

Report on the investigation of  
a fatal accident on board  
***Gemma Fidelis (GY 419)***  
9 miles east of the River Tees  
on  
23 October 2001

Marine Accident Investigation Branch  
First Floor  
Carlton House  
Carlton Place  
Southampton  
United Kingdom  
SO15 2DZ

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

The fundamental purpose of investigating an accident under these Regulations is to determine its circumstances and the cause 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

	<b>Page</b>
<b>GLOSSARY OF ABBREVIATIONS</b>	
<b>SYNOPSIS</b>	<b>1</b>
<b>SECTION 1 - FACTUAL INFORMATION</b>	<b>3</b>
1.1 Particulars of <i>Gemma Fidelis</i> and accident	3
1.2 Description of the vessel	4
1.3 Background	5
1.4 The crew	5
1.5 The hauling operation	5
1.6 Environmental conditions	6
1.7 Narrative of events (all times are UTC + 1 Hour)	7
1.8 Previous incidents	8
1.9 The snatch blocks - (condition) (Figures 6 and 7)	9
1.10 Marine guidance and information	11
1.11 Fishermen and safety	12
1.12 The Merchant Shipping and Fishing Vessels (Health and Safety at Work) Regulations 1997	12
1.13 Accidents involving lifting equipment (fishing vessels)	13
1.14 Current and proposed regulation	14
1.15 Subsequent action	14
<b>SECTION 2 - ANALYSIS</b>	<b>15</b>
2.1 Aim	15
2.2 The accident	15
2.3 Lifting and hauling equipment (fishing vessels)	15
2.4 Attitude towards safety	16
2.5 Assessing the risk	16
2.6 Risk assessment implementation	17
2.7 Subsequent action	17
<b>SECTION 3 - CONCLUSIONS</b>	<b>18</b>
3.1 Causes and contributing factors	18
3.2 Other findings	18
<b>SECTION 4 - RECOMMENDATIONS</b>	<b>19</b>
Figures 1	<i>Gemma Fidelis</i>
Figure 2	Aft deck
Figure 3	Aft deck starboard
Figure 4	Aft deck
Figure 5 & 6	Starboard snatch block
Annex	Extract from pro-forma risk assessment document

## **GLOSSARY OF ABBREVIATIONS**

EU	:	European Union
gt	:	gross tons
HSE	:	Health and Safety Executive
kW	:	kilowatt
LBP	:	Length between perpendiculars
LOA	:	Length overall
m	:	metre
MCA	:	Maritime and Coastguard Agency
MGN	:	Marine Guidance Note
MIN	:	Marine Information Note
SFIA	:	Sea Fish Industry Authority (Seafish)
UK	:	United Kingdom
v	:	volt

## SYNOPSIS



While the 15.8m Grimsby-registered stern trawler *Gemma Fidelis* was fishing the grounds 9 miles east of the River Tees, a member of her crew was fatally injured.

The MAIB was informed of the accident on 23 October 2001 and an investigation began that day.

Two members of the four-man crew were aft at their stations while the fishing gear was being hauled. A third was operating the winch, and the skipper was in the wheelhouse.

When the trawl doors were heaved clear of the water, the winchman stopped the winch, and the deckhands began the operation of “dogging -up” the doors. The crewman on the starboard side began passing the dog chain between the trawl door and the securing brackets. Just as he was doing so the trawl wire came free from the snatch block, through which the trawl wire was leading, and caught him across the right side of his body, crushing him against the aft gunwale. The snatch block was being operated in the open condition. The snatch block was supporting the weight of both the trawl door and the trawl itself.

Before the remaining deckhands could attempt to free the casualty, he was dragged over the side when the skipper reversed the winch in an effort to release him. When the crew retrieved him back on board they were unable to revive him. The extent of his injuries were fatal.

The causes and contributing factors were:

- The starboard snatch block being operated in the open condition.
- The casualty and the surviving crew’s complacency in their acceptance of an unsafe procedure.
- The crew’s attitude towards safety, and their lack of any safety awareness training.
- The lack of effective control measures to adequately reduce the identified risk.
- The ambiguous nature of the control measure stated in the risk assessment document.

Recommendations have been addressed to the Maritime and Coastguard Agency, and the owner, Mr A Locker of Lockers Trawlers Ltd. These can be seen in Section 4.



*Gemma Fidelis*

Figure 1

## SECTION 1 - FACTUAL INFORMATION

### 1.1 PARTICULARS OF *GEMMA FIDELIS* AND ACCIDENT

#### Vessel details

Registered owner	:	Lockers Trawlers Ltd, Whitby
Manager	:	Lockers Trawlers Ltd, Whitby
Port of registry	:	Grimsby
Flag	:	UK
Type	:	Stern trawler
Built	:	1979 Southampton
Construction	:	Steel
Length overall	:	17.91m
Length registered	:	15.80m
Gross tonnage	:	62
Engine power and type	:	351kW (diesel)
Service speed	:	10 knots
Propulsion	:	Single fixed propeller

#### Accident details

Time and date	:	430 (UTC + 1) 23 October 2001
Location of incident	:	9 miles east of the River Tees 54°43' N 000° 56' W
Persons on board	:	4
Injuries/fatalities	:	1 fatality
Damage	:	None

## 1.2 DESCRIPTION OF THE VESSEL

*Gemma Fidelis* was built by South Ocean Services (Commercial Craft) Ltd in Southampton in 1979. Originally named *Edna Sue*, she was of conventional stern trawler design and was equipped for bottom trawling.

Her design incorporated one deck above the waterline (**Figure 1**). Below deck the accommodation was forward. The fish room and engine room were aft of the accommodation, separated by watertight bulkheads.

On the main deck the wheelhouse was situated forward. Immediately aft of the wheelhouse was the main trawl winch and working deck, which incorporated centre pounds and longitudinal channels for storing the trawl and ground gear when in the hauled-on-deck position (**Figure 2**).

*Gemma Fidelis* held a United Kingdom Fishing Vessel Certificate issued on 15 February 2001, which was valid until 31 May 2004.

Figure 2



Aft deck

### 1.3 BACKGROUND

*Gemma Fidelis*'s current owner, Lockers Trawlers Ltd, bought her in 1992. She was one of nine vessels owned and operated by the company.

Working on a regular basis from the port of Whitby, she carried a four-man crew and spent several days at sea each trip before returning to land her catch.

She was engaged in bottom trawling, a method of fishing using a trawl net which is dragged along the seabed by the use of two trawl wires (warps). Each warp is connected to a trawl door to achieve the spread of the net. Sweeps are used with the aid of floats to achieve the required height, and robust ground gear is used to drag the trawl along the seabed.

Although moderately successful, *Gemma Fidelis* was one of the older vessels in the company. Her owner, therefore, had applied for her to be decommissioned in conjunction with a compensation scheme run by the government to encourage fishermen to take their vessel out of service. This alleviated some of the pressure exerted by commercial fishermen on fish stocks. However, *Gemma Fidelis* was later sold and continues to be used as a fishing vessel.

### 1.4 THE CREW

Under *The Fishing Vessels (Certification of Deck Officers and Engineer Officers) Regulations 1984*, *Gemma Fidelis* was not required to carry any certificated people.

However, the skipper, an experienced fisherman, held a Class 2 certificate of service. He had served as skipper of fishing vessels for several years.

The remainder of the crew, three deckhands, were also experienced fishermen.

The casualty joined the vessel 5 days before the accident. He had worked on *Gemma Fidelis* previously.

All four crewmen had completed basic training in sea survival, first-aid and fire-fighting. However, none had completed the recently introduced Safety Awareness Course.

### 1.5 THE HAULING OPERATION

After a determined period of time, the trawl is heaved back to the surface and the catch is landed on board.

During the hauling operation, the skipper is stationed in the wheelhouse, controlling the vessel. One deckhand is stationed at the winch control and the other two are stationed each side of the stern, in preparation for hanging off ("dogging up") the trawl doors once they are hauled clear of the water.

The warps, to which the trawl doors are connected, are led over the stern of the vessel through heavy snatch blocks which hang from both the port and starboard side of a stern gantry, at about head-height (**Figure 3**).

When the trawl doors are heaved up, they are secured in position by means of a dogging chain. Each door is then lowered and the weight taken on the chain. This creates slack in the warp, which allows the crewman standing aft to disconnect the door.

Once this operation is complete, the warp/sweep is pushed out of the block, when opened, on to the stern ramp of the vessel. This allows the trawl to be heaved on deck (**Figure 4**).

## 1.6 ENVIRONMENTAL CONDITIONS

The weather at the time of the accident was a south-south-easterly wind of force 2 to 3 with a 1-1½ metre south-easterly swell. The visibility was good and the sea temperature was 11°C.

Figure 3



Aft deck starboard



Aft deck

## 1.7 NARRATIVE OF EVENTS (ALL TIMES ARE UTC + 1 HOUR)

*Gemma Fidelis* sailed from her home port of Whitby at 0400 on 22 October 2001, bound for the inshore fishing grounds off the east coast of England. Later in the day she returned to port to have an electrical fault repaired, and sailed again by 1900 that evening.

On arrival at the grounds she shot her gear and began fishing. During the course of the evening she eventually trawled to a position 8 to 10 miles east of Teesport, and continued fishing in this area throughout that night and the following day. Fishing was moderate.

At approximately 1350, the crew began to haul the gear. The skipper was in the wheelhouse using steerage way only to maintain the vessel's heading. One of the deckhands was operating the winch, and the other two were stationed aft on either side of the working deck, in preparation for the trawl doors coming up. The vessel was heaving and pitching moderately in the prevailing conditions.

When the trawl doors were heaved clear of the water, the winchman stopped the winch and the deckhands then began the operation of "dogging" the doors up. The crewman on the starboard side began passing the dog chain between the

trawl door and the securing brackets. Just as he was doing so, positioned beneath the snatch block, the trawl wire came free and caught him across the right side of his body, crushing him against the aft gunwale. The snatch block was being operated in the open condition, and was supporting the weight of both the trawl door and the trawl itself.

Immediately, the winchman stopped the winch, put the brake on, and then ran aft to help. However, before the winchman and the remaining deckhand could attempt to free the casualty, he was dragged over the side when the skipper reversed the winch in an effort to release him.

After momentarily being submersed, the casualty reappeared on the sea surface approximately 3 to 4 metres away from the vessel. One of the deckhands threw a lifebuoy to him, but he was unable to grasp it. Shortly after this he lost consciousness and began floating on the surface face-down.

Eventually, the skipper managed to manoeuvre *Gemma Fidelis* alongside the casualty and, with the aid of the other two crewmen, a rope was passed round his body. This enabled them to haul him back on board. Once on board, one of the crew members tried to revive him, while the skipper called for help on the VHF radio.

Approximately 10 to 12 minutes later a rescue helicopter arrived on scene and a paramedic was lowered on board. Shortly after, a doctor arrived on the Tees lifeboat. After examining the casualty, the doctor pronounced him dead. His body was later transferred ashore by lifeboat.

*Gemma Fidelis* made her way to Teesport, arriving a few hours later.

## **1.8 PREVIOUS INCIDENTS**

Before the deckhand's fatal accident, the crew knew of at least another three occasions when the trawl wire had come free from the snatch block during the hauling operation. Fortunately, on those occasions nobody was underneath the block, so nobody was injured.

Despite these previous incidents, very little was done to prevent it happening again. Approximately 3 months before the accident, the owner, while temporarily crewing *Gemma Fidelis*, fitted a polypropylene lashing to the starboard block so the opening side could be closed by tying it to the main body. However, this measure did not remain in place. The only other precaution taken was the skipper occasionally warning the crew verbally not to place themselves in a position underneath the blocks.

The use of specifically designed open blocks for particular applications is commonplace elsewhere in the fishing industry, and it had become normal practice to operate the snatch blocks in the open condition on board *Gemma Fidelis*. However, in this case, they were in such a poor condition that it would have been impossible to close them without the locking pins - which were unavailable anyway.

## **1.9 THE SNATCH BLOCKS - (CONDITION) (Figures 5 and 6)**

The day after *Gemma Fidelis*'s arrival at Teesport, both snatch blocks were removed ashore by the police for expert testing.

Following a test conducted on 17 November 2001, Waterhouse and Yare Ltd, consulting engineers, produced a report.

Relevant parts read as follows:

*In the opinion of the surveyors, the blocks sighted, stated to have been removed from Gemma Fidelis showed considerable wear consistent with the blocks being original equipment of the vessel, and also showed lack of recent maintenance, although still serviceable.*

*Further in our opinion, the distortion of the cheek plate of the starboard block although indicative of lack of maintenance or repair, was not of sufficient extent to make the block unusable or to have contributed to any accident involving the trawl wire jumping from the block.*

*Finally, in our opinion, the lack of locking pins for the hinged cheek plate of either block, and the apparent lack of recent wear or signs of recent steel to steel contact in the locking pin holes, indicate that it is most likely these blocks had been habitually used without pins, and may have been used open, that is without the hinged section of the cheek plate being closed. This is incorrect use of the snatch block and would make it possible for the wire to jump from the sheave, particularly if tension on the wire was momentarily released during movement of the vessel in open water with swell or seas causing pitching of the vessel if sufficient forward motion of the vessel was not maintained when hauling nets.*

Figure 5



Starboard snatch block

Figure 6



## 1.10 MARINE GUIDANCE AND INFORMATION

The MCA has issued guidance and advice on the hazards associated with lifting equipment in a Marine Information Note (MIN 83 M&F), entitled *Lifting Equipment: Risk of Accident from Improper Repairs to and Lack of Maintenance of Cargo or Pulley Blocks*.

Paragraph 2.1 states:

*Lifting plant and parts of hauling gear, hoisting gear and related equipment should be kept in good, efficient working order and should be subject to careful visual checks at regular intervals. The deterioration of equipment through general wear and tear, erosion of bearing surfaces, damage corrosion or other similar effects would be apparent from periodical close visual inspections. The presence of undocumented repairs could also be detected at this time. Worn damaged or corroded equipment, equipment with undocumented repairs or block swivel eyes showing evidence of weld seal repairs from original manufacture, should be removed from service and either replaced or repaired, tested and examined by a specialist test house ashore.*

Paragraph 2.3 states:

*Systematic preventative maintenance should be carried out in accordance with the manufacturer's instructions.*

*Additionally, the MCA issued a Safety Alert (Annex 1) on 7 December 2001, following a more recent fatality involving lifting equipment.*

Relevant parts read as follows:

- *Blocks are not being maintained and checked e.g. seized swivels, distorted or worn cheeks etc.*
- *The design of some blocks is inadequate e.g. no facility to prevent the cheeks opening out and the wire falling out.*

Relevant recommendations:

- *Monthly – closely examine the block for wear and tear and distortion and any other irregularities.*
- *Always – use a design of block, which prevents the cheeks opening out.*

## 1.11 FISHERMEN AND SAFETY

*Fishermen and Safety*, a booklet published by the MCA, contains the following advice:

### ***Fishing Dangers***

*Every type of fishing method has its own particular dangerous aspects and it is essential that the crew members are made fully aware of all risks and dangers which they have to contend with. Various general risks and advice are given below:*

- *Ensure that crew members performing critical operations (like the chaining up of trawl doors) have space to step clear if necessary.*
- *Do not turn your back on gear being hoisted and never work underneath suspended gear.*

### ***Ropes and Lines, etc***

*Ropes, cables, lines and chains when in use can be dangerous: they can snap, suddenly become taught, jump a fair lead, etc. so:*

- *Try not to step over or under a rope or net or a warp. It could pull tight and injure you, or pull you into the winch, or the sea.*
- *If you are not involved, stay well clear of a rope, cable, etc. especially if it is under strain.*
- *Never remove guards or safety devices from equipment. If it has to be removed put it back immediately afterwards.*

## 1.12 THE MERCHANT SHIPPING AND FISHING VESSELS (HEALTH AND SAFETY AT WORK) REGULATIONS 1997

*The Merchant Shipping and Fishing Vessels (Health and Safety at Work) Regulations 1997*, which came into force on 31 March 1998, require maintenance of plant and machinery and systems of work, so far as is reasonably practicable, to be safe and without risk of health. As part of this process, employers, in conjunction with their employees, are required to carry out a suitable and sufficient risk assessment.

Advice about complying with the regulations, and guidance in risk assessment, is given in *Marine Guidance Note MGN 20 (M+F)* entitled *Merchant Shipping and Fishing Vessels (Health and Safety at Work) Regulations 1997*.

In accordance with the Regulations a risk assessment of *Gemma Fidelis* had been carried out. This was in the form of a standard SFIA (Sea Fish Industry Authority) pro-forma risk assessment document. It had been completed by the skipper and the owner. They did not involve the remainder of the crew in the process, as they believed they would not understand it. The skipper and two of the crew had signed the risk assessment document. The other crew member, the casualty, had not. Both the skipper and the owner thought the risk assessment document was too long-winded, included too many trivial risks, and generally wasn't easily understood.

When carrying out the risk assessment for his other vessels, the owner had not involved any of their crews because he was convinced they also would not understand it.

In the risk assessment document, hazards associated with '*winch and warp dangers*' included '*unguarded moving ropes/wires*'. The '*possible consequences*' were identified in the document as '*serious injury*'. The owner and skipper recorded the '*frequency*' of the hazard as '*unlikely*' and the '*severity*' as '*slightly harmful*'. Using the formulae supplied with the pro-forma document, the risk factor was 2, on a scale of 1 to 9. This required no action to be taken, other than to ensure the risk did not increase. The '*control measures necessary*' were stated by the skipper and owner as '*all precautions are taken*'.

### **1.13 ACCIDENTS INVOLVING LIFTING EQUIPMENT (FISHING VESSELS)**

On 15 February 2000, the skipper of the beam trawler *Pieterje* was fatally injured when a derrick end block eye failed, allowing the derrick to fall on to the quayside in Plymouth while he was landing the catch. Two members of the public were also injured.

An investigation of the accident, conducted by the HSE, concluded that there was no uniform system in place for the inspection and maintenance of lifting equipment in relation to fishing vessels.

As a result of the inquest into the death of the skipper, the coroner recommended to the Secretary of State that "*such steps are taken as soon as ever possible to prevent a recurrence of a similar accident. Had there been a proper regulatory system in force applying to all fishing vessels at the very least, it is possible that the defects in question in this case would have resulted in the block that failed (which was also seized) being replaced*".

More recently, on 26 November 2001, another crewmember was fatally injured on board the fishing vessel *Ocean Star* (PD 458) when a trawl block failed. The MAIB is currently investigating this accident, and a report will be published in due course.

## 1.14 CURRENT AND PROPOSED REGULATION

In addition to *The Merchant Shipping and Fishing Vessels (Health and Safety at Work) Regulations 1997*, which deal mainly with the work place and assessment of risks, *The Fishing Vessels (Safety Provisions) Rules 1975*, as amended state the following, in respect of fishing vessels of 15m LBP and over:

54A (1): *All equipment used in hoisting shall be tested and examined at regular intervals.*

(2): *All parts of hauling gear, hoisting gear and related equipment shall be maintained in good repair and working order.*

There is no regulatory survey system in place to ensure that fishing vessels are complying with these regulations. The survey of lifting and hauling equipment is not part of the 4-yearly safety survey. Consequently, many fishing vessels are operating potentially with uncertificated and poorly maintained lifting and hauling equipment.

New regulations relating to health and safety aspects of lifting operations, lifting equipment, and the provision and use of work equipment are likely to be introduced around the beginning of 2003.

These regulations will place an obligation on an employer to ensure that work equipment, including lifting gear, is safe for workers to use and is used safely. The final requirements of the regulations have yet to be agreed, but at present it seems likely that there will be a requirement for lifting equipment on fishing vessels to be inspected and, where considered appropriate, tested as well. All other equipment, including hauling gear, will be required to be inspected.

## 1.15 SUBSEQUENT ACTION

Since the accident, and as a result of suggestions from both the industry and the MAIB at the Fishing Industry Safety Group (FISG) meeting which took place on 9 May 2002, a risk assessment working group was set up to consider simplifying the SFIA pro-forma risk assessment document with a view to making it more user-friendly.

The group will report its findings at the next FISG meeting which is due to take place in November 2002.

## **SECTION 2 - ANALYSIS**

### **2.1 AIM**

The purpose of the analysis is to determine the contributing causes and circumstances of the accident as a basis for making recommendations to prevent similar accidents from occurring in the future.

### **2.2 THE ACCIDENT**

It is unclear as to what actually caused the trawl wire to come free of the block. Operating it in the open condition was a major cause, but both blocks had habitually been operated in the open condition for some time.

During this time, although very significant, the trawl wire had only come free on three previous occasions. From this evidence it is clear that other factors must have also been present.

The only effective way of preventing the trawl wire coming free was to ensure the trawl blocks were closed.

### **2.3 LIFTING AND HAULING EQUIPMENT (FISHING VESSELS)**

The condition of both trawl blocks was such that it was impossible to close them in the correct manner. Not only were the locking pins missing, but the securing lugs on the main body of the blocks were corroded to such an extent that they were also unusable.

The main reason for this was the lack of an on-board procedure for maintenance. This allowed the blocks to deteriorate to such a condition over a prolonged period of time, and would have adversely influenced any attempt to close the block by other means. An effective maintenance procedure would have enabled the snatch block to be closed correctly.

At present there is no regulatory survey system in place that ensures lifting and hauling equipment on fishing vessels is regularly tested, inspected and maintained.

During the 4-yearly safety survey, carried out by the MCA and applicable to all vessels over 12m-registered length, lifting and hauling equipment is not subject to survey.

In extreme cases, lifting and hauling equipment on fishing vessels is not repaired or replaced until it actually fails.

Unless there is an effective regulatory inspection system in place that ensures lifting and hauling equipment is maintained in good repair and working order, it is unlikely the current situation will change significantly.

Had a regulatory survey system been in place for lifting and hauling equipment, the snatch blocks on board *Gemma Fidelis* would probably have been replaced before the accident. However, in view of the commonplace use of specifically designed open blocks for particular applications elsewhere in the fishing industry, it is uncertain whether or not they would have been used correctly.

## 2.4 ATTITUDE TOWARDS SAFETY

During the hauling operation, when the trawl doors were being secured, the two deckhands working aft would have found it easier, and less time consuming, to work underneath the trawl blocks when passing the dog chain through the trawl door brackets.

Although the operation could have been performed without working underneath the blocks, there was a tendency to disregard this for reasons of convenience and time.

Working underneath the blocks had become common practice, and the crew had become complacent about the danger involved.

Since none of the deck crew were involved in assessing the risks when the assessment was carried out, the risk of the trawl wire coming out of the block was not fully appreciated.

Had they fully appreciated the risk, they would probably have taken precautions not to work underneath the open blocks when securing the trawl doors.

Being involved in, and aware of, the risk assessment process through safety awareness training and active participation, would have positively enhanced the crew's attitude to safety.

The Safety Awareness Course is currently voluntary and being provided free of charge. After 31 March 2003, this one-day training course will become a mandatory requirement for all fishermen.

## 2.5 ASSESSING THE RISK

The skipper and owner had carried out a risk assessment on board *Gemma Fidelis*. In accordance with statutory regulations, they had a duty to ensure that any control measures to bring risks to within acceptable levels, were implemented. Operating snatch-type trawl blocks in the open condition clearly created an identifiable risk of the trawl wire coming free from the block.

When the skipper and owner completed the risk assessment, they considered the frequency of hazards associated with '*unguarded moving ropes and wires*' to be '*unlikely*'. In addition, the '*severity*' was considered to be only '*slightly harmful*' even though the pro-forma document identified the possible consequences as '*serious injury*'. This assessment was based on the necessary control measure that all precautions were taken.

It is unclear what was meant by “all precautions”. With respect to the starboard snatch block, the owner interpreted it to include fitting a polypropylene lashing, albeit temporarily, so that it could be closed; the skipper interpreted it to include his occasionally warning the crew not to place themselves underneath the open block.

The ambiguous nature of the control measure stated in the risk assessment document resulted in a lack of effective control measures being implemented to reduce adequately the identified risk.

During the course of a previous MAIB investigation of a fatal accident on board mfv *Solstice II*, the MAIB issued an interim recommendation, MAIB Safety Bulletin 2/2000, to her owner. The owner was recommended to ensure that control measures, identified as a result of health and safety risk assessments, were implemented, as appropriate, in the form of safe standard operating procedures.

## **2.6 RISK ASSESSMENT IMPLEMENTATION**

Neither the skipper nor the owner thought it was necessary to involve any other members of the crew in the process of completing the risk assessment, as they both believed the crew would not understand it. This was also the case with the owner’s other vessels.

For any risk assessment to be effective, all crew need to understand it, particularly those to whom it is directed.

It is not a requirement to have a risk assessment in written form. However, many fishing vessel skippers and owners have adopted, and made use of, the pro-forma document issued by the SFIA as means of guidance, and, not least, to prove compliance with the regulations.

However, both the skipper and the owner not only thought the pro-forma SFIA risk assessment document was not easily understood, but also that it included too many trivial risks, which clouded the main risks. If this was their impression, it is not surprising that the main risks might not have received sufficient attention during the assessment.

## **2.7 SUBSEQUENT ACTION**

The action since taken by FISG in reviewing the SFIA pro-forma risk assessment document, with a view to making it more user-friendly, should encourage its use in the fishing industry.

## SECTION 3 - CONCLUSIONS

### 3.1 CAUSES AND CONTRIBUTING FACTORS

1. The starboard snatch block being operated in the open condition. [2.2]
2. The casualty and the remaining crew's complacency in accepting an unsafe procedure. [2.4]
3. The crew's attitude towards safety, and their lack of any safety awareness training. [2.4]
4. The lack of effective control measures to adequately reduce the identified risk. [2.5]
5. The ambiguous nature of the control measure stated in the risk assessment document. [2.5]

### 3.2 OTHER FINDINGS

1. The lack of an on-board maintenance procedure rendered the starboard snatch block unusable in the correct manner, which adversely influenced any attempt to close the block by other means. [2.3]
2. Had a regulatory survey system been in place for lifting and hauling equipment, the trawl blocks on board *Gemma Fidelis* would probably have been replaced before the accident. However, in view of the commonplace use of specifically designed open blocks for particular applications elsewhere in the fishing industry, it is uncertain whether or not they would still have been used correctly. [2.3]
3. Unless there is an effective regulatory inspection system in place that ensures lifting and hauling equipment is maintained in good repair and working order, it is unlikely the current situation will change significantly. [2.3]
4. Being involved in, and aware of, the risk assessment process, through safety awareness training and active participation, would have positively enhanced the crew's attitude to safety. After 31 March 2003, the one-day Safety Awareness Course will become a mandatory requirement for all fishermen. [2.4]
5. The action since taken by FISG in reviewing the SFIA pro-forma risk assessment document, with a view to making it more user-friendly, should encourage its use in the fishing industry. [2.7]

## SECTION 4 - RECOMMENDATIONS

**The Maritime and Coastguard Agency** is recommended to:

1. Introduce a requirement for an effective inspection system for lifting and hauling equipment on fishing vessels and ensure such system is adhered to.
2. Review its guidance on compliance with *The Merchant Shipping and Fishing Vessels (Health and Safety at Work) Regulations 1997*, to ensure that any control measures, as a result of risk assessment, are ship-specific, and are implemented in the form of safe standard operating procedures.
3. Issue guidance to the effect that open, or snatch blocks, should be used correctly and such that there is no risk of injury due to the rope or wire falling out of the block.

**Mr Arnold Locker, (Lockers Trawlers Ltd)** is recommended to:

4. Ensure crews on all his vessels undergo safety awareness training provided by SFIA (Seafish), in conjunction with MCA requirements.
5. Ensure all lifting and hauling equipment on his vessels is maintained in good repair and working order.
6. Ensure:
  - all crew members are fully involved in the process of risk assessment on all of his vessels.
  - any on-board risk assessment is fully understood by the crews.
  - control measures, identified as a result of any risk assessment, are specific, take account of regulation and published guidance, and are implemented in the form of safe standard operating procedures.

**Marine Accident Investigation Branch  
July 2002**

Standard Risk Assessment Form			TRAWLING/PAIR TRAWLING/SEINING			
Activity or area	Possible hazards	Possible consequences	F/P	S	F/P x S	Control measures necessary with respect to your vessel
Winch and Warp Dangers	Unguarded moving ropes/wires	Serious injury	2	1		ALL PRECAUTION ARE TAKEN
	Unguarded winches and machinery	Serious injury/death	1	1		ALWAYS GUARDED
	Worn components	Gear damage Serious injury	1	1		ALL GEAR IS CHECKED DAILY
	Winch operator cannot see the operations on deck	Serious injury	1	1		CAN SEE AT ALL TIMES.
	Inadequate emergency stop facilities	Serious injury Vessel damage	1	1		ALL EMERGENCY STOP ARE CHECKED DAILY
	Inability to jettison trawl gear	Vessel capsize/founder	1	1		THIS VESSEL IS VERY SIMPLE TO WORK AND JETTISON TRAWL GEAR
Seining - Rope Reels	Falling onto rotating reel	Carried around reel - serious injury/death				N/A
	Reels cannot be seen from the control position	Crewmember seriously injured or killed				N/A
Other						

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Signature 

Date 1-6-01

Trawling/Pair Trawling/Seining

D7

Extract from pro-forma risk assessment document