Report of an Investigation
into the Near Miss
Incident between

***mv Elm* and**
mfv Suzanne

on 11 February 1999

Extract from

The Merchant Shipping

(Accident Reporting and Investigation)

Regulations 1994

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

CONTENTS

GLOSSARY OF ABBREVIATIONS

AB	Able Seaman
GPS	Global Positioning System
gt	gross tonnage
kW	kilowatt
m	metre
MF	Medium Frequency
SOLAS	*International Convention for the Safety of Life at Sea*
STCW 95	*International Convention on Standards of Training, Certification and Watchkeeping for Seafarers incorporating the 1995 amendments*
UK	United Kingdom
UTC	Universal Co-ordinated Time
VHF	Very High Frequency

SYNOPSIS

The incident was notified to the Marine Accident Investigation Branch (MAIB) on 11 February 1999. An investigation started on 3 March 1999.

The bulk carrier *Elm* and the fishing vessel *Suzanne* were involved in a near miss incident in position 50° 07' N, 004° 05' W.

Elm was on passage from Belfast to Teignmouth. *Suzanne* was engaged in trawling.

The immediate cause of the "near miss" was that the bridge watch on board *Elm* failed to detect that their ship was on or nearly on a collision course with another vessel.

A contributory cause was the failure of the night lookout and the master to maintain a proper look-out in accordance with the *International Regulations for Preventing Collisions at Sea 1972*.

There are no recommendations.

SECTION 1 FACTUAL INFORMATION

1.1 PARTICULARS OF VESSELS AND INCIDENT

Name	:	*Suzanne*
Type	:	Fishing vessel (stern trawler)
Port of Registry	:	Plymouth
Fishing Number	:	PH 438
Built	:	1996 Dragon Marine Sunderland Tyne and Wear
Construction	:	Steel
Owner	:	Mr V Kryunivsky Elburton Road, Plymstock, Plymouth
Gross Tonnage	:	27.80
Length Overall	:	11.92m
Length Registered	:	9.90m
Breadth	:	4.80m
Depth	:	2.62m
Propulsion	:	Gardner Diesel 216 kW Single Screw Shaft
Crew	:	One

Name	:	*Elm*
Type	:	Bulk carrier
Port of Registry	:	Kingstown St Vincent and the Grenadines
Official Number	:	7420948
Built	:	1975 Scheepwerf Netherlands
Construction	:	Steel
Owner	:	Labrador Shipping Bahamas
Manager	:	Anglo Dutch Management Services Ltd PO Box 1, Woking, Surrey
Gross Tonnage	:	959
Length Overall	:	64.98m
Length BP	:	59.94m
Breadth	:	10.83m
Depth	:	4.88m
Propulsion	:	De Industrie 846 kW Single Screw shaft
Crew	:	Six
Position of Incident	:	50° 07' N 004° 05' W
Date and Time	:	11 February 1999 0645 (UTC)

Figure 1

Suzanne

Figure 2

Figure 3

Elm

Figure 4

1.2 DESCRIPTION OF VESSELS

Suzanne was designed as a less than 10m registered length stern trawler. She regularly worked the inshore fishing grounds south of Plymouth on a daily basis. She was currently engaged in twin-rig trawling.

The wheelhouse was situated forward with the main working deck aft. *Suzanne* was equipped with standard navigational equipment which included: GPS, radar, magnetic compass with autopilot, VHF radio and echo sounder.

Elm was designed as a dry bulk carrier and was currently engaged on the UK/Near Continental trade, carrying general bulk cargoes. The vessel had a single hold, with a Macgregor single-pull hatch cover. She also was equipped with standard navigational equipment which included: GPS, radar, magnetic compass with autopilot VHF radio, MF radio and echo sounder.

1.3 TRAWLING (TWIN-RIG)

Twin-rig trawling is a method of fishing using two bottom trawls, which are pulled along the seabed side by side.

A slow trawling speed and high propeller torque are required to drag the trawls along the seabed.

While engaged in trawling, a fishing vessel is hampered by her fishing gear, and her manoeuvrability is restricted.

1.4 THE CREWS

The skipper/owner, who normally operated his vessel single-handedly, was the only person on board *Suzanne*.

Under *The Fishing Vessels (Certification of Deck Officers and Engineer Officers) Regulations 1984*, *Suzanne* was not required to carry any certificated persons on board. However, the skipper was the holder of a Class 2 (Fishing Vessel) certificate of competency.

He was an experienced fisherman, having been employed in the fishing industry since 1973 on various types of fishing vessels. He had owned and operated *Suzanne* since 1996.

Elm carried a crew of six; a master, mate, chief engineer, two ABs and an AB/cook, in accordance with her safe manning certificate issued by the St Vincent and Grenadine authorities.

The master and mate shared the navigation watch, alternating six hours on and six hours off. The master was normally on watch from 0600 until 1200 and 1800 until 2400.

The master was British. He held an unrestricted Panamanian master's certificate of competency. He had over 20 years experience on cargo vessels of less than 2,000gt.

The remainder of the crew were non-UK nationals.

1.5 ENVIRONMENTAL CONDITIONS

The weather reported throughout the incident was: light airs with a calm sea and good visibility of 10-12 miles. The predicted times of nautical twilight and sunrise were 0608 and 0720 respectively.

1.6 NARRATIVE OF EVENTS (All times are UTC) (All courses are true)

Suzanne left her home port of Plymouth at 0445 on 11 February 1999, bound for fishing grounds 12 miles south-east of the port. She reached the fishing grounds at approximately 0600, and the skipper began preparations for shooting the fishing gear.

At 0630 *Suzanne* shot her fishing gear and began towing in a direction of 190° at a speed of 2.4 knots. The correct lights and shape were displayed for a fishing vessel engaged in trawling.

On board *Elm*, the master was on watch. Also present on the bridge was the night lookout. *Elm* was on passage from Belfast to Teignmouth steering a course of 075° at a speed of 10.1 knots.

At 0645, with the master's approval, the night lookout left the bridge because daylight was breaking. Shortly afterwards, the master selected the 16 mile range scale on the radar to obtain a range and bearing from Start Point. He then began entering way-points into the GPS for the next leg of the voyage. While carrying out this task, the autopilot started operating erratically, applying port and starboard helm in rapid succession. The master then went to the autopilot control to try to rectify the fault.

On board *Suzanne*, sometime before 0700, the skipper detected *Elm* approaching from the west-south-west. He also noticed that *Elm* was not on a steady course, but steering erratically. Due to this, the skipper was unable to ascertain whether or not there was a risk of collision until the distance between the vessels had reduced to ¼ mile.

Realising that both vessels were on collision courses, the skipper of *Suzanne* called *Elm* on VHF radio to advise *Elm's* watchkeeper of the situation. When no reply was received, he fired a red distress flare in the direction of *Elm* to attract attention, and then began taking evasive action by releasing the trawl warps from the towing block.

This had the effect of pulling *Suzanne* astern. Realising that this action alone was insufficient to avoid a collision, he used the main engine controls to come hard astern.

On board *Elm*, the master, who was still busy trying to rectify the fault with the autopilot, heard a call for an eastbound coaster on the VHF radio, and then saw a red flare. He went immediately to the port side of the bridge and saw *Suzanne* in close proximity on the port side. He assessed by then that it was too late to make an alteration of course without making the situation worse. *Elm* was still steering erratically. At approximately 0700, both vessels passed each another within a distance of 1 cable, in position 50° 07' N 004° 05' W.

When both vessels were clear of one another, the skipper of *Suzanne* contacted Brixham Coastguard on VHF radio and reported the situation. Brixham Coastguard then contacted *Elm* for details. The master of *Elm* reported to the Coastguard that he had not detected *Suzanne* because he was busy trying to rectify a fault with the autopilot. After the conversation with Brixham Coastguard the master of *Elm* contacted the skipper of *Suzanne* and apologised.

Suzanne hauled her fishing gear. She was not damaged.

Elm continued on passage. On arrival at Teignmouth, the autopilot and steering gear were checked, and the fault rectified.

1.7 *INTERNATIONAL REGULATIONS FOR PREVENTING COLLISIONS AT SEA 1972 (COLLISION REGULATIONS)*

Rule 2(a) of the *International Regulations for Preventing Collisions at Sea 1972 (Collision Regulations)* states:
"Nothing in the rules shall exonerate any vessel, or the owner, master and crew thereof, from the consequences of any neglect to comply with the Rules or of the neglect of any precaution which may be required by the ordinary practice of seaman, or by the special circumstances of the case.

Rule 5 states:
Every vessel shall at all times maintain a proper look-out by sight and hearing as well as by all available means appropriate in the prevailing conditions, so as to make a full appraisal of the situation and of the risk of collision.

Rule 16 states:
Every vessel which is directed to keep out of the way of another vessel shall, so far as possible, take early and substantial action to keep well clear.

Rule 17(a)(i) states:
Where one of the two vessels is to keep out of the way, the other shall keep her course and speed.

Rule 17(a)(ii) states:

The latter vessel may however take action to avoid collision by her manoeuvre alone, as soon as it becomes apparent to her that the vessel required to keep out of the way is not taking appropriate action in compliance with these Rules.
Rule 18(a) states:
Except where Rules 9, 10 and 13 otherwise require, a power-driven vessel underway shall keep out of the way of:

(i) a vessel not under command;

(ii) a vessel restricted in her ability to manoeuvre;

(iii) a vessel engaged in fishing;

(iv) a sailing vessel.

Rule 34(d) states:
When vessels in sight of one another are approaching each other and from any cause either vessel fails to understand the intentions or actions of the other, or is in doubt whether sufficient action is being taken by the other to avoid collision, the vessel in doubt shall immediately indicate such doubt by giving at least five short and rapid blasts on the whistle. Such a signal may be supplemented by a light signal of at least five short and rapid flashes."

1.8 NAVIGATIONAL WATCH

Section A-VIII/2 of the *International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, incorporating the 1995 amendments (STCW 95)* sets out the basic principles to be observed in keeping a safe navigational watch.

Part 3.1 *Look-out,* Paragraph 14, states:
"The look-out must be able to give full attention to the keeping of a proper look-out and no other duties shall be undertaken or assigned which could interfere with that task.

Paragraph 15, amongst other points, states:
The officer in charge of the navigational watch may be the sole look-out in daylight provided that on each occasion:

1. the situation has been carefully assessed and it has been established without doubt that it is safe to do so;

2. full account has been taken of all relevant factors including, but not limited to;

(i) state of weather,
(ii) visibility,

(iii) traffic density,
(iv) proximity of dangers to navigation, and
(v) the attention necessary when navigating in or near traffic separation schemes; and

3. assistance is immediately available to be summoned to the bridge when any change in the situation so requires.

Paragraph 35 states:

The officer in charge of the navigational watch shall bear in mind the necessity to comply at all times with the current requirements of the International Convention for the Safety of Life at Sea (SOLAS) 1974. The officer of the watch shall take into account:

1. the need to station a person to steer the ship and to put the steering into manual control in good time to allow any potential hazardous situation to be dealt with in a safe manner; and

2. that with a ship under automatic steering it highly dangerous to allow a situation to develop to the point where the officer in charge of the watch is without assistance and has to break the continuity of the look-out in order to take emergency action."

SECTION 2 ANALYSIS

2.1 NIGHT LOOKOUT (*Elm*)

2.1.1 Before leaving the bridge at 0645, some 15 minutes before the incident, the night lookout failed to detect *Suzanne*. When he left the bridge she would have been bearing 12° to port at a distance of 2.8 miles. The visibility at the time was very good and the sea state was calm. *Suzanne* was displaying the correct lights and shape for a vessel engaged in trawling and should have been easily seen by the lookout.

2.1.2 Consequently, when the night lookout left the bridge, neither he, nor the master, was aware that both vessels were on or nearly on a collision course.

2.1.3 It is possible that the night lookout had been busying himself with other tasks in preparation for going off-watch, or was in conversation with the master and had inadvertently ceased his night look-out duties when dawn began to break. In any event, the night lookout failed to maintain a proper look-out in accordance with Rule 5 of the Collision Regulations.

2.2 ACTION BY THE MASTER (*Elm*)

2.2.1 When the master allowed the night lookout to leave the bridge, he then took over his responsibility. Being unaware that his vessel was on or nearly on a collision course with *Suzanne* he used the radar to start fixing the vessel's position. Selecting the 16 mile range scale would have made it difficult to detect any targets in close proximity, especially with his mind being focused on obtaining a range and bearing from Start Point. When the position was obtained, he began entering way-points into the GPS. During that time he was totally distracted from keeping a proper look-out.

2.2.2 He was further distracted when the autopilot began operating erratically and, by trying to rectify the fault himself, without calling assistance to the bridge, made it impossible for him to maintain a proper look-out.

2.2.3 The master should have made a full appraisal of the situation by sight and all other available means, including the use of short range scales on radar, before he relieved the night lookout and began fixing the vessel's position. Had this been done, he would have probably detected *Suzanne* on or nearly on a collision course, and avoiding action could have been taken in ample time.

2.2.4 When the autopilot began operating erratically the master should have called an additional person to the bridge, selected manual steering, and employed a dedicated helmsman so that he could act as lookout in accordance with section A-VIII/2 of STCW 95. Had this been done, *Suzanne* could still have been detected in sufficient time to take avoiding action.

2.2.5 Any work carried out on the autopilot should have been left until the master could be relieved from his look-out duties.

2.2.6 By not fully appraising the situation and being distracted by the autopilot malfunctioning, the master failed to maintain a proper look-out in accordance with the Collision Regulations.

2.2.7 Although the master considered he was unable to alter course to avoid a collision, he might have been able to take effective avoiding action by stopping or reversing propulsion.

2.3 ACTION BY THE SKIPPER (*Suzanne)*

2.3.1 Realising that both vessels were on collision courses, and receiving no reply to his call on the VHF radio, the skipper should have made the appropriate sound signal in accordance with Rule 34(d) of the Collision Regulations. It is possible that such a signal would have alerted the master of *Elm* in time for him to take effective avoiding action.

2.3.2 The subsequent action taken by the skipper was effective in preventing a collision and was in accordance with Rule 17(a)(ii) of the Collision Regulations. However, an immediate alteration of course would have been more effective.

2.3.2 An immediate alteration of course to starboard, rather than firing a distress signal signal, knocking out the trawl warps and coming astern on the main engine, would have increased the distance at which both vessels passed each other.

2.3.3 Nevertheless, had it not been for the action taken by the skipper, both vessels would probably have collided.

SECTION 3 CONCLUSIONS

3.1 CAUSES

The cause of the near miss between the cargo vessel *Elm* and the fishing vessel *Suzanne* was that the bridge watch on board *Elm* failed to detect that she was on or nearly on a collision course with another vessel.

3.2 CONTRIBUTORY CAUSES

1. The night lookout on board *Elm* failed to maintain a proper look-out in accordance with the Collision Regulations.**(2.1.3)**

2. The master on board *Elm* failed to maintain a proper look-out in accordance with the Collision Regulations. **(2.2.6)**

3. The master on board *Elm* failed to make a full appraisal of the situation on relieving the night lookout. **(2.2.3)**

4. It is possible that the night lookout inadvertently ceased his duties as dawn began to break. **(2.1.3)**

5. The master failed to employ a dedicated helmsman in manual steering when the fault occurred with the autopilot. **(2.2.4)**

3.3 OTHER FINDINGS

1. The master and the night lookout on board *Elm* were unaware that their vessel was on or nearly on a collision course with another vessel. **(2.1.2)**

2. The action taken by the skipper of *Suzanne* probably avoided a collision. **(2.3.3)**

SECTION 4 RECOMMENDATIONS

There are no recommendations

Marine Accident Investigation Branch
August 1999