, in accordance with *The Fishing Vessels (Safety Provisions) Rules 1975* and *The Fishing Vessels (Lifesaving Appliances) Regulations 1998*.

She was also equipped with an immersion survival suit for each crew member, two Bell MOB line-throwing appliances mounted in an accessible position on deck, a Markus lifenet and a set of ladders for retrieving a casualty from the water.

In addition to standard lifejackets, constant wear buoyancy equipment (CWBE) was also available for use by the crew, who were encouraged by the owner to wear it when working on deck. However, this was ignored and none of the crew ever wore it.

Fisherman and Safety, which is published by the Maritime and Coastguard Agency (MCA) contains useful advice on lifejackets and buoyancy aids.

Marine Guidance Note MGN 155(F) which is also published by the MCA and entitled *Buoyancy Equipment for Fishermen at Work* strongly recommends:

- (a) *that a sufficient quantity of suitable CWBE is carried on board every fishing vessel to ensure that one device is available, at all times, for each person working on deck, and*
- (b) *that all fishermen wear suitable CWBE whilst working on deck.*

1.10 Risk assessment

The Merchant Shipping and Fishing Vessels (Health and Safety at Work) Regulations 1997, which came into force on 31 March 1998, required all fishing vessels to carry out a risk assessment.

Advice in complying with the regulations is given in *Marine Guidance Note MGN 20* entitled *Merchant Shipping and Fishing Vessels (Health and Safety at Work) Regulations 1997*.

Annex 1 Risk Assessment states in part:

Under the Merchant Shipping and Fishing Vessels (Health and Safety at Work) Regulations 1997, employers are required to ensure the health and safety of workers and other persons so far as is reasonably practicable, by the application of certain principles. These principles include the avoidance of risks, and the evaluation of unavoidable risks and the taking of action to reduce them.

Specifically, employers are required to make a suitable and sufficient assessment of the risks to health and safety of workers arising in the normal course of their activities or duties, for the purpose of identifying:

- (a) *groups of workers at particular risk in the performance of their duties; and*
- (b) *the measures to be taken to comply with the employer's duties under these Regulations;*

The assessment should extend to others on board ship who may be affected by the acts or omissions of the employer.

At the time of the accident no formal risk assessment had been carried out on board *Opportune*. The owner had commissioned one to take place on 24 February 2000 but this was cancelled in light of this accident.

On 3 March 2000, D B Anderson, Management and Assessment Specialists of Alford, Aberdeenshire, carried out a risk assessment on board *Opportune*.

1.11 Subsequent action by the owner

Since the accident, the owner and skipper of *Opportune* have made it a condition of working aboard the vessel that the crew wear working-type lifejackets when on deck.

Figure 3



Opportune - net secured in bin

Figure 4



SECTION 2 - ANALYSIS

2.1 General

This accident could easily have been avoided.

Precautions such as identifying the risks involved, keeping clear of loose gear while shooting, letting your work colleagues know where and what you are doing at all times, and summoning help when required, would have helped prevent this accident.

Had the casualty been wearing a working-type lifejacket while on deck, and had the subsequent search and rescue been initiated immediately, the victim might have been saved.

2.2 The accident (reconstruction)

There were no eyewitnesses to the accident, the remainder of the crew were forward, apart from the skipper in the wheelhouse and the engineer down below. The casualty was last seen leaving the fishroom, forward under the shelter, making his way aft. It was not until the net was being shot, approximately 10-15 minutes after the casualty is believed to have fallen overboard, that the remainder of the crew were aware that he was missing.

It is probable that when he left the fishroom he was unaware of how many coils of rope had been shot. In making his way aft, which all the crew routinely did in preparation for shooting the net, it is possible he noticed that the colour of the rope being shot was white. Having mistakenly interpreted that coil of rope to be the last coil, instead of the third from last, he prematurely released the lashings on the net in preparation for shooting.

With the lashings released and the vessel rolling in the prevailing conditions, it is likely that some of the net spilled out of the bin and began trailing overboard. In an attempt to retrieve the net and prevent any more falling outboard, he probably climbed on to the top of the net in the bin to haul it back and secure it down. While attempting to do this, he fell overboard.

Had the casualty stood clear of the loose net and informed the skipper of the problem, or summoned help in securing it, the accident could have been avoided. At worst the other crew members would have been alerted to his falling overboard and immediate assistance would have been available.

2.3 Action by the skipper

Once the skipper had been informed that one of his crew was missing, he instructed the remainder of the crew on deck to start hauling the net back on to the drum.

Unfortunately, this operation took approximately 15 minutes to complete, during which time *Opportune* was unable to begin any form of search.

The crew could have used the quick release mechanism and let the net go. The net would still have been connected to the port ropes and could have been retrieved later. This would have

saved time, allowing *Opportune* the chance of starting a search immediately. However, releasing the net would have allowed it to float and drift on the surface for a short time before sinking, and might have posed a danger to the missing crewman. He could have become entangled in it, had he fallen overboard immediately before the net was shot.

2.4 Lifesaving appliances

Opportune was well equipped with lifesaving appliances, over and above that required by the regulations. Unfortunately, many of these appliances would only have assisted the casualty had someone actually seen him fall overboard. A lifejacket was the one piece of equipment which would have been of particular value to the casualty.

Many fishermen are reluctant to wear standard issue lifejackets while working on deck because they are too bulky to work in. While there may be a case for these lifejackets not being practical to work in, the crew of *Opportune* had been supplied individually with constant wear buoyancy equipment (CWBE). These lifejackets can easily be worn while working on deck. However, the crew chose not to wear them.

Had the casualty worn such a lifejacket, it would have kept him afloat, aided his recovery, and might have saved his life. His chances of survival would have been far greater with a lifejacket, than without.

2.5 Risk assessment

A formal risk assessment should have been carried out on board *Opportune* long before the accident happened. A comprehensive assessment of the risks involved in shooting and handling the gear would have identified appropriate control measures to prevent someone falling overboard.

Had this been the case, and the control measures been adopted by the crew, the accident could well have been averted.

2.6 Subsequent action by the owner

The owner has made it a condition of working aboard the vessel that any crew member must wear a lifejacket while working on deck. This will ensure that, should a crewman fall overboard from *Opportune* again, his chances of survival will be increased.

If other owners and skippers followed this example, fatalities due to fishermen falling overboard could be greatly reduced.

SECTION 3 - CONCLUSIONS

3.1 Findings

1. There were no eyewitnesses to the accident. [2.2]
2. The casualty placed himself in immediate danger by probably climbing onto the net. [2.2]
3. The casualty probably fell overboard when the vessel rolled while he tried to retrieve part of the net. [2.2]
4. Employing the quick release mechanism and letting the net go could have saved valuable time but would have posed a danger of the missing crewman becoming entangled in it. [2.3]
5. *Opportune* was equipped with more than the required lifesaving appliances for a vessel of her size. [2.4]
6. Each crew member was provided with constant wear buoyancy equipment (CWBE). [2.4]
7. The crew did not wear constant wear buoyancy equipment (CWBE) while working on deck. [2.4]
8. Constant wear buoyancy equipment worn by the casualty might have saved his life. [2.4]
9. At the time of the accident no formal risk assessment had been carried out on board *Opportune*. [2.5]
10. A comprehensive risk assessment would have identified the risks involved in shooting the fishing gear. [2.5]
11. Had the risks been identified and appropriate control measures taken, the accident might have been avoided. [2.5]
12. The wearing of lifejackets while working on deck as a condition of working aboard the vessel will ensure that if a crewman falls overboard he will have a better chance of survival. [2.6]

3.2 Cause

The probable immediate cause of the accident was the vessel rolling, causing the crewman to fall overboard. [2.2]

3.3 Contributory causes

1. The probable decision by the crewman to climb on to the net thereby placing himself in immediate danger. [2.2]
2. His decision not to wear an available working-type lifejacket. [2.4]
3. His decision not to inform his colleagues before trying to retrieve the net. [2.2]
4. The absence of a comprehensive risk assessment, which would have identified the risks involved and the appropriate control measures to be taken. [2.5]

SECTION 4 - RECOMMENDATIONS

The MAIB has no safety recommendations to issue at this time.

**Marine Accident Investigation Branch
October 2000**