MCIB
Marine Casualty Investigation Board

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REPORT OF THE INVESTIGATION INTO THE LOSS OF THE MFV "MAGGIE B" ON 29th MARCH 2006

The Marine Casualty Investigation Board was established on the 25th March, 2003 under The Merchant Shipping (Investigation of Marine Casualties) Act 2000

REPORT No. MCIB/122

Report MCIB/122 published by The Marine Casualty Investigation Board
9th April 2009.

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FOREWORD

Following the sinking of the MFV "Maggie B" and the resultant tragic loss of life, the MCIB conducted an investigation into the incident.

Following the investigation a draft report was issued to any adversely affected party, each of whom had the opportunity to make a comment on any point in the findings.

These comments were examined by the MCIB and the report amended as necessary.

Whilst the draft report was being prepared for final printing, a decision was taken to raise the MFV "Maggie B". As a result of this decision, the MCIB postponed the publication of the report so that the MCIB Investigators could examine the wreck to ascertain if any new evidence had emerged which would shed further light on the cause of the sinking. These findings are publicised in the attached Supplementary Report.

1. SYNOPSIS

1.1 The Motor Fishing Vessel MFV "Maggie B", with three people on board, departed from Kilmore Quay, Co. Wexford on Tuesday 28th March 2006 at between 20.00 hrs. and 22.00 hrs. local time to commence a fishing trip which took place South of Hook Head, approximately four hours steaming time away from Kilmore Quay.

1.2 The vessel completed four to five trawling tows of about 3½ - 4 hours duration each. Fishing continued until the late evening of Wednesday 29th March 2006.

1.3 The Fish Hold bilge level alarm had been sounding regularly during the voyage and the Skipper had been starting the bilge pump when the alarm sounded. At approximately 22.50 hrs. another alarm sounded. This alarm sounded for approximately 10 minutes before the Skipper and the surviving crew member went to the engine room to investigate. On inspection of the engine room it was found to be flooded approximately half way up the main engine. The fish hold was also reported to be flooded.

1.4 The vessel appeared to be sinking by the stern and rolled to Starboard. The vessel did not right itself and capsized.

1.5 One crewman survived the sinking, the Skipper and another crewman are still missing.

2. FACTUAL INFORMATION

2.1 Vessel details:

Official Number:	403808
Port of Registry:	Wexford
Fishing No.	WD 113
Owner:	The vessel is recorded as being registered to Declan Bates of Kilmore Quay. It is understood that Walsh Brothers Fishing Ltd. Ballyhimicken, Garryvoe, Co. Cork had purchased the vessel from Mr. Bates and were in the process of re-registering ownership in their name at the time of the incident.
Year of build:	1989 (Yard: Van der Pol, Holland)
Year of lengthening:	1995 (Yard: Appledore Shipbuilders, Devon,UK)
Construction:	Steel
Overall Length:	15.72 metres
Registered Length:	14.49 metres
Breadth:	5.18 metres
Depth:	3.33 metres
Gross Tonnage:	41 tons
Registered Tonnage:	12 tons
Engine:	Cummins NT 855M 172 Kw
Fuel remaining on board:	Approximately 3000 Litres Gas Oil.
Hydraulic Oil on board:	Not Known
Engine Lubricating Oil:	Not Known
RFD SOLAS	6 person inflatable liferaft with 'A' pack.
Fish on board:	Approximately 6 boxes of fish and over 90 empty boxes were stored in the Fish Hold. No ice was taken on board for the trip

2.2 Crew:

Skipper: Mr. Glynn Cott

Crewman: Mr. Jan Sankowski

Crewman: Mr. Krzysztof Pawtowski

The Fishing Vessels (Certification of Deck Officers and Engineer Officers)(Amendment) Regulations, 2000 (S.I 192 0f 2000) does not require a qualified Deck Officer for a vessel of less than 17 metres.

The Fishing Vessel (Basic Safety Training) Regulations 2001 (S.I.587 of 2001) require that crew members on board an Irish registered fishing vessel undertake basic safety training as set out in the Regulation. It is unclear if Mr. Cott and Mr. Sankowski had undertaken such training or a recognised equivalent. Mr. Pawtowski has stated that he completed safety training courses in Poland. However, it is unclear if these would be a recognised equivalent standard. His certificates for the courses were lost with the vessel. The MCIB have checked with the BIM Training Colleges and have found that there is no record of Mr. Cott undertaking training at their training centres.

2.3 Sea Fish Licence:

The safety requirements for licensing of sea-fishing boats were revised in the Maritime Safety Act 2005. The following is the relevant text from this Act.

"8(A)
(a) It is a condition of a sea-fishing boat licence that the licensee shall ensure that the licensed boat complies with requirements specified by or under the Merchant Shipping Acts 1894 to 2005.

(b) Where by or under the Merchant Shipping Acts 1894 to 2005 a survey is required to be carried out of a sea-fishing boat for the purpose of establishing whether or not such boat complies with the requirements specified by or under those Acts, the licensing authority shall not grant or renew a sea-fishing boat licence in respect of the boat unless the licensing authority is satisfied that the boat complies with such requirements.

(c) Where a code of practice published by the Minister relating to the safety and sea-worthiness of sea-fishing boats of a class to which paragraph (b) does not apply requires a survey to be carried out of a sea-fishing boat of such class for the purpose of establishing whether or not such boat complies with the requirements specified in the code of practice, the licensing authority shall not grant a sea-fishing boat licence in respect of the boat unless a declaration of compliance with the code of practice has been provided to the licensing authority".

The length overall of the MFV "Maggie B" was 15.72 metres. Therefore, it was not covered by either paragraph (b) or (c) and there is no statutory survey regime or regulations for vessels in the 15 to 24m category. However, for vessels between 15m length overall and 24m registered length, it is understood that the Licensing Authority has continued a practice in place prior to the 2005 Act to require provision of a vessel condition survey report by a private marine surveyor for vessels in that category confirming that the vessel is in a safe and seaworthy condition before a licence is issued in respect of the vessel. It is not necessary for such a survey report to be received before issue of a licence offer but it would be required before issue of the licence.

In the case of the MFV "Maggie B" the owners did submit a survey report. The Deputy Registrar General of Fishing boats wrote an offer of Licence letter on 29th March 2006 to Walsh Brothers Fishing Limited. This letter listed a number of conditions which would require compliance with before a licence would be issued. That letter also stated, "I am to point out that this licence offer does not confer the right to fish. You may not engage in any fishing activities until a formal licence has issued and the vessel is properly registered in your name, at a Port within the State, as required under Part IV of the Merchant Act, 1894".

3. EVENTS PRIOR TO THE INCIDENT

3.1 This fishing vessel was originally built in 1989 and registered on the British Flag as "Gilsea" BM118 RSS number B11104. It was built as an under 10 Metre trawler and during the period it operated in this category it was involved in an incident in 1993 in which it capsized. The UK Marine Accident Investigation Board (MAIB) did not carry out a formal investigation into the incident but in a brief report concluded that the accident was caused by a trawl door snagging on the bottom causing the vessel to veer across the snagged trawl warp whilst still maintaining a relatively high forward speed (a manoeuvre known as "girting"). There are four other incidents recorded on the UK authorities database relating to the vessel, which are not related to the vessels design or to its stability.

3.2 In 1995 the vessel was lengthened to its present overall length of 15.72 Metres and converted for beam trawling. Due to its new length the vessel would be subject to compliance with the UK Fishing Vessels (Safety Provisions) Rules. It would not have been required to comply with these rules at its original length. It was assessed by the UK authorities and deemed to be in compliance. The vessel was purchased in Milford Haven by its first Irish owner in 2003. From February 2003 to May 2005 the vessel was laid up in Kilmore Quay while work was carried out to the vessel. It was then operated out of Kilmore Quay until it was sold to the present owner in March/April 2006.

3.3 When operating out of Kilmore Quay the trawling beams were removed as the vessel was used for herring fishing.

3.4 The Marine Survey Office carried out an initial safety equipment inspection in October 2003 and this was finalised in September 2005 at Kilmore Quay. When the vessel was inspected in September 2005 the vessels safety equipment was found to be in compliance with statutory requirements.

3.5 When the vessel was purchased by its present owners it was intended that it would be converted back to beam trawling and to accomplish this it was fitted with the original beams and a new A frame, forward. A net drum was removed from the aft gantry with this gantry being left in place. A fish hopper system was fitted.

3.6 A survey to establish the condition of the vessel prior to purchase was undertaken on behalf of Walsh Brothers by a private marine surveyor in February 2006.

3.7 There appears to have been a considerable amount of shifting/adding and removing ballast from the vessel at the time that the modifications were taking place. The ballast consisted of steel railway track joiners and bags of lead. It could not be ascertained whether there was an increase or a decrease in the amount of ballast on board compared with what would originally have been in the vessel.

3.8 The deck was modified aft of the Fish Hold hatch to allow the fitting of a hopper system.

3.9 The flush deck hatch at the aft end of the main deck was removed to allow adding and removal of ballast. From witness statements taken, it appears that this hatch may not have been correctly secured. It has not been possible to verify if it was sealed with a gasket or sealant.

3.10 The vessel was prepared to go to sea by the Skipper and Crew for a number of weeks prior to the incident. The Skipper decided to carry out an initial fishing trip on the 28th March 2006.

3.11 The witness, Mr. Krzysztof Pawtowski stated that before the fishing trip began and whilst in port, the Steering Gear compartment bilge level alarm would sound every day. The crew would then start the bilge pump for a period and the alarm would stop. He also recalled that twice during the period of preparing the vessel, the Fish Hold bilge level alarm sounded and was similarly pumped out.

3.12 The weather at the time of departure was Wind: Westerly force 2 to 3.
Weather: Scattered showers and patchy drizzle
Visibility Moderate in showers otherwise good
Sea state: Moderate

3.13 The weather at the time of the incident was Wind: South backing Southeast force 6 to 7 with gusts up to 37 knots
Weather: Widespread rain heavy at times
Visibility: Moderate to poor
Sea state: Moderate to rough

3.14 The vessel departed from Kilmore Quay, Co. Wexford on Tuesday 28th March 2006 at between 20.00 hrs. and 22.00 hrs. local time to commence a fishing trip, which took place after steaming approximately four hours from Kilmore Quay.

3.15 During the period the vessel was steaming at sea, the surviving crewmember Mr. Pawtowski recalled that the bilge level alarm for the Fish Hold was sounding regularly and he recalled that it sounded three times when he was in the wheelhouse. Each time the alarm sounded, the Skipper Mr. Cott started the bilge pump and pumped out the bilge. Nobody went to check the Fish Hold compartment because it seems that the sounding of bilge level alarms was a regular occurrence both in port and at sea.

3.16 Mr. Cott had instructed that when the bilge alarm sounded that the Fish Hold bilge pump should be started and then switched off when the bilge was pumped out.

3.17 The gear was shot and towed for periods of 3 to 3½ hours and then hauled each time.

3.18 Fishing continued throughout the day of 29th March and the weather was deteriorating during the day.

3.19 Before the last hauling of the fishing gear Mr. Pawtowski recalls the bilge level alarm sounding and Mr. Cott went to start the pump. Normally the alarm stops once the bilge level falls sufficiently, however, in this case it continued to sound. Mr. Cott was then seen removing what the witness described as a fuse at an electrical panel which stopped the alarm sounding. The fuse was later seen to be back in place and no alarm was then sounding.

4. THE INCIDENT

4.1 At approximately 22.50 hrs. Mr. Pawtowski who was in the Mess Room recalled hearing an alarm, which he described as different to that which he had heard before but assumed that it was a bilge alarm. He stated that this alarm sounded continuously for approximately 15 minutes until the end. After approximately 10 minutes Mr. Cott and Mr. Pawtowski went to the Engine Room door and looked down and saw that the space was flooded. Water was up to the height of the engine flywheel as it was spraying water upwards as it turned. Mr. Cott was then seen running to the wheelhouse. The crewmember that remains missing, Mr. Sankowski, reported to Mr. Pawtowski that the Fish Hold was also flooded.

4.2 The main engine at this time was still running and the fishing gear was still down.

4.3 The last time Mr. Cott was seen by Mr. Pawtowski was on the Starboard side of the vessel on the Main Deck. Mr. Pawtowski stated that Mr. Cott had come out to the Main Deck via the external steps from the wheelhouse deck. This would indicate that Mr. Cott was on the Main Deck level as the vessel was sinking.

4.4 A Mayday call was received by MRCC at 23.05 hrs. This call was made by the Skipper, Mr. Glynn Cott.

4.5 In a very short space of time the vessel started to roll to Starboard and continued until it capsized.

4.6 The vessel sank and is lying at the bottom, heeled over on its Starboard side, in position 52 02.7314N 006 56.8214W South of Hook Head.

5. EVENTS FOLLOWING THE INCIDENT

5.1. The vessels Emergency Position Indication Radio Beacon (EPIRB) was activated which gave the position of the vessel.

5.2 After the vessel capsized the crewmembers, Mr. Pawtowski and Mr. Sankowski were in the water. Mr. Pawtowski did not see Mr. Cott again since he saw him on the Starboard side of the Main Deck.

5.3 Mr. Pawtowski and Mr. Sankowski saw that the vessel's inflatable liferaft was floating in the water un-inflated still in its canister and decided to swim over to it. Mr. Pawtowski believed that Mr. Sankowski was swimming behind him towards the liferaft but when he arrived at it there was no sign of him and he did not see him again.

5.4 Mr. Pawtowski reported that none of the three persons on board were wearing lifejackets, as there was not enough time to put them on.

5.5 Mr. Pawtowski pulled out the liferaft painter and inflated the raft, however, it inflated upside down and he was unable to right it. He also reported that the liferaft appeared to be not fully inflated. This may have contributed to him being unable to right the liferaft to its normal position in the water.

5.6 Mr. Pawtowski estimates that he was in the water for about half an hour before being rescued by the Dunmore East Lifeboat which brought him to Dunmore East. He was then transferred to Waterford Regional Hospital where he recovered.

5.7 On the 4th April 2006 two divers undertook to dive on the wreck on behalf of the owners (Walsh Brothers). That dive did not find the missing men or provide any evidence which would give information that would explain how water entered the vessel.

5.8 Between the 21st May and 26th May 2006, Irish Naval Service divers operating from the Irish Lights vessel "Granuaile" carried out an investigation of the wreck. That investigation consisted of searches using a ROV (remotely operated vehicle) fitted with a video camera and a number of manned dives carried out by the Diving Section. The search did not locate the missing men and the video evidence examined by MCIB did not give any apparent reason as to the cause of the loss of the vessel.

5.9 Extensive searches were carried out by the Coast Guard both at sea and on the shore line for 21 days using helicopters, Lifeboats, Irish Naval Service vessels, Air Corps fixed wing Casa aircraft, local fishing vessels, Coast Guard shore units and members of the public. Some items that had floated off the vessel were found but to date, Mr. Cott and Mr. Sankowski remain missing.

6. CONCLUSIONS

6.1 At the time the vessel was lengthened in 1995 an approved stability book was produced for it. In the weeks prior to the incident this vessel had been modified by the Skipper and Crew. There does not appear to be any evidence to show that stability calculations were carried out to assess the vessel's stability taking into account the modifications and changes in weight which took place.

6.2 There appears to have been an on-going problem with bilge level alarms sounding on a regular basis. It has not been established where water entered the Engine Room and Fish Hold.

6.3 A crack on the hull situated on the Port side forward had been identified by a private surveyor employed by the owner at the time of the vessel's purchase. That surveyor was of the opinion that the crack did not pose any danger to the hull of the vessel and recommended that a repair could be carried out the next time it was dry-docked or slipped. The videotape evidence gathered by Naval divers did not show that any crack, which might have been in this area, had spread causing a catastrophic hull failure allowing water ingress.

6.4 Tests carried out on the inflatable liferaft showed that it was capable of inflating and that the components of the liferaft were capable of working. The liferaft had been serviced by an approved servicing station but it was found that the CO2 inflation cylinder was overdue for pressure testing. The cylinder and its connecting hose and fittings were sent to a specialist company to carry out full pressure and leakage tests on them and these tests showed that there were no faults in the cylinder or its connections. There is no way of establishing if the cylinder had been filled with the correct amount of inflation gas when it was last serviced.

6.5 A stability investigation to understand the stability profile of the vessel prior to the sinking was carried out by the MCIB. From that investigation it appears that the vessel would have complied with the enhanced stability criteria for beam trawlers.

7. RECOMMENDATIONS

7.1 It is recommended that legislation for the construction, stability and safety of Fishing Vessels between 15-24 metres be implemented as soon as possible.

7.2 The MCIB notes that the Merchant Shipping (Safety of Fishing Vessels) (15 - 24 metres) Regulations 2007 (S.I. 640 of 2007) was signed by Minister of Transport on 17th September 2007.

7.3 It is recommended that a Marine Notice be issued to Owners and Skippers of fishing vessels pointing out the dangers of making structural alterations or modifications to fishing methods or equipment without a qualified Naval Architect carrying out an assessment of the effects upon the vessels stability.

7.4 It is recommended to Skippers and Crew of vessels that when an alarm is actuated on board their vessels that they satisfy themselves as to the cause of the alarm and assess the implications for the safety of the vessel.

8. LIST OF APPENDICES

Appendix 8.1 Met Eireann weather report 28th March – 29th March 2006.

MET ÉIREANN
The Irish Meteorological Service

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E-mail: met.eireann@met.ie

Our Reference: WS 3018/2

Investigator Marine Casualty Investigation Board
Marine Survey Office
Government Buildings
Sullivans Quay
Cork

28 June 2006

Dear

Please find enclosed as requested a weather report for the coastal area up to 10 nautical miles offshore from Kilmore Quay Co Wexford to Dunmore East Co Waterford for the period 20:00 hours 28th March 2006 to 24:00 hours 29th March 2006. Also enclosed are the published Sea Area Forecasts for the 28th and 29th March.

Please note that the information is derived by extrapolation from Met Éireann's nearest synoptic station namely Rosslare Harbour plus reports from buoy M5 at position 51° 42'N 6° 42'W which is approximately 30 nautical miles to the south of the area. Archived weather charts, satellite and radar images and wave model data were also consulted.

Yours Sincerely,

Willemien van Hoeve, MSc.
Marine Meteorologist
Ph: 01 8064285 E: willemien.vanhoeve@met.ie

Encl:

1. Weather Report
2. Observations of M5 Buoy
3. Daily weather reports of Rosslare station
4. Sea Area Forecast issued on 28th 29th March 2006

Appendix 8.1 Met Eireann weather report 28th March – 29th March 2006.

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Weather report for the coastal area up to 10 nautical miles offshore from Kilmore Quay Co Wexford to Dunmore East Co Waterford for the period 20:00 hrs Tue 28th March 2006 to 24:00 hrs Wed 29th March

General Meteorological Situation:
On Tuesday evening an occluded front is positioned over the south coast of Ireland with slack and variable winds throughout the night. A deepening depression is approaching from the Atlantic and from 09:00 hours on 29th onwards a southerly wind gradually increases ahead of the occluded front. By 18:00 hours this front has reached the area under investigation with widespread rain heavy at times, the rain continues throughout the evening and clears after 22:00 hours. Winds in this precipitation are from a Southerly direction and are strong and gusty.

From 18:00 to 24:00 hours 28th March 2006:
Winds: Westerly force 2 to 3
Weather: Scattered showers and patchy drizzle
Visibility: Moderate in showers otherwise good
Sea state: Moderate

From 00:00 to 06:00 hours 29th March 2006:
Winds: Variable force 2 to 3
Weather: Patchy drizzle
Visibility: Moderate to good
Sea state: Slight to moderate

From 06:00 to 12:00 hours 29th March 2006:
Winds: Variable force 2 to 3
Weather: Scattered light showers
Visibility: Moderate to good
Sea state: Slight to moderate

From 12:00 to 18:00 hours 29th March 2006:
Winds: Southerly force 4 to 5 with gusts up to 21 knots
Weather: Rain and drizzle
Visibility: Moderate
Sea state: Moderate

From 18:00 to 24:00 hours 29th March 2006:
Winds: South backing Southeast force 6 to 7 with gusts up to 37 knots
Weather: Widespread rain heavy at times
Visibility: Moderate to poor
Sea state: Moderate to rough

Willemien van Hoeve, MSc.
Marine Meteorologist Met Éireann Ph: 01 8064285 willemien.vanhoeve@met.ie

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Nearby observations from offshore weather buoy M5 position 51.7N 6.7W

stno	date	Wind direction (from North)	Wind Speed (knots)	Highest Gust (knots)	Sig wave height (meters)
62094	28/03/2006 18:00	250	17	24	2.4
62094	28/03/2006 19:00	250	13	20	2.4
62094	28/03/2006 20:00	250	13	18	2
62094	28/03/2006 21:00	250	12	16	2.1
62094	28/03/2006 22:00	270	12	16	2
62094	28/03/2006 23:00	270	9	15	1.9
62094	29/03/2006 00:00	260	10	13	1.8
62094	29/03/2006 01:00	260	8	13	1.8
62094	29/03/2006 02:00	290	6	12	2
62094	29/03/2006 03:00	260	9	12	1.7
62094	29/03/2006 04:00	240	6	10	1.9
62094	29/03/2006 05:00	230	5	11	1.9
62094	29/03/2006 06:00	250	6	9	1.7
62094	29/03/2006 07:00	240	6	10	1.8
62094	29/03/2006 08:00	220	3	8	1.7
62094	29/03/2006 09:00	160	5	7	1.7
62094	29/03/2006 10:00	130	5	7	1.6
62094	29/03/2006 11:00	180	9	11	1.4
62094	29/03/2006 12:00	180	12	16	1.4
62094	29/03/2006 13:00	180	14	19	1.5
62094	29/03/2006 14:00	180	16	20	1.5
62094	29/03/2006 15:00	180	16	20	1.4
62094	29/03/2006 16:00	180	16	20	1.5
62094	29/03/2006 17:00	160	18	22	1.5
62094	29/03/2006 18:00	160	18	23	1.5
62094	29/03/2006 19:00	150	21	29	1.7
62094	29/03/2006 20:00	150	24	30	1.6
62094	29/03/2006 21:00	160	22	31	1.8
62094	29/03/2006 22:00	210	27	35	1.8
62094	29/03/2006 23:00	220	26	33	1.9
62094	30/03/2006 00:00	220	25	33	2

The sea surface temperature as reported by this buoy was 8.6 °C

UTC Universal Time Coordinate = Greenwich Meantime
Wind direction in degrees from North
Wind speed and gusts in knots
Temperatures in degrees Celsius
Significant wave height in meters

Appendix 8.1 Met Eireann weather report 28th March – 29th March 2006.

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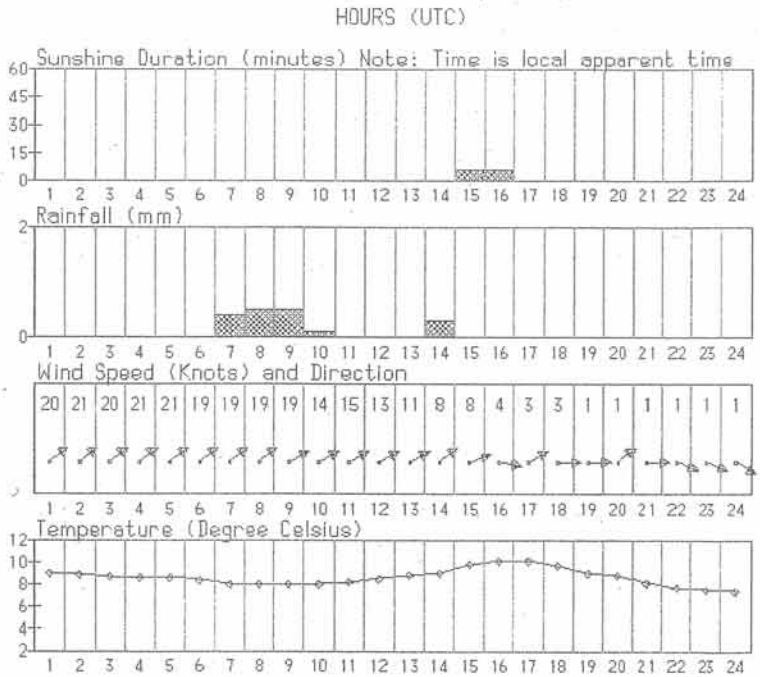
www.met.ie E-mail: met.eireann@met.ie

DAILY STATION REPORT

STATION : ROSSLARE
Co. Wexford

DATE : 28 Mar 2006



DAILY WEATHER SUMMARY

SUNSHINE		TEMPERATURE	
total hours	0.2	max	10.4 deg C
		min	7.4 deg C
		mean	8.9 deg C
		grass min 9h	7.0 deg C
RAINFALL		WIND	
amount	1.8 mm	mean speed	11.6 knots
duration	3.3 hrs	max gust	42 knots

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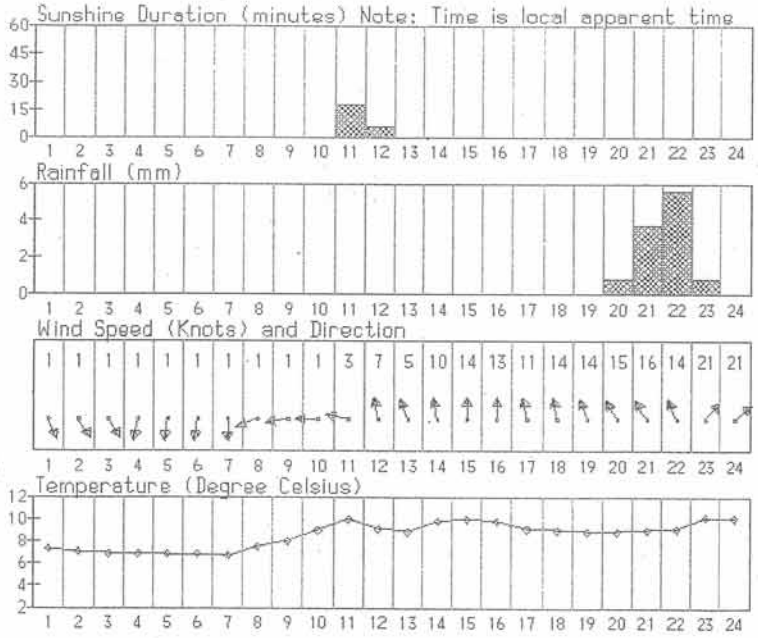
DAILY STATION REPORT

STATION : ROSSLARE
Co. Wexford

DATE : 29 Mar 2006

HOURS (UTC)



DAILY WEATHER SUMMARY

SUNSHINE		TEMPERATURE	
total hours	0.4	max	10.5 deg C
		min	6.6 deg C
		mean	8.6 deg C
		grass min 9h	5.0 deg C
RAINFALL		WIND	
amount	10.9 mm	mean speed	7.5 knots
duration	3.0 hrs	max gust	37 knots

Appendix 8.1 Met Eireann weather report 28th March – 29th March 2006.

MET éireann

WeatherDial Fax Product Code 0021

General Forecast Division

Fax : 1570 131 838

Sea Area Forecast

WEATHERDIAL

Sea Area Forecast until : 0600 hours Wednesday, 29-Mar-2006
Issued at 0530 hours Tuesday, 28-Mar-2006

1. Gale warning: in operation

2. Meteorological Situation : A depression of 978 hPa near Malin Head will drift eastwards. An occlusion over Ireland is moving slowly southwards.

3. Forecast for coasts from : Howth Head to Carnsore Point to Mizen Head and the south Irish Sea

Wind : West to southwest force 6 to gale force 8. Veering west to northwest force 5 or 6 this afternoon. Moderating force 2 to 4 tonight.

Forecast for coasts from : Mizen Head to Loop Head to Erris Head

Wind : West to northwest force 4 to 6, moderating force 3 to 5 today.

Forecast for coasts from : Erris Head to Fair Head to Howth Head and the north Irish Sea

Wind : West to southwest, veering west to northwest imminently, force 6 to gale force 8. Moderating force 5 or 6 during the day. Decreasing force 4 to 5 tonight.

Weather for all sea areas : Rain followed by showers, except on the south coast.

Visibility for all sea areas : Poor in rain. Otherwise moderate to good.

4. Outlook for a further 24-hours until 0600 hours, Thursday, 30-Mar-2006 : Winds gradually decreasing light variable tomorrow. Rain in southern sea areas later spreading northwards.

Appendix 8.1 Met Eireann weather report 28th March – 29th March 2006.

Warning of heavy Atlantic swell : NIL

Text of Gale warning issued 5.00 am Tuesday 28-3-06
West to southwest winds will reach gale force for a time today on coasts from Carlingford Lough to Carnsore Point to Mizen Head and on the Irish Sea. West to northwest gales will develop on coasts from Erris Head to Fair Head to Howth Head and the north Irish Sea.

Coastal Reports	at 5 AM
Malin Head	Northwest, 16 Knots, Light drizzle, 0.4 Miles, 979, Rising slowly
Rosslare	Southwest, 21 Knots, Gust 37 Knots, Cloudy, 13 Miles, 992, Steady
Roches Pt (Automatic)	West-Southwest, 22 Knots, over 10 Miles , 994, Steady
Valentia	West-Southwest, 17 Knots, Gust 32 Knots, Rain shower, 8 Miles, 994, Steady
Belmullet	North-Northwest, 16 Knots, Gust 28 Knots, Recent rain, 6 Miles, 989, Rising
Dublin Airport	Southwest, 24 Knots, Gust 39 Knots, Recent rain, 7 Miles, 987, Rising slowly
Buoy M1 53° 8'N, 11° 12'W	N/A, 14 Knots, WAVE HT 06.2 m, 991, Rising slowly
Buoy M2 53° 28'N, 5° 26'W	Southwest, 25 Knots, WAVE HT 02.3 m, 987, Steady
Buoy M3 51° 13'N, 10° 33'W	West-Southwest, 22 Knots, Gust 35 Knots, WAVE HT 05.0 m, 996, Steady
Buoy M4 54° 40'N 9° 4'W	Northwest, 26 Knots, Gust 39 Knots, WAVE HT 04.5 m, 985, Rising rapidly
Buoy M5 51° 41'N 6° 41'W	West-Southwest, 26 Knots, Gust 38 Knots, WAVE HT 03.3 m, 994, Steady

Sea Crossings	State of sea for the next 48 hours
Dublin - Holyhead	Rough decreasing slight.
Rosslare - South Wales	Rough decreasing moderate.
Cork - South Wales	Rough decreasing moderate.
Rosslare - France	Mostly rough.
Cork - France	Mostly rough.

Next update before 1300 hours
A detailed forecast may be obtained by dialling ***Weatherdial*** on 1550 123 855.
Calls cost € 0.95 per minute (Incl. VAT).

Appendix 8.1 Met Eireann weather report 28th March – 29th March 2006.

MET éireann

WeatherDial Fax Product Code 0021

General Forecast Division

Fax : 1570 131 838

Sea Area Forecast

WEATHERDIAL

Sea Area Forecast until 1200 hours Wednesday 29-Mar-2006
Issued at 1200 hours Tuesday 28-Mar-2006

1. Gale warning: in operation; issued 1200/28-03-2006.

2. Meteorological Situation at 0900 : A low of 984 hPa over southern Scotland is drifting eastwards while maintaining a strong, unstable northwest to north airflow over Ireland; an occlusion lying over southern counties is slow-moving.

3. Forecast for coasts from Rossan Point to Carlingford Lough to Wicklow Head and the Irish Sea :-

Wind : West to northwest force 6 to gale force 8, decreasing west force 4 or 5 later today; backing southwest overnight, then becoming cyclonic variable in the south Irish Sea on Wednesday morning.

Weather : Showery rain dying out later today, then mainly fair.

Visibility : Good, occasionally moderate to poor in rain at first.

Forecast for coasts from Wicklow Head to Valentia to Rossan Point :-

Wind : West to northwest force 3 to 5, decreasing force 2 to 4 and backing west to southwest tonight; then becoming cyclonic variable between Wicklow Head and Loop Head on Wednesday morning.

Weather : Rain at times in the south, elsewhere becoming mainly fair.

Visibility : Moderate, locally poor, in rain; elsewhere mostly good.

3a. Warning of Heavy Swell : Nil.

4. Outlook for a further 24-hours until 1200 hours Thursday 30-Mar-2006 : Moderate to fresh, southwest winds in the north at first, otherwise winds becoming cyclonic variable, light to moderate; rain and drizzle in the south spreading north steadily.

Appendix 8.1 Met Eireann weather report 28th March – 29th March 2006.

Warning of heavy Atlantic swell : NIL

Text of Gale warning
West to northwest winds will reach gale force this afternoon on Irish coastal waters from Rossan Point to Carlingford Lough to Wicklow Head and on the Irish Sea.

Coastal Reports	at 12 Noon
Malin Head	North, 27 Knots, Gust 36 Knots, Light rain, 9 Miles, 990, Rising rapidly
Rosslare	West-Southwest, 15 Knots, Gust 30 Knots, Light rain, 8 Miles, 995, Rising
Roches Pt (Automatic)	West-Southwest, 14 Knots, Gust 25 Knots, Greater than 10 Miles , 996, Rising slowly
Valentia	West, 05 Knots, Light rain, 8 Miles, 998, Rising slowly
Belmullet	North-Northwest, 16 Knots, Gust 27 Knots, Cloudy, 16 Miles, 996, Rising
Dublin Airport	North-Northwest West, 20 Knots, Light drizzle, 9 Miles, 992, Rising
Buoy M1 53° 8'N, 11° 12'W	15 Knots, Gust 25 Knots, WAVE HT 05.1 m, 997, Rising rapidly
Buoy M2 53° 28'N, 5° 26'W	West, 23 Knots, Gust 33 Knots, WAVE HT 02.3 m, 990, Rising
Buoy M3 51° 13'N, 10° 33'W	West, 19 Knots, WAVE HT 04.7 m, 999, Rising slowly
Buoy M4 54° 40'N 9° 4'W	Northwest, 21 Knots, Gust 32 Knots, WAVE HT 04.5 m, 994, Rising
Buoy M5 51° 41'N 6° 41'W	West-Southwest, 21 Knots, Gust 33 Knots, WAVE HT 02.9 m, 997, Rising slowly

Sea Crossings	State of sea for the next 48 hours
Dublin - Holyhead	Rough decreasing slight tonight.
Rosslare - South Wales	Rough decreasing slight tonight.
Cork - South Wales	Rough decreasing slight tonight.
Rosslare - France	Rough, occasionally very rough at first.
Cork - France	Rough, occasionally very rough at first.

Next update before 1900 hours
A detailed forecast may be obtained by dialling ***Weatherdial*** on 1550 123 855.
Calls cost € 0.95 per minute (Incl. VAT).

Appendix 8.1 Met Eireann weather report 28th March – 29th March 2006.

MET éireann

WeatherDial Fax Product Code 0021

General Forecast Division

Fax : 1570 131 838

Sea Area Forecast

WEATHERDIAL

Sea Area Forecast until : 1800 hours Wednesday, 29-Mar-2006
Issued at 1700 hours Tuesday, 28-Mar-2006

1. Gale warning: NIL

2. Meteorological Situation : A cool, unstable west to northwest airflow over Ireland will back west to southwest as a depression of 981hPa, just East of Scotland, drifts Eastwards. An occlusion is slow-moving over the South of Ireland.

3. Forecast for NE'ern and E'ern coastal waters from Malin Head to Belfast Lough to Wicklow Head and the Irish Sea :

Wind : West to northwest force 6 or 7; gusting to gale force 8 in the North Channel. Decreasing this evening force 5 or 6 and tonight west to southwest force 4 or 5. Further decreasing force 3 or less in the Irish Sea South of Anglesey.

Weather : Scattered showers.

Visibility : Moderate in showers otherwise good.

Forecast for SE'ern, S'ern and W'ern coastal waters from Wicklow Head to Mizen Head to Slyne Head :

Wind : W'ly force 5 or 6. Decreasing northerly or variable force 3 tonight. Becoming south to southeast force 4 or 5 tomorrow afternoon.

Weather : Patchy light rain or drizzle. Heavy rain later.
Visibility : Moderate becoming poor later.

Forecast for W'ern and NW'ern coastal waters from Slyne Head to Rossan Point to Malin Head :

Wind : NW'ly force 5 or 6 gusting to force 7 decreasing westerly force 4 this evening. Increasing southwesterly force 5 overnight. Backing southerly force 4 or 5 tomorrow.

Weather : Scattered showers.
Visibility : Moderate in showers otherwise good.

3a. Warning of Heavy Swell : Nil

4. Outlook for a further 24-hours until 1800 hours, Thursday, 30-Mar-2006 : Moderate to fresh south to southeast winds veering southwesterly. Heavy rain extending to all areas followed by patchy drizzle and fog.

Appendix 8.1 Met Eireann weather report 28th March – 29th March 2006.

Warning of heavy Atlantic swell : NIL

Text of Gale warning
NIL

Coastal Reports	at 4 pm.
Malin Head	Northwest, 27 Knots, Gust 37 Knots, Cloudy, 26 Miles, 994, Rising
Rosslare	West-Southwest, 08 Knots, Cloudy, 26 Miles, 997, Rising slowly
Roches Pt (Automatic)	West-Northwest, 11 Knots, 10 Miles , 999, Rising
Valentia	North-Northwest, 06 Knots, Recent rain, 8 Miles, 999, Rising slowly
Belmullet	North, 17 Knots, Gust 29 Knots, Cloudy, 21 Miles, 998, Rising slowly
Dublin Airport	West-Northwest, 17 Knots, Gust 29 Knots, Rain shower, 16 Miles, 995, Rising
Buoy M1 53° 8'N, 11° 12'W	North-Northwest, 11 Knots, Gust 22 Knots, WAVE HT 05.0 m, 999, Rising slowly
Buoy M2 53° 28'N, 5° 26'W	West, 19 Knots, WAVE HT 01.6 m, 995, Rising
Buoy M3 51° 13'N, 10° 33'W	West, 11 Knots, WAVE HT 04.4 m, 999, Steady
Buoy M4 54° 40'N 9° 4'W	North-Northwest, 19 Knots, WAVE HT 04.2 m, 997, Rising
Buoy M5 51° 41'N 6° 41'W	West, 21 Knots, WAVE HT 02.7 m, 998, Steady

Sea Crossings	State of sea for the next 48 hours
Dublin - Holyhead	Rough decreasing slight.
Rosslare - South Wales	Rough decreasing slight.
Cork - South Wales	Rough decreasing slight.
Rosslare - France	Rough decreasing moderate.
Cork - France	Rough decreasing moderate.

Next update before 0100 hours
A detailed forecast may be obtained by dialling ***Weatherdial*** on 1550 123 855.
Calls cost € 0.95 per minute (Incl. VAT).

Appendix 8.1 Met Eireann weather report 28th March – 29th March 2006.

MET éireann

WeatherDial Fax Product Code 0021

General Forecast Division

Fax : 1570 131 838

Sea Area Forecast

WEATHERDIAL

Sea Area Forecast until : 2300 hours Wednesday, 29-Mar-2006
Issued at 2300 hours Tuesday, 28-Mar-2006

1. Gale warning: NIL

2. Meteorological Situation at 11pm: A cool Northwesterly airflow covers Ireland. A large area of low pressure to the Southwest will approach the Munster coast later tomorrow.

3. Forecast for coasts from Slyne Head to Malin Head to Howth Head and also including the North Irish Sea :

Wind : West to Northwest force 5 to 7, strongest along the North coast, backing Southwesterly tonight. Moderating Southerly force 3 to 5 tomorrow afternoon. Increasing Southeasterly force 4 to 6 later tomorrow.

Weather : Scattered showers. Rain in the South later tomorrow.

Visibility : Mostly good, locally moderate later.

Forecast for coasts from Howth Head to Roches Point to Slyne Head and also including the South Irish Sea:

Wind : Variable force 3 or 4. Increasing Southeasterly Force 4 to 6 tomorrow afternoon and evening.

Weather : Patchy drizzle at first. Rain developing tomorrow afternoon and evening.

Visibility : Moderate or good becoming moderate or poor later.

4. Outlook for a further 24-hours until 2300 hours, Thursday, 30-Mar-2006 :
Strong Southwesterly winds setting in . Rain followed by showers.

Appendix 8.1 Met Eireann weather report 28th March – 29th March 2006.

Warning of heavy Atlantic swell : NIL

Text of Gale warning
NIL

Coastal Reports	at 11 PM
Malin Head	West, 13 Knots, Gust 24 Knots, Hail shower, 26 Miles, 998, Rising slowly
Rosslare	West-Northwest, 01 Knot, Fair, 21 Miles, 1001, Rising slowly
Roches Pt (Automatic)	West-Northwest, 06 Knots, Greater than 10 Miles , 1002, Rising slowly
Valentia	North-Northeast, 02 Knots, Cloudy, 13 Miles, 1003, Rising slowly
Belmullet	West-Northwest, 10 Knots, Fine, 21 Miles, 1001, Rising slowly
Dublin Airport	West, 07 Knots, Fair, 13 Miles, 1001, Rising
Buoy M1 53° 8'N, 11° 12'W	North-Northwest, 08 Knots, WAVE HT 03.6 m, 1003, Rising slowly
Buoy M2 53° 28'N, 5° 26'W	West-Northwest, 14 Knots, WAVE HT 01.5 m, 1000, Rising slowly
Buoy M3 51° 13'N, 10° 33'W	North-Northeast, 08 Knots, WAVE HT 03.3 m, 1003, Rising slowly
Buoy M4 54° 40'N 9° 4'W	West, 18 Knots, WAVE HT 03.5 m, 999, Rising slowly
Buoy M5 51° 41'N 6° 41'W	West, 12 Knots, WAVE HT 02.0 m, 1002, Rising slowly

Sea Crossings	State of sea for the next 48 hours
Dublin - Holyhead	Rough decreasing slight
Rosslare - South Wales	Rough decreasing moderate
Cork - South Wales	Rough decreasing moderate
Rosslare - France	Rough decreasing moderate to rough
Cork - France	Rough decreasing moderate to rough

Next update before 0700 hours
A detailed forecast may be obtained by dialling ***Weatherdial*** on 1550 123 855.
Calls cost € 0.95 per minute (Incl. VAT).

Appendix 8.1 Met Eireann weather report 28th March – 29th March 2006.

MET éireann

WeatherDial Fax Product Code 0021

General Forecast Division

Fax : 1570 131 838

Sea Area Forecast

WEATHERDIAL

Sea Area Forecast until : 0600 hours Thursday, 30-Mar-2006
Issued at 0600 hours Wednesday, 29-Mar-2006

1. Gale warning: NIL

2. Meteorological Situation at 5am : A cool mainly Westerly airflow covers Ireland. A frontal system will move up over the country from the Southwest this evening and tonight.

3. Forecast for coasts from Slyne Head to Malin Head to Carlingford Lough and also including the North Irish Sea :

Wind : West to Southwest force 5 to 7, strongest in the North, Backing Southerly force 3 or 4 today Increasing Southeast force 4 to 6 this evening and tonight.

Weather : Scattered showers. Rain developing this evening and tonight.

Visibility : Good becoming moderate or poor in rain.

Forecast for coasts from Carlingford Lough to Roches Point to Slyne Head and also including the South Irish Sea:

Wind : Variable force 2 to 4. Increasing Southeast force 5 or 6 this afternoon and evening. Veering Southwest force 5 to 7 tonight.

Weather : Patchy drizzle at first. Rain developing this afternoon and evening. Clearing to showers tonight.

Visibility : Moderate or good becoming moderate or poor in rain.

4. Outlook for a further 24-hours until 0600 hours, Friday, 31-Mar-2006 :
Strong Southwesterly winds with further rain or showers.

Appendix 8.1 Met Eireann weather report 28th March – 29th March 2006.

Warning of heavy Atlantic swell : NIL

Text of Gale warning
NIL

Coastal Reports	at 5 AM
Malin Head	Southwest, 19 Knots, Gust 37 Knots, Fine, 21 Miles, 996, Falling slowly
Rosslare	North, 01 Knot, Cloudy, 21 Miles, 1002, Steady
Roches Pt (Automatic)	North-Northwest, 04 Knots, Greater than 10 Miles , 1003, Steady
Valentia	East-Northeast, 01 Knot, Recent rain, 13 Miles, 1003, Steady
Belmullet	West, 17 Knots, Fine, 21 Miles, 1000, Falling slowly
Dublin Airport	Southwest, 06 Knots, Fair, 10 Miles, 1003, Steady
Buoy M1 53° 8'N, 11° 12'W	West, 12 Knots, WAVE HT 02.7 m, 1002, Falling slowly
Buoy M2 53° 28'N, 5° 26'W	West-Southwest, 12 Knots, WAVE HT 00.9 m, 1002, Rising slowly
Buoy M3 51° 13'N, 10° 33'W	North-Northeast, 11 Knots, WAVE HT 03.1 m, 1002, Falling slowly
Buoy M4 54° 40'N 9° 4'W	West-Southwest, 21 Knots, Gust 33 Knots, WAVE HT 03.0 m, 998, Falling slowly
Buoy M5 51° 41'N 6° 41'W	West-Southwest, 06 Knots, WAVE HT 01.9 m, 1002, Falling slowly

Sea Crossings	State of sea for the next 48 hours
Dublin - Holyhead	Rough decreasing slight to moderate.
Rosslare - South Wales	Rough decreasing moderate
Cork - South Wales	Rough decreasing moderate
Rosslare - France	Rough decreasing moderate to rough
Cork - France	Rough decreasing moderate to rough

Next update before 1300 hours
A detailed forecast may be obtained by dialling ***Weatherdial*** on 1550 123 855.
Calls cost € 0.95 per minute (Incl. VAT).

Appendix 8.1 Met Eireann weather report 28th March – 29th March 2006.

MET éireann

WeatherDial Fax Product Code 0021

General Forecast Division

Fax : 1570 131 838

Sea Area Forecast

WEATHERDIAL

Sea Area Forecast until 1200 hours Thursday 30-Mar-2006
Issued at 1200 hours Wednesday 29-Mar-2006

1. Gale warning: Nil.

2. Meteorological Situation at 0900 : A weak ridge is developing ahead of an occluding frontal system which is moving steadily towards Ireland from the southwest; the occlusion will cross the country tonight and a strong, unstable southwesterly airstream will follow for Thursday.

3. Forecast for coasts from Carlingford Lough to Roches Point to Slyne Head and Irish Sea :-

Wind : Southwest backing east force 2 to 4; increasing force 4 or 5 this evening, then veering southwest overnight and increasing force 5 to 7.

Weather : Mainly fair; rain soon spreading northeast, then clearing later tonight to scattered showers.

Visibility : Good becoming moderate to poor in rain; later good to moderate.

Forecast for coasts from Slyne Head to Malin Head to Carlingford Lough :-

Wind : Southwest to west force 4 to 6, strongest on the north coast; backing east to northeast force 4 or 5 later today, then becoming cyclonic variable force 2 to 4 overnight.

Weather : Becoming mainly fair; rain spreading from the south later today, clearing to showers Thursday morning.

Visibility : Good becoming moderate to poor in rain.

3a. Warning of Heavy Swell : Nil.

4. Outlook for a further 24-hours until 1200 hours Friday 31-Mar-2006 : Fresh to strong, southwest winds in most areas but moderate, cyclonic variable winds at times in the west and northwest; further showers, some prolonged and possibly thundery.

Appendix 8.1 Met Eireann weather report 28th March – 29th March 2006.

Warning of heavy Atlantic swell : NIL

Text of Gale warning
NIL

Coastal Reports	at hours coastal DoubleClick here to run Coastal
Malin Head	
Rosslare	
Roches Pt (Automatic)	
Valentia	
Belmullet	
Dublin Airport	
Buoy M1 53° 8'N, 11° 12'W	
Buoy M2 53° 28'N, 5° 26'W	
Buoy M3 51° 13'N, 10° 33'W	
Buoy M4 54° 40'N 9° 4'W	
Buoy M5 51° 41'N 6° 41'W	

Sea Crossings	State of sea for the next 48 hours
Dublin - Holyhead	Slight increasing moderate to rough on Thursday.
Rosslare - South Wales	Moderate increasing rough on Thursday.
Cork - South Wales	Moderate increasing rough on Thursday.
Rosslare - France	Rough, occasionally very rough.
Cork - France	Rough, occasionally very rough.

Next update before 1900 hours
A detailed forecast may be obtained by dialling *Weatherdial* on 1550 123 855.
Calls cost € 0.95 per minute (Incl. VAT).

Appendix 8.1 Met Eireann weather report 28th March – 29th March 2006.

MET éireann

WeatherDial Fax Product Code 0021

General Forecast Division

Fax : 1570 131 838

Sea Area Forecast

WEATHERDIAL

Sea Area Forecast until : 1800 hours Thursday, 30-Mar-2006
Issued at 1700 hours Wednesday, 29-Mar-2006

1. Gale warning: in operation for the south coast

2. Meteorological Situation : An active occlusion with its associated Low of 984hpa will move northwards over Ireland tonight with a mild unstable southwest airflow following.

3. Forecast for coasts from : Carlingford Lough to Roches Point to Loop Head and the Irish Sea.

Wind : South to southeast force 5 or 6 imminent, veering South to Southwest force 6 or 7 and gusty tonight and occasionally reaching gale 8 on the south coast.

Forecast for coasts from : Loop Head to Malin Head to Carlingford Lough

Wind : Mainly between South and West force 3 or 4 but force 5 and gusty at first off the north coast. Becoming east to northeast force 4 or 5 this evening and early tonight, then cyclonic variable for a time overnight. Increasing South to southwest force 5 or 6 during tomorrow.

Weather for all Sea Areas: Rain becoming widespread and heavy for a time turning more showery from the south later tonight, risk of fog.

Visibility for all Sea Areas : Moderate occasionally poor.

3a. Warning of Heavy Swell : nil

4. Outlook for a further 24-hours until 1800 hours, Friday, 31-Mar-2006 : Fresh to Strong South to Southwest winds but moderate cyclonic variable at times in the northwest. Heavy showers, some prolonged with a risk of thunder.

Appendix 8.1 Met Eireann weather report 28th March – 29th March 2006.

Warning of heavy Atlantic swell : NIL

Text of Gale warning
NIL

Coastal Reports	at 4 PM
Malin Head	West, 20 Knots, Gust 33 Knots, Fair, 40 Miles, 997, Steady
Rosslare	South, 14 Knots, Mist, 5 Miles, 1000, Falling
Roches Pt (Automatic)	South, 14 Knots, Greater than 10 Miles , 998, Falling
Valentia	Southeast, 10 Knots, Light rain, 4 Miles, 996, Falling rapidly
Belmullet	South, 12 Knots, Cloudy, 21 Miles, 998, Falling slowly
Dublin Airport	Southeast, 14 Knots, Cloudy, 16 Miles, 1000, Falling
Buoy M1 53° 8'N, 11° 12'W	East, 06 Knots, WAVE HT 04.0 m, 997, Falling rapidly
Buoy M2 53° 28'N, 5° 26'W	South-Southeast, 13 Knots, WAVE HT 00.6 m, 1001, Falling slowly
Buoy M3 51° 13'N, 10° 33'W	South-Southeast, 15 Knots, WAVE HT 02.2 m, 995, Falling rapidly
Buoy M4 54° 40'N 9° 4'W	West-Southwest, 13 Knots, WAVE HT 03.9 m, 998, Falling slowly
Buoy M5 51° 41'N 6° 41'W	South, 16 Knots, WAVE HT 01.4 m, 1001, Falling

Sea Crossings	State of sea for the next 48 hours
Dublin - Holyhead	Slight increasing moderate to rough.
Rosslare - South Wales	Moderate increasing rough
Cork - South Wales	Moderate increasing rough
Rosslare - France	Rough increasing very rough
Cork - France	Rough increasing very rough

Next update before 0100 hours
A detailed forecast may be obtained by dialling ***Weatherdial*** on 1550 123 855.
Calls cost € 0.95 per minute (Incl. VAT).

Appendix 8.1 Met Eireann weather report 28th March – 29th March 2006.

MET éireann

WeatherDial Fax Product Code 0021

General Forecast Division

Fax : 1570 131 838

Sea Area Forecast

WEATHERDIAL

Sea Area Forecast until : 2400 hours Thursday, 30-Mar-2006
Issued at 2330 hours Wednesday, 29-Mar-2006

1. Gale warning: in operation

2. Meteorological Situation at 2200 hrs : A vigourous depression of 982 hPa just west of Kerry is moving northeastwards and will cross Scotland during Thursday. A frontal wave will approach Ireland from the southwest later Thursday.

3. Forecast for coasts from : Howth Head to Carnsore Point to Valentia and the Irish Sea south of Anglesey

Wind : South to southwest force 6 to gale force 8 imminent. Veering west to southwest and moderating force 4 to 6 by early afternoon. Later increasing southwest force 6 or 7.

Forecast for coasts from : Valentia to Slyne Head to Malin Head

Wind : Cyclonic force 5 to 7. Decreasing variable force 3 to 4 during the day. Later increasing south-southwest force 5 to 7, strongest in south of area.

Forecast for coasts from : Malin Head to Fair Head to Howth Head and the Irish Sea north of Anglesey

Wind : Variable, mainly east, force 5 to 6 imminent. Becoming cyclonic for a time later tonight. Then northwest force 5 or 6 for a time during the day. Later variable force 3 to 5.

Weather for all sea areas : Rain soon clearing to showers. Further rain spreading from the southwest later.

Visibility for all sea areas : Poor in rain. Otherwise moderate to good.

4. Outlook for a further 24-hours until 2400 hours, Friday, 31-Mar-2006 : Fresh to strong south to southwest winds in all sea areas on Friday. Further showers or longer spells of rain.

Appendix 8.1 Met Eireann weather report 28th March – 29th March 2006.

Warning of heavy Atlantic swell : NIL

Text of Gale warning issued 23.30 hrs Wednesday, 29-3-06
South to southwest winds will reach gale force at times overnight and Thursday morning on coasts from Howth Head to Carnsore Point to Valentia and the Irish Sea south of Anglesey.

Coastal Reports	at 11 PM
Malin Head	South-Southeast, 14 Knots, Cloudy, 32 Miles, 991, Falling rapidly
Rosslare	South-Southeast, 14 Knots, Gust 29 Knots, Heavy rain, 0.8 Miles, 987, Falling very rapidly
Roches Pt (Automatic)	Southwest, 21 Knots, over 10 Miles , 986, Falling
Valentia	South-Southwest, 26 Knots, Gust 41 Knots, Cloudy, 8 Miles, 982, Falling rapidly
Belmullet	East-Northeast, 11 Knots, Light rain, 4 Miles, 988, Falling rapidly
Dublin Airport	East-Southeast, 16 Knots, Light rain, 4 Miles, 990, Falling rapidly
Buoy M1 53° 8'N, 11° 12'W	Northeast, 19 Knots, Gust 30 Knots, WAVE HT 03.1 m, 984, Falling rapidly
Buoy M2 53° 28'N, 5° 26'W	Southeast, 17 Knots, WAVE HT 00.9 m, 991, Falling rapidly
Buoy M3 51° 13'N, 10° 33'W	Southwest, 30 Knots, Gust 42 Knots, WAVE HT 04.0 m, 986, Steady
Buoy M4 54° 40'N 9° 4'W	East, 17 Knots, WAVE HT 02.7 m, 990, Falling rapidly
Buoy M5 51° 41'N 6° 41'W	South-Southwest, 27 Knots, Gust 35 Knots, WAVE HT 01.8 m, 988, Falling rapidly

Sea Crossings	State of sea for the next 48 hours
Dublin - Holyhead	Slight increasing moderate to rough.
Rosslare - South Wales	Moderate increasing rough.
Cork - South Wales	Mostly rough.
Rosslare - France	Mostly rough.
Cork - France	Mostly rough.

Next update before 0700 hours
A detailed forecast may be obtained by dialling ***Weatherdial*** on 1550 123 855.
Calls cost € 0.95 per minute (Incl. VAT).

Appendix 8.2 Munster CO_2 pressure test report on liferaft inflation gas cylinder.

Munster Co_2 Limited

ISO 9002 REGISTERED COMPANY

A Complete Cylinder Service

Co_2 Test / Fill
Marine Co_2 Test / Fill
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Diving Cyclinder Test / VIP
B.A. Cylinder Test / Fill
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Sales / Service

Unit 3 A,
Mayfield Business Park,
Cork.
Telephone: (021) 4505550
Fax: (021) 4505745
E-Mail: munco2@indigo.ie

Surveyor in Charge ,
Marine Survey Office ,
Government Buildings ,
Sullivan's Quay ,
Cork .

Re : Kidde Liferaft cylinder serial no 396539

15/05/06

Dear

I refer to the above which was delivered to our workshop by Gordon Reeves of Midleton Marine . We have now conducted a thorough examination of this vessel and would comment as follows :

(1) This Kidde cylinder was manufactured on 11/ 69 and last retested on 8/95 . Tare weight 8.32 kg s .
(2) The test house markings on the cylinder is HRS (?) who presumably refilled it in 1995 after test . Who subsequently filled the cylinder after we are not in a position to say .
(3) On 11/05/06 we removed the valve and completed a visual examination of the interior . We also checked the threads on the cylinder and valve with the appropriate gauges . The results were conclusive , this cylinder as received by us as in perfect condition . The threads are perfect and the interior of the cylinder has no trace of corrosion .
(4) To prove our conclusions we refilled the cylinder on 11/05/06 to the prescribed weight and checked for leaks . The were none . We left it on test and rechecked on 15/05/06 . Again we detected no leak .
(5) The exterior condition of the cylinder is good with no trace of corrosion . We have seen cylinders in far worse exterior condition which passed scrutiny .

We await your further instructions and enclose our invoice .

Yours truly,
David Hickey
David Hickey M.D.

Directors: D. Hickey. M.Hickey. Registration No. 159621.

Appendix 8.3 Hosetech report of examination and tests on connecting hose and fittings.

hosetech

Midleton Marine,
Marine Centre,
Carrigtohill
Co. Cork.

Tuesday, 29 August 2006

Dear

Attached please find report and certificate for the hose we recently tested for you. I trust the test was of some help to the investigation.

With kind regards,

Jean Cantrell
Hosetech

Appendix 8.3 Hosetech report of examination and tests on connecting hose and fittings.

hosetech

HOSE REPORT
August 16, 2006

CUSTOMER DEPARTMENT OF THE MARINE, C/O MIDLETON MARINE.

HOSE TYPE RUBBER, BRAIDED.

INTERNAL DIAMETER 3/8"

LENGTH 800mm

Hosetech was requested to test the above hose.

On a visual inspection the hose showed no signs of physical damage, either to the exterior braid or the swaged fittings.

For test purposes the hose was blanked at one end and tested with nitrogen under water to 1900 psi. This is 100 psi more than the manufacturer's maximum allowable pressure. The hose remained intact during the full 10 minute duration of this test. Evidence of damage to the hose would be bubbles leaking from either the hose or fittings during test, or catastrophic rupture, but there was no evidence whatsoever of either during the test.

We conclude that this hose is in perfect working order.

This test was carried out by Hosetech's Senior Technician, Anthony Morrissey, and witnessed by Chief Surveyor, Department of the Marine, Southern region.

SIGNED:

Anthony Morrissey.
ANTHONY MORRISSEY
HOSETECH

JEAN CANTRELL
HOSETECH

Appendix 8.3 Hosetech report of examination and tests on connecting hose and fittings.

Hosetech Ltd
Euro Business Park, Little Island, Cork
Tel: 021 4520600 Fax: 021 4354906
email: hosetech.ie

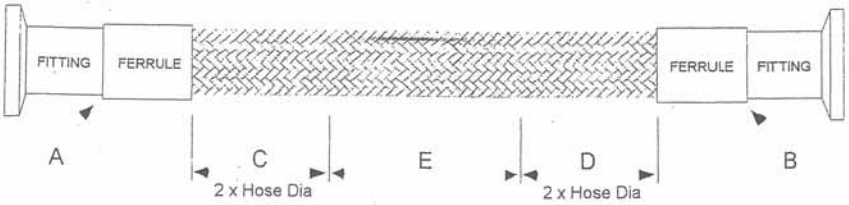
hosetech

Pressure Test Certificate No.
041961

HT Customer
DEPARTMENT OF MARINE

Pressure Test Certificate

for Hose Assemblies



ITEM	ASSEMBLY PART NO.	CUSTOMER CODE	SERIAL NO.	TEST PRESSURE	TEST SERIAL NO.	TEST REPORT NO.
01	Hose presented for testing by	N/A	N/A	1900 PSI	N/A	041961

Hose assemblies are tested under controlled conditions in accordance with the international standards BS 5173-100:1992, ISO 1402:1994, ASTM D380:2000 in compliance with EC directive 97/23/EC *Pressure Equipment Directive* .
Hose assemblies are covered by individual Test Reports showing, test method, test medium, and test results.

We certify that the hose assemblies listed have been inspected and tested, and unless otherwise stated fully conform with the specifications of the contract of order.

Certificate Date	Technician	Signature
Aug 15 2006	Anthony Morrissey	Anthony Morrissey

Appendix 8.4 Liferaft servicing record

LIFERAFT SERVICING RECORD

D6584

Liferaft Manufacturer: RFD Type: SURVIVA Capacity: 6 Serial No.: 0272

Name of Servicing Station	Servicing Station No.	Gas inflation test (yes/no)	Overload test davit launched raft (yes/no)	Date of inspection	Signature (certified technician)
Solas Marine	458	NO	N/A	1-03	C Bonaker
KIS SEA SAFETY	360	NO	NO	13-2-04	Paul
SOLAS MARINE	458	YES	NO	4/9/05	Twhel

IDENTIFICATION CARD

Inflatable liferafts

NAME OF SHIP	INTERNATIONAL CALL SIGNAL	FISHERY SIGN	SHIPS IMO No.	FLAG STATE
SOLAS MARINE				IRISH

RFD PART NO. 43859011

Appendix 8.5 MCIB stability assessment.

STABILITY CALCULATIONS & NARRATIVE

When the "MFV Maggie B" was registered in the United Kingdom it had a stability book approved by the Marine Safety Agency as complying with the requirements of The Fishing Vessels (Safety Provisions) Rules 1975. Within this book a record of minor alterations to the vessel was completed. This provided for the addition of 500kgs of Ballast and 750kg for a Net Drum. At this time a lightship survey was also carried out and this verified the increase in displacement. Initially the MCIB established the Loading Condition of the vessel. This can be seen on Page 17. The lightship was taken as the original, (58.625t, LCG 8.118m, VCG 2.779m) and the ballast recorded from the Record of Minor Alterations was also included (0.500t, LCG 0.250m, VCG 2.150m). The net drum was not included as this was removed from the vessel during the modifications.

The calculated stability profile for this condition is tabulated on Page 20``. As can be seen the vessel would satisfy the recommended requirements for a Beam Trawler. The critical criteria being No. 4 requiring the maximum GZ at an angle greater than or equal to 30 degrees to be greater than 240mm.

Following on from this, we know from witness statements that the vessel was flooding at the time of the incident. Therefore stability calculations were carried out with various permutations of flooding, the engine room on its own, the fish hold on its own, the engine room and fish hold combined and the engine room and the accommodation module. In all cases of flooding the vessel would have foundered except during the flooding of the engine room on it own and in this case only if the vertical extent of the flooding was limited to the main deck. This is an unlikely scenario.

Finally to gauge a point where the flooding would have induced sufficient loss of stability for the vessel to capsize and sink a loading condition was computed with 40 tonnes of sea water in the engine room and fish hold. This calculation was carried out on an added mass basis. As can be seen from the calculations there is still some residual positive stability but at this stage the stability profile is now very poor (Pages 21 - 24).

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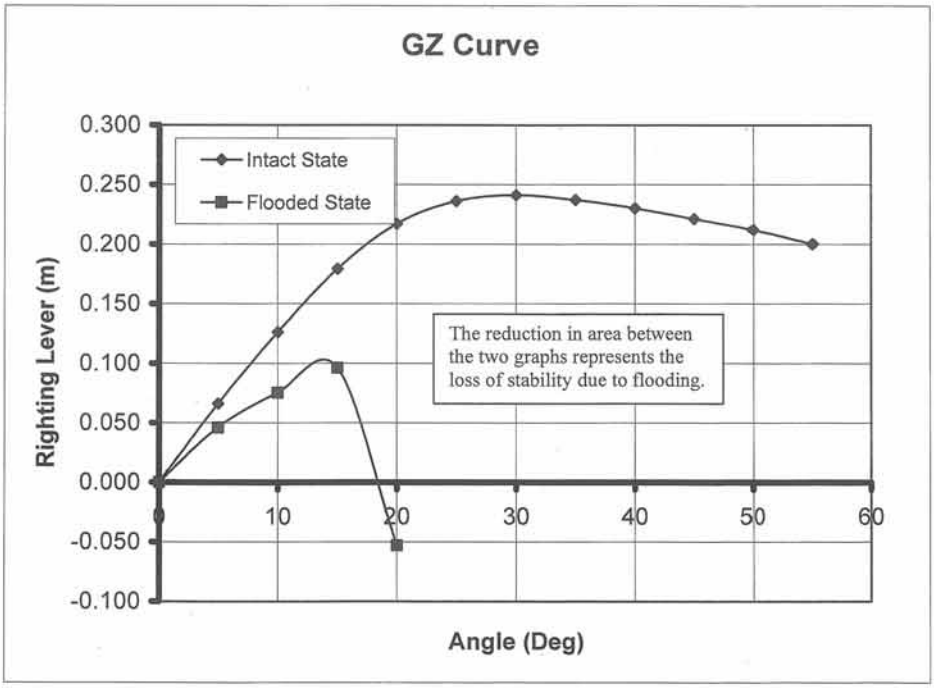
Appendix 8.5 MCIB stability assessment.

The loss of stability due to the flooding can be summarised as follows,

Criterion	Intact State	E/R & Hold Flooded	% Deduction
No. 1	0.088 mrads	0.018 mrads	80%
No. 2	0.124 mrads	0.018 mrads	85%
No. 3	0.041 mrads	0.000 mrads	100%
No. 4	0.241 m	0.000 m	100%
No. 5	29.4 °	15 °	49%
No. 6	0.763 m	0.619 m	19%

This can also be visualised with the following graph of the GZ curves superimposed on each other. One the larger represents the stability profile in the intact state and the second is in the flooded state.



Appendix 8.5 MCIB stability assessment.

Intact State

Title	Cargo	% full	SG (t/m3)	Weight (t)	LCG (m)	TCG (m)	VCG (m)	FSM (t-m)	S M
Fresh Water									
FW Tk (P): FW Tk (P)	FW	50.0	1.000	0.3	11.27	-1.46	1.94	0.0	
FW Tk (S): FW Tk (S)	FW	50.0	1.000	0.3	11.27	1.46	1.94	0.0	
Total Fresh Water				**0.6**	**11.27**	**0.00**	**1.94**	**0.0**	
Fuel									
Fuel Tk (P): Fuel Tk (P)	FUEL	60.0	0.850	1.3	8.82	-1.57	1.93	0.2	
Fuel Tk (S): Fuel Tk (S)	FUEL	60.0	0.850	1.3	8.82	1.57	1.93	0.2	
Total Fuel				**2.6**	**8.82**	**0.00**	**1.93**	**0.4**	
Fishing Gear (29/3/06)									
Trawl Warps				0.4	7.20	0.00	4.00	0.0	
Beams				2.5	5.50	0.00	3.50	0.0	
Boxes (94)				0.4	4.90	0.00	2.30	0.0	
Total Fishing Gear (29/3/06)				**3.3**	**5.66**	**0.00**	**3.43**	**0.0**	
Fish (Hold)									
Fish (6 Boxes)				0.3	5.96	0.00	1.54	0.0	
Total Fish (Hold)				**0.3**	**5.96**	**0.00**	**1.54**	**0.0**	
Crew & Effects									
Crew				0.3	10.50	0.00	5.40	0.0	
Victuals				0.2	11.00	0.00	3.80	0.0	
Total Crew & Effects				**0.5**	**10.70**	**0.00**	**4.76**	**0.0**	
Ballast (Nov 1999)									
Ballast (Nov 99)				0.5	0.25	0.00	2.15	0.0	
Total Ballast (Nov 1999)				**0.5**	**0.25**	**0.00**	**2.15**	**0.0**	
Lightweight				**58.6**	**8.12**	**0.00**	**2.78**	**0.0**	
Deadweight				**7.8**	**7.11**	**0.00**	**2.75**	**0.6**	
Total Displacement				**66.4**	**8.00**	**0.00**	**2.78**	**0.6**	
Buoyancy				**66.4**	**8.02**	**0.00**	**1.86**	**112.3**	
Total Buoyancy				**66.4**	**8.02**	**0.00**	**1.86**	**112.3**	

Appendix 8.5 MCIB stability assessment.

Intact State

Drafts at equilibrium angle

Draft at LCF	2.542	metres
Draft aft at marks	2.367	metres
Draft fwd at marks	2.744	metres
Draft at AP	2.367	metres
Draft at FP	2.744	metres
Mean draft at midships	2.556	metres

Hydrostatics at equilibrium angle

Density of water	1.0250	tonnes/cu.m
Heel	No heel	
Trim by the bow	0.377	metres
KG	2.776	metres
FSC	0.009	metres
KGf	2.785	metres
GMt	0.763	metres
BMt	1.692	metres
BMl	15.396	metres
Waterplane area	64.12	sq.metres
LCG	8.000	metres
LCB	8.023	metres
TCB	0.000	metres
LCF	7.089	metres
TCF	0.000	metres
TPC	0.657	tonnes/cm
MTC	0.673	tonnes-m/cm
Shell thickness	0.000	mm

Appendix 8.5 MCIB stability assessment.

Intact State

Righting Lever (GZ) Curve

Heel to Stbd (deg)	GZ (m)	Slope (m/rad)	Trim (m)	WLrad (m)	Freeboard (m)
0.00	0.0000	0.7632	0.377	2.367	0.68[1]
5.00	0.0658	0.7347	0.386	2.348	0.68[1]
10.00	0.1263	0.6520	0.411	2.294	0.68[1]
15.00	0.1786	0.5583	0.448	2.205	0.68[1]
20.00	0.2170	0.3588	0.491	2.084	0.69[1]
25.00	0.2364	0.1214	0.527	1.949	0.70[1]
30.00	0.2408	-0.0133	0.533	1.813	0.70[1]
35.00	0.2369	-0.0578	0.507	1.676	0.70[1]
40.00	0.2297	-0.0640	0.451	1.539	0.70[1]
45.00	0.2209	-0.0359	0.370	1.399	0.69[1]
50.00	0.2118	-0.0547	0.270	1.256	0.68[1]
55.00	0.1998	-0.1132	0.158	1.112	0.67[1]

Beam Trawler Criteria

#	Criterion	Actual Value	Critical Value
1	Area under GZ curve up to 30 deg	0.083	0.066
2	Area under GZ curve up to 40 deg	0.124	0.108
3	Area between 30 & 40 deg	0.041	0.036
4	GZ to be at least 0.24m at angle greater than or equal to 30 deg	0.241	0.240
5	Minimum angle of maximum GZ	29.415	25.000
6	Initial transverse metacentric height	0.763	0.420

Appendix 8.5 MCIB stability assessment.

Flooded State

Title	Cargo	% full	SG (t/m3)	Weight (t)	LCG (m)	TCG (m)	VCG (m)	FSM (t-m)	S M
Fresh Water									
FW Tk (P): FW Tk (P)	FW	50.0	1.000	0.3	11.27	-1.46	1.94	0.0	
FW Tk (S): FW Tk (S)	FW	50.0	1.000	0.3	11.27	1.46	1.94	0.0	
Total Fresh Water				**0.6**	**11.27**	**0.00**	**1.94**	**0.0**	
Fuel									
Fuel Tk (P): Fuel Tk (P)	FUEL	60.0	0.850	1.3	8.82	-1.57	1.93	0.2	
Fuel Tk (S): Fuel Tk (S)	FUEL	60.0	0.850	1.3	8.82	1.57	1.93	0.2	
Total Fuel				**2.6**	**8.82**	**0.00**	**1.93**	**0.4**	
Added Mass Flooding									
ER&FH: ER&FH	WB	53.3	1.025	42.0	7.71	0.00	1.67	61.1	I
Total Added Mass Flooding				**42.0**	**7.71**	**0.00**	**1.67**	**61.1**	
Fishing Gear (29/3/06)									
Trawl Warps				0.4	7.20	0.00	4.00	0.0	
Beams				2.5	5.50	0.00	3.50	0.0	
Boxes (94)				0.4	4.90	0.00	2.30	0.0	
Total Fishing Gear (29/3/06)				**3.3**	**5.66**	**0.00**	**3.43**	**0.0**	
Fish (Hold)									
Fish (6 Boxes)				0.3	5.96	0.00	1.54	0.0	
Total Fish (Hold)				**0.3**	**5.96**	**0.00**	**1.54**	**0.0**	
Crew & Effects									
Crew				0.3	10.50	0.00	5.40	0.0	
Victuals				0.2	11.00	0.00	3.80	0.0	
Total Crew & Effects				**0.5**	**10.70**	**0.00**	**4.76**	**0.0**	
Ballast (Nov 1999)									
Ballast (Nov 99)				0.5	0.25	0.00	2.15	0.0	
Total Ballast (Nov 1999)				**0.5**	**0.25**	**0.00**	**2.15**	**0.0**	
Lightweight				**58.6**	**8.12**	**0.00**	**2.78**	**0.0**	
Deadweight				**49.8**	**7.62**	**0.00**	**1.84**	**61.7**	
Total Displacement				**108.4**	**7.89**	**0.00**	**2.35**	**61.7**	
Buoyancy				**108.4**	**7.89**	**0.00**	**2.25**	**139.3**	
Total Buoyancy				**108.4**	**7.89**	**0.00**	**2.25**	**139.3**	

Appendix 8.5 MCIB stability assessment.

Flooded State

Drafts at equilibrium angle

Draft at LCF	3.149	metres
Draft aft at marks	2.801	metres
Draft fwd at marks	3.549	metres
Draft at AP	2.801	metres
Draft at FP	3.549	metres
Mean draft at midships	3.175	metres

Hydrostatics at equilibrium angle

Density of water	1.0250	tonnes/cu.m
Heel	No heel	
Trim by the bow	0.748	metres
KG	2.348	metres
FSC	0.569	metres
KGf	2.917	metres
GMt	0.619	metres
BMt	1.286	metres
BMl	11.178	metres
Waterplane area	70.25	sq.metres
LCG	7.889	metres
LCB	7.894	metres
TCB	0.000	metres
LCF	7.223	metres
TCF	0.000	metres
TPC	0.720	tonnes/cm
MTC	0.798	tonnes-m/cm
Shell thickness	0.000	mm

Appendix 8.5 MCIB stability assessment.

Flooded State

Righting Lever (GZ) Curve

Heel to Stbd (deg)	GZ (m)	Slope (m/rad)	Trim (m)	WLrad (m)	Freeboard (m)
0.00	0.0000	0.6194	0.748	2.797	0.02[1]
5.00	0.0457	0.4108	0.764	2.781	0.02[1]
10.00	0.0753	0.2812	0.743	2.770	0.01[1]
15.00	0.0962	0.2210	0.743	2.737	-0.02[1]
20.00	-0.0525	-0.0663	-6.215	6.801	-3.96[0]
25.00	-0.0519	-0.0192	-6.750	6.967	-4.27[0]
30.00	-0.0485	0.0104	-7.337	7.129	-4.59[0]
35.00	-0.0443	0.0301	-8.013	7.302	-4.94[0]
40.00	-0.0398	0.0447	-8.681	7.444	-5.27[0]
45.00	-0.0047	0.2862	20.145	7.358	-8.75[0]
50.00	-0.0065	0.2906	19.787	7.412	-8.69[0]
55.00	-0.0085	0.2942	19.497	7.490	-8.64[0]

Beam Trawler Criteria

#	Criterion	Actual Value	Critical Value	
1	Area under GZ curve up to 30 deg	0.018	0.066	F
2	Area under GZ curve up to 40 deg	0.018	0.108	F
3	Area between 30 & 40 deg	0.000	0.036	F
4	GZ to be at least 0.24m at angle greater than or equal to 30 deg	-0.009	0.240	F
5	Minumum angle of maximum GZ	0.000	25.000	F
6	Initial transverse metacentric height	0.619	0.420	

Appendix 8.6 Condition and value survey report by Promara.

Vessel Particulars

Vessel Name	Maggie B (WD 113)
Fleet number	GBR000B11104
Builder	Van Der Poll, Holland, 1989
Lengthened	Appledore Ship Builders, UK, 1995
Length: Overall	15.72m
Length Reg	14.49m
Beam	5.18m
Depth	3.33m
Hull Construction	Steel
Gross Tonnage	41 GT
Main Engine	Cummins NT855M – 172 kW

External hull

At the time of survey the vessel was dried on Kilmore Quay Slipway. Hull thickness was measured with a Cygnus Data Logger Ultrasonic Thickness Gauge which was calibrated on a 15mm test piece. The results are tabulated in the attached diagram. Measurements were consistent throughout and no areas of wastage were detected. It is noteworthy that this vessel was lengthened in 1995. A hull crack was detected on the starboard side forward of midships extending to 200mm. This does not show signs of internal leakage. It should be repaired by Veeing out and welding over the full extent of the crack.

On deck.

Accommodation is located forward beneath the wheelhouse. Access and escape are adequate. The gantry has temporarily been removed from the vessel by the current owners. This is to be refitted to the vessel along with trawl beams before the vessel goes into service. The fish hold is fully insulated with refrigeration coils fitted. Bilge alarm tested.

Engineroom

The main engine was run on test at the time of survey and appears to run well. The main engine is a Cummins NT855 developing 179 kW @ 1800 rpm. Engine hours are 24,000.

Appendix 8.6 Condition and value survey report by Promara.

The engine was installed in 1995. It was overhauled in 2003 and has run c.200 hours since then. The engine drives a Twin Disc gearbox with a reduction ratio of 4.43:1. An Beta 4 cylinder auxy engine is mounted in front of the main engine. Electrical power is 24 volt. The electrical system appears to be in good overall condition.

Steering is by hydraulic powered steering nozzle. Cooling is by keel coolers. A CO2 fire fighting system is installed.

Firefighting & Life saving Appliances

The vessel fully complies with MSO current requirements. The vessel was surveyed by the DCMNR Surveyors in Oct 2005. All equipment is current and in-date.

Accommodation / wheelhouse

The cabin is located forward to starboard and beneath the wheelhouse. The following wheelhouse equipment is fitted:

• Koden Sounder CVS 822	• Furuno Navtex
• Koden Radar MD 3406	• Navitron Pilot
• Shipmate Plotter RS2500	• Shipmate RS 4000
• Hansel Plotter H550	• ICOM VHF x2 IC120 & 2022
• Furuno GPS	• Sailor Receiver T2030
• Sinrad RD 68	

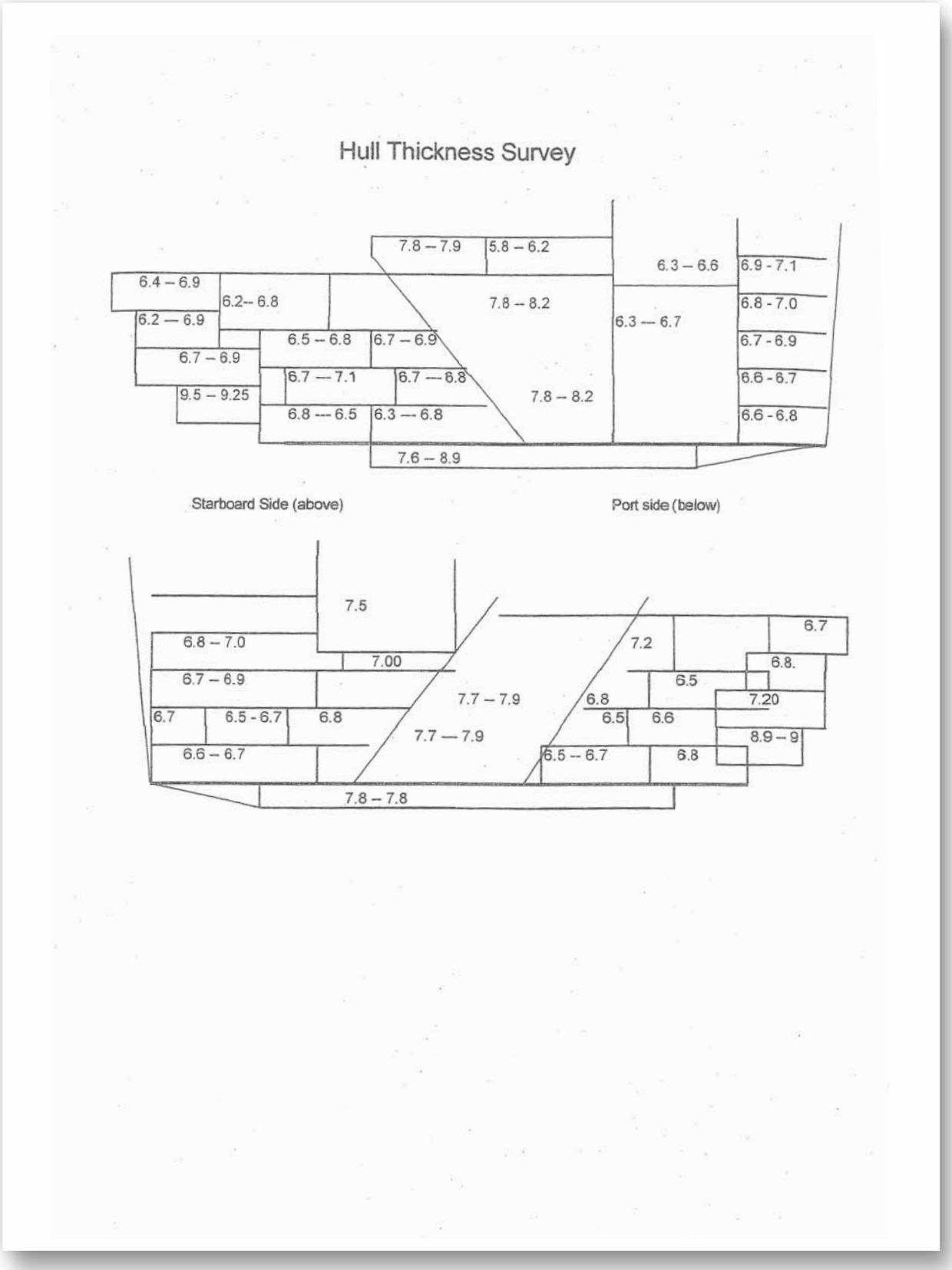
Conclusion

The vessel is in overall good condition. Her current market value is €180,000 including all equipment aboard. All particulars are believed to be correct but not guaranteed. We have not inspected woodwork or other parts of the structure which were covered, unexposed or inaccessible and we are, therefore, unable to report that any such part of the vessel is free from defect.

Signed _____ 15 Mar 2006

Noel O'Regan, Promara Ltd.

Appendix 8.6 Condition and value survey report by Promara.



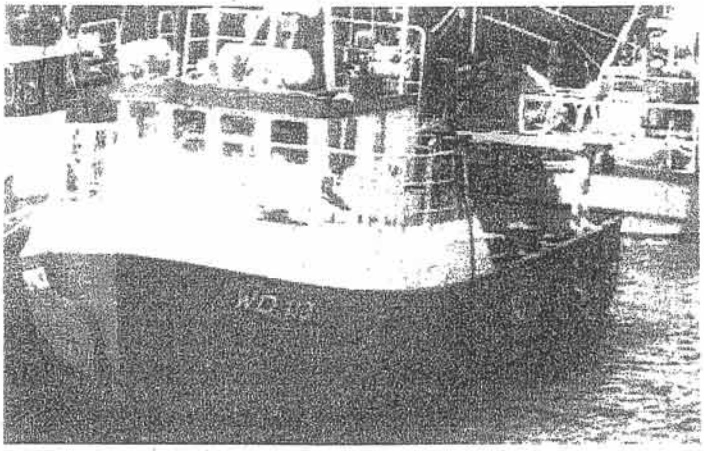
Appendix 8.6 Condition and value survey report by Promara.

Pro

3 Castlecourt
St Josephs Rd
[illegible] Co.Cork
Ireland
Tel [illegible]
Fax [illegible]
sales@promara.ie

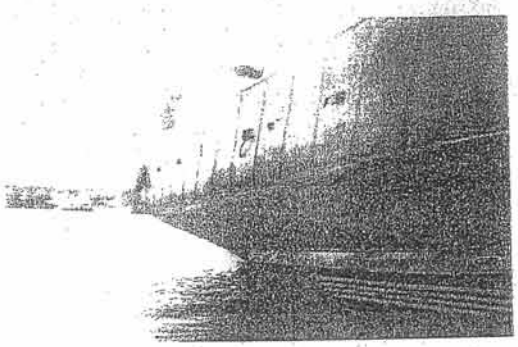
Survey Report
(Condition & Value)

MFV Maggie B

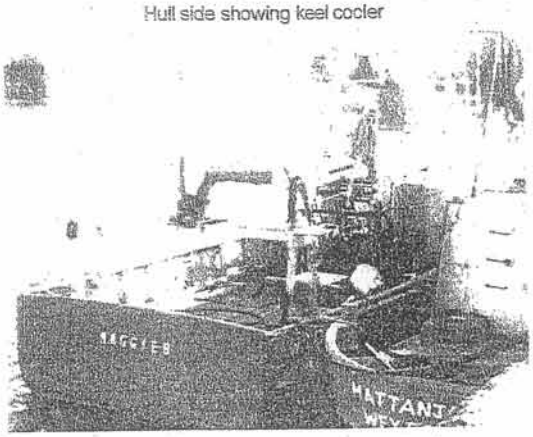


This survey has been carried out at the request of Mr Anthony Mr Joseph Welsh on the vessel Maggie B. Noel O'Regan of Promara Ltd attended the vessel at Kilmore Quay, Monday 27th February 2006 and carried out the survey. The purpose of this survey is a condition survey prior to purchase. The survey is personal and confidential to my clients and for the purpose mentioned above at this time. It has no external warranty if disposed of to a third party for any purpose

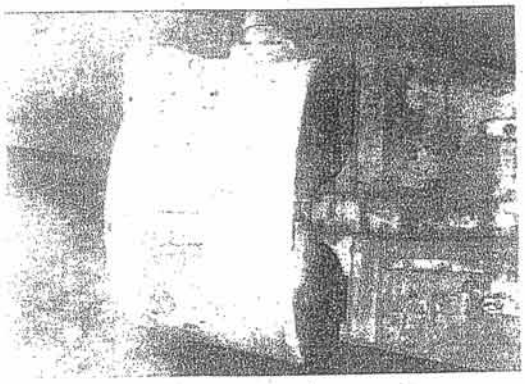
Appendix 8.6 Condition and value survey report by Promara.



Hull side showing keel cooler



Aft deck before beam trawls were refitted



Steering nozzle

9. LIST OF CORRESPONDENCE RECEIVED

Mrs Bridie Cullinane
Secretary
Marine Casualty Investigation Board
Leeson Lane
Dublin 2

26th January 2007

Re: DRAFT REPORT of the Investigation into the Loss of the MFV "MAGGIE B" on 29th March 2006

Dear Mrs Cullinane,

We, the Cott Family, wish to acknowledge receipt of the DRAFT REPORT of the Marine Casualty Investigation Board's investigation into the sinking of the beam trawler, the "Maggie B".

Thank you for affording us the opportunity to make known our comments and observations on this DRAFT REPORT.

We want it clearly understood, by everyone who reads our response to the DRAFT that, every member of our family have consistently stated, from the very night of the tragedy, that our purpose in asking questions and seeking answers is to find facts.

Without verifiable facts, rumours and speculation can abound. This is understandable in any tragic or unexplained loss of life, which in this case affects not only a family, but all involved in the fishing industry.

We have constantly campaigned, by every means available to us to have the "Maggie B" raised. The reason for this has not been to apportion blame or liability, but to establish the facts about the "Maggie B" and to determine the cause of the tragedy.

Section 4.4 of the draft states that, "A Mayday call was received by MRCC at 23:05 hrs. This call was made by the Skipper, Mr Glynn Cott".

This information is inaccurate, incorrect and not good enough coming in a DRAFT report from a Statutory Body.

Glynn made not one, but two Mayday calls, when the boat was literally sinking under him.

At 23:12 – ARCC (Aviation Rescue Co-ordination Centre) Kinloss advised MRCC Dublin that they picked up an ELT (Emergency Locator Transmission) with the call sign EII7530 (Maggie B).

We would like to see the FINAL REPORT show the exact local time that Kinloss picked up the ELT from the "Maggie B" and the times that Glynn's two Mayday calls were made.

While the board correctly points out that a vessel of less than 17 metres does not require a qualified Deck Officer, the factual and incontrovertible information from the Mayday calls, supported by the EPIRB, confirm that Glynn had all the qualities of a great person who put his crewmates first.

Section 5.1 states that, "The Emergency Position Radio Beacon (EPIRB) was activated which gave the position of the vessel." We would like to point out to the MCIB and others, that it was Glynn who first gave the exact position of the location of the "Maggie B" in his second Mayday call. The fact that the "Maggie B" now lies on the sea-bed in position 52 02.7314N 006 56.821 South of Hook Head, confirms this.

The Alarm Panel, the Smoke Sensor, the CO2, Gas, Fire & Bilge Level Alarms and the Audible Steering

Alarms were located on the "Maggie B" directly over the access going down to the Mess Room where Mr Patowski says he was when he first heard the alarm (4.1). He did not say where Glynn was.

Therefore, we request the MCIB to give us a copy of the recording of Glynn's voice sending out the Mayday calls, to enable us to determine which of these alarms was sounding in the background during the sending of the two Mayday messages the night the boat sank.

We would also like Mr Patowski to be shown a copy of the Fire & Safety Plan of the MFV Gilsea (which we have in our possession should the MCIB not have a copy), dated 26th September 1995, so that he can indicate from which Alarm Panel he saw Glynn remove "what (he) described as a fuse at an electrical panel which stopped the alarm sounding." – as per Section 3.19.

We ask the board to compare the text from section 4.1 of the DRAFT, with the statement made after the sinking by Mr Patowski. This was taken on 30th March 2006 at Medical 3 Ward, WRH. In this statement Mr Patowski states that it took 2 minutes for the boat to go down, he did not know that a Mayday call had been made and he made no mention of the alarms that the MCIB are alleging were continually sounding and certainly made no mention of a fuse being removed to stop an alarm.

These discrepancies raise serious questions over Mr Patowksi's evidence, which is relied upon heavily by the MCIB throughout the DRAFT.

In section 1.3 the MCIB states, "The Fish Hold bilge level alarm had been sounding regularly during the voyage and the Skipper had been starting the bilge pump when the alarm sounded. At approximately 22:50 hrs another alarm sounded. This alarm sounded for approximately 10 minutes before the Skipper and surviving crew member went to the engine room to investigate. On inspection of the engine room it was found to be flooded approximately half way up the main engine. The fish hold was also reported to be flooded."

We would like to know if Mr Noel O'Regan carried out a test in the Fish Hold Bilge Alarm and to know exactly where in the Fish Hold the alarm sensor was located?

We are asking these questions, as we don't understand Mr Patowski's constant references to alarms sounding and being ignored by Glynn. Your letter to us states, "In order to ensure that fair procedures are followed, and that the principles of Natural Justice are complied with, you are now afforded the opportunity to respond to the draft report if you wish."

3.2 - From February 2003 to May 2005, the vessel was laid up in Kilmore Quay while work was carried out on the vessel. What were these works that were carried out?

6.1 - "In the weeks prior to the incident this vessel had been modified by the Skipper and Crew". Glynn was a skipper and we are prepared to declare, under oath that:

- Glynn was not a welder, had no welding experience and never owned welding gear or tools for metal work;
- Glynn was not an electrician

We do accept that Glynn assisted in carrying out some of the alterations to the vessel after its purchase by its new owners, Mr Anthony Walsh & Mr Joseph Walsh of Walsh Brothers Fishing Limited, Ballyhicken, Garryvoe, Co. Cork, but do not accept that he was responsible for the alterations.

In relation to the external hull, we do not understand what Mr O'Regan means when he says that, "It is noteworthy that this vessel was lengthened in 1995." We ask, why is this noteworthy? Does this have any relevance to it's sinking?

Mr O'Regan states that, "A hull crack was detected on the starboard side, forward of midships extending to 200mm. This does not show signs of internal leakage. It should be repaired by veering out and

welding over the full extent of the crack." Was the hull crack above or below the waterline?

The crack was on the starboard side of the vessel, why does the log of the Naval Diving Operation on 25th May 2006 state that, "ROV was deployed to search along the port side of the wreck for possible fracture in steel below the waterline as per MCIB request." Why did you make this request? In section 6.3, the MCIB states that the crack is on the port side.

The surveyor did not state in his report dated 15th March 2006, as the MCIB claims, that "he was of the opinion that the crack did not pose any danger to the hull of the vessel and recommended a repair could be carried out the next time it was dry-docked or slipped." This is simply not true and we find it incredible that it is included in the MCIB's report.

The surveyor actually stated that, "It should be repaired by veering out and welding over the full extent of the crack."

The survey report is signed by Noel O'Regan, Promara Ltd and dated 15th March 2006. Therefore, it appears that the Walsh Brothers had applied for a Fishing License for the "Maggie B" before they received and considered the Report on the Condition & Value of the "Maggie B."

Please explain how the application for a Sea Fishing Boat License for the beam trawler, "Maggie B" that was received by the Licensing Authority on 8th March 2006, could have also included the Survey Report dated 15th March 2006?

We do not understand this. It is not for us to investigate but we would like further comment to be made on this as it is not clear in the DRAFT report that was sent to me for comment.

By law, Glynn did not have a right to fish on the day that the "Maggie B" left Kilmore Quay.

Glynn did have a right to life and to be able to return to Kilmore Quay on the same boat on which he left.

We would like to thank everybody who has been effected and involved in this tragic event.

Yours sincerely,

The Cott Family
5 Island View
Ballycotton
Co. Cork

MCIB RESPONSE TO LETTER FROM THE COTT FAMILY, RECEIVED ON 31st JANUARY 2007.

The first recorded Mayday call was shown in the MRCC SITREP made available to the MCIB. This has been verified by MRCC as being correct and is considered by the Investigator to show the start time of the incident. That document shows that a Mayday call was received from "Maggie B" at 23.05 hours (Local time), which was the time that the incident became known to the rescue services. The call was acknowledged by MRCC who requested the caller to identify the name of the vessel calling. The normal Mayday call procedures appear not to have been followed insofar as the caller did not state the name of the vessel, or its position. In a continuation of that Mayday call and conversation with MRCC, the position of the vessel was then given by the caller, who reported that it was sinking at 23.07 hours. This all took place in the space of two minutes and the MCIB does not consider the report of the vessel sinking to be a second Mayday call but that it was an update of the situation.

The SITREP also states that UKMCC advised that they received a COSPAS SARSAT alert from E17530 ("Maggie B") at 23.12 hours (Local time).

The MCIB has a copy of the General Arrangement drawing, which shows the lay out of internal spaces in the vessel, but it does not show any detail of alarm panel location.

Mr. Patowski was interviewed again at a later date following the interview which took place at Waterford Regional Hospital. It must be appreciated that a statement taken immediately after such a shocking experience may not provide every detail of the incident. It is always necessary to obtain a statement as early as possible after an incident in order to assemble the general sequence of events that have taken place. However it is only after some time that a person may begin to remember other details of an incident, hence the reason for taking a further statement.

In the signed statement given by Mr. Noel O'Regan on the 2nd May 2006 he described the bilge system and stated that each compartment was fitted with individual electric pumps. In addition it was also possible to pump the bilges using the engine driven bilge pump. He also stated that each compartment was fitted with a bilge level alarm, which was tested in the presence of Mr. O'Regan and Mr. Declan Bates, the previous owner. Mr. O'Regan has advised that to the best of his recollection the bilge alarm sensor in the Fish hold was situated between the forward bulkhead and the position where the propeller shaft passed through the hull. This would place the sensor slightly forward of the longitudinal centre of the space.

The vessel was purchased by Mr. Declan Bates in 2003 and brought to Kilmore Quay where an MSO (Marine Survey Office) surveyor carried out a Safety Equipment survey in October 2003. A written list of deficiencies to rectify before a follow up inspection was issued to the owner at that survey. In July 2004 the owner contacted the MSO to advise that the vessel was ready for re-inspection. The vessel was inspected again and some further items were identified which required attention and another deficiency list was issued to the owner. In October 2004 a further inspection was carried out by MSO and the surveyor was unable to complete the inspection until repair work on the main deck was completed. In September 2005 a final inspection took place and the vessel was declared to be in compliance with current legislation for a vessel of this type and size.

It is the Board's understanding from an interview with Mr. Andrew Walsh that he and his business partners knew very little about the technical aspects of fishing vessels and basically provided the funds necessary for any modifications, which took place under the supervision of Mr. Cott.

The Board does not attribute any particular significance to Mr. O'Regan's comment regarding the lengthening of the vessel in 1995. He has also advised the investigator that his comment does not have any technical relevance. An MCA approved stability information book was produced for the vessel in 1997.

In the original report provided by Mr. Noel O'Regan of Promara Ltd. and dated 15th March 2006, the report identified a crack on the starboard side of the vessel. The Investigator subsequently received a letter from Mr. O'Regan stating that there was an error in his report and that the crack was actually on the port side and not the starboard side as shown in the report. That report was attached to all documents relevant to the investigation. This was the reason for close inspection of the port side.

In a signed statement given by Mr. Anthony Walsh on the 7th April 2006 he stated that the Promara surveyor Mr. Noel O'Regan was of the opinion that the crack did not compromise the integrity of the hull and its water tightness. He also stated that Mr. O'Regan indicated that a repair could be completed sometime around August 2006 when the vessel would be slipped for its annual re-fit.

Mr. O'Regan's report recommended a type of repair which should be carried out to the crack. The Investigator clearly shows the fact that the recommended repair was not carried out and also includes the explanation given by Mr. Walsh for the repair work being deferred until the vessel was going to be slipped in August 2006.

In a signed statement given by Mr. Noel O'Regan on the 2nd May 2006 he stated

that he surveyed the "Maggie B" at Kilmore Quay on two occasions and was satisfied that the vessel was in a seaworthy condition and a good investment for the owners. Mr. O'Regan also advised the Investigator that he was not concerned about the hull crack as it was small and was situated in way of a small tank and above the waterline.

As stated in the report, the video evidence did not show that any crack, which might have been in this area, had spread causing a catastrophic hull failure allowing water ingress.

There is nothing preventing anyone from applying for a fishing licence by completing an application form and submitting it to the Department of Transport. The fact is that a licence will not be issued until all requirements are met. In this case no licence was issued for that reason.

The Sea Fishing Boat Licence Application form was received on 8th March 2006. In a letter dated 29th March 2006 signed by the Deputy Registrar General of Fishing Boats and addressed to Mr. Anthony Walsh it stated in addition to other points that, the vessel condition survey report submitted by Mr. Walsh with his application did not specifically confirm that the vessel was in a safe and seaworthy condition. The letter also stated that the report was being returned to Mr. Walsh.

Marine Casualty Investigation Board
Leeson Lane
Dublin 2
Ireland

76 Royal Avenue,
Onchan
Isle of Man,
IM3 1LB

26th January 2007

Dear Ms Cullinane,

I wish to acknowledge the Draft Report of the Investigation into the loss of the MFV "Maggie B" on the 29th March 2006 in which my brother Glynn Cott lost his life.

I have studied the report and passed on my comments to my father who will act on my behalf.

Yours Sincerely

Mrs Anne Corrigan

MCIB RESPONSE

The MCIB notes the contents of this letter.

M ridie Cullinane
Secretary
Marine Casualty Investigation Board
Leeson Lane
Dublin 2

Elaine Hayes
2 O'Briens Terrace
Ballycotton
Co. Cork

18th January 2007

Re: Draft Report of the Investigation into the Loss of the MFV "MAGGIE B" on 29th March 2006

Dear Mrs Cullinane,

My name is Elaine Hayes and my long-term partner Glynn Cott, was the Skipper of the "Maggie B" which sank on the 29th March 2006.

I would like to start my reply to the Marine Casualty Investigation Board's Draft Report by highlighting some important factual errors.

3.10 *"The skipper decided to carry out an initial fishing trip on the 28th March 2006."* - Before Glynn took the boat out on the fishing trip, he told me, that he had been told by the owners of the boat, that the "license was in the post" and that it was ok to take the boat out fishing. **He did not make this decision himself** and I would ask that the report be altered to reflect this fact.

6.1 *"In the weeks prior to the incident this vessel had been modified by the Skipper and Crew"* – **Glynn and his crewmates did not modify the vessel.** They provided only their time and labour by assisting the previous owner of the boat, Mr Declan Bates in making the modifications. Mr Bates was responsible for the significant changes that were made to the boat, under direction from the Walsh Brothers, and he made all engineering decisions. There is no record of this in the report and again, I ask that this be reflected in the report.

Glynn was an employee of the Walsh Brothers and carried out his duties as requested by his employer. It is important to point out that all decisions regarding licensing and modification of the boat were the responsibility of the Walsh Brothers. It is incorrect to suggest that Glynn decided to take the "Maggie B" out for an initial fishing trip and that he was responsible for the major modifications made to the vessel.

The Marine Casualty Investigation Board has carried out this investigation to establish the cause, or causes, of the incident and to make recommendations for the avoidance of similar marine casualties in the future.

In my opinion, the MCIB have failed to properly establish the reasons behind why the vessel sank. After spending months investigating this incident, the synopsis of your findings is that the vessel sank, because the engine room and fish hold were flooded. While this may be the case, this finding is inadequate, as the MCIB's objective should be to investigate the reasons behind why the engine room and fish hold were able to become flooded.

I was forced to wait a number of months to be formally told by the MCIB that the vessel was not going to be raised. I have stated in numerous letters to the MCIB and through letters and meetings with Mr Pat "the Cope" Gallagher that I wanted the boat raised. None of my requests have been entertained. The standard response to every request was that the MCIB are investigating and therefore we are unable to comment on the investigation. The investigation is now complete and I have already made comment on it's inadequacy. I would now like to point out sections of your own report that indicate reasons why the vessel should be raised.

4.3 *"The last time Mr Cott was seen by Mr Patowski was on the Starboard side of the vessel on the Main Deck."* - Mr Patowski did not see Glynn in the water, meaning that the MCIB are presuming

that Glynn was not on board the vessel when it sank. Despite thorough searches, Glynn's body has not been found. Nobody can say with absolute certainty that he is not still with the vessel as not all parts of it have been searched. Glynn deserves to be shown dignity and respect, even if it is long overdue. This would be achieved by raising the boat and searching it.

5.7 *"On the 4th April 2006 two divers undertook to dive on the wreck on behalf of the owners (Walsh Brothers). That dive did not find the missing men or provide any evidence which would give information that would explain how water entered the vessel"*

5.8 Irish Naval Service divers carried out an investigation of the wreck between 21st & 26th May 2006. *"The search did not locate the missing men and the video evidence examined by the MCIB did not give any apparent reasons as to the cause of the loss of the vessel"*

Despite two separate dives and the use of a ROV (remotely operated vehicle), no evidence was gathered to help establish the reasons behind why the vessel sank.

The MCIB have themselves stated that they have failed to properly establish the reasons for the incident by stating in section 6.1, *"It has not been established where water entered the Engine Room & Fish Hold"*

There were major modifications made to the "Maggie B". The owners of the boat commissioned a pre-purchase survey to ensure that the vessel they were buying was in proper working order. It is regrettable that they did not take the decision to commission a survey after the vessel had been modified and prior to the vessel being sent out to sea. The pre-purchase survey states that, "The gantry has temporarily been removed from the vessel by the current owners (Declan Bates). This is to be refitted to the vessel along with trawl beams before the vessel goes into service."

Your sections 3.5, 3.7, 3.8 and 3.9 all relate to the work carried out after the boat had been surveyed and purchased by the Walsh Brothers. This amounted to a significant change to the set-up of the vessel.

The "Maggie B" was surveyed as being seaworthy in February. Major modifications were made in March. The "Maggie B" sank on its first fishing trip on March 29th 2006. This sequence of events raises serious questions about the modifications, especially when, *"There does not appear to be any evidence to show that stability calculations were carried out to assess the vessel's stability taking into account the modifications and changes in weight which took place."* Surely this requires a thorough investigation by the MCIB to establish exactly what impact the modifications had on why and where water entered the Engine Room & Fish Hold.

Your section 6.5 relates to a stability investigation carried out by the MCIB. There are so many guesses, estimates and assumptions in this stability investigation that in my opinion it renders it meaningless. The only part of section 6.5 that is worth noting is that, "the loss of stability may well have been accentuated by the alterations made to the ballast configuration." These alterations, of course, being made during the modification process after the vessel had been surveyed and purchased.

Bearing all this information in mind, I do not think I am being unreasonable in wanting the "Maggie B" to be raised.

I would like the MCIB to clearly outline the reasons behind why it has chosen not to raise the Maggie B.

There are a number of outstanding issues that I would like action to be taken on.

- Licensing – The "Maggie B" was not licensed when it sank. An offer letter was issued on the day it sank. The letter was issued on 29th March 2006 and this letter clearly states that the license offer

...oes **not confer the right to fish** or engage in any fishing activities until a formal license is issued. The formal license was seemingly a long way from being "in the post", as advised by the owners when they told Glynn to take the "Maggie B" out fishing.

I would ask that this report be forwarded to the relevant authorities to impose the maximum penalties against the owners of this vessel for operating an unlicensed vessel.

- I understand that law precludes the MCIB from attributing blame or fault. However, as I feel that blame is attributable in this instance, I would ask that this report be forwarded to the Gardai and the Health & Safety Authority for their review and for them to take action as they see fit, including the possibility of raising the vessel to assist their investigations.

- I would ask that this report be forwarded to Mr Pat "the Cope" Gallagher. I would like to publicly ask him for his comments. He consistently hid behind the MCIB to avoid making a decision to request the boat be raised. I would now like his comments on whether he intends to raise the vessel, taking into account the inconclusive nature of this report and the unanswered questions I have outlined in my response.

- I would like the MCIB to investigate the reasons behind why the Waterford search and rescue helicopter was unable to attend the scene of the incident after the mayday call had been issued. As the nearest helicopter to the incident, had it attended, who knows what the outcome may have been. The helicopter from Shannon was the first to attend. Perhaps as part of your recommendations, the Irish Coast Guard should make public the times when it has scheduled maintenance work being carried out and is unable to fly it's helicopters.

- I would like to ask the MCIB to contact the Irish Coast Guard to explain why they allowed private divers to do an unsupervised dive on the boat on the 4th April.

- I would also like the MCIB to identify the reasons as to why they did not request a professional dive to be carried out on the "Maggie B". This Irish Naval dive was carried out only at the request of Mr Pat "the Cope" Gallagher, after a great deal of lobbying by Glynn's family and I, nearly two months after the vessel sank. Gardai divers did not dive on the boat at any stage.

I look forward to the MCIB correcting the inaccuracies in the report. I would ask that before the MCIB finalise their report, they take time to properly consider whether raising the "Maggie B" will add nothing to their unsatisfactory findings that the boat sank because the Engine Room & Fish Hold were flooded.

I would like to go on record as thanking the volunteers who took place in the search effort. Their efforts were hugely appreciated at a very difficult time.

Finally, Glynn to me was, still is and always will be a person, a human being. He was my partner, a brother, an uncle, a friend, a cousin and a son and is loved by many people. Glynn did his duty till the end.

He was a very brave and respected man who deserves justice and I deserve the right to know why the "Maggie B" fishing vessel took his life.

He will always be loved and never forgotten

Yours sincerely,

Elaine Hayes

Elaine Hayes

MCIB RESPONSE TO LETTER FROM MS. ELAINE HAYES, RECEIVED ON 31st JANUARY 2007.

Ms. Hayes stated that Mr. Glynn Cott did not make the decision to sail the vessel. As the Skipper, it would be Mr. Cott's decision to sail or not to sail.

The Investigator states from an interview with Mr. Anthony Walsh that he and his business partners knew very little about the technical aspects of fishing vessels and basically provided the funds necessary for any modification, which took place under the supervision of Mr. Cott.
The owners may or may not have advised Mr. Cott that a licence was in the post but the Board has no information of this.

In a signed statement given by Mr. Declan Bates (previous owner) on 29th May 2006 he stated that whilst he had offered his advice to the Skipper he felt that the Skipper was happier to do things his own way so he (Mr. Bates) had little involvement in the re-rigging project.

Many of the points raised in Ms. Hayes letter are similar to those revised by the Cott Family letter and have been answered by the MCIB in their reply to that letter.

The MCIB wishes to re- iterate that it is satisfied that it has established the reason for the sinking of the "Maggie B".

The subject of divers, helicopters etc. is not a matter for the MCIB and should be directed to the relevant authorities. The function of the MCIB is to find the facts not faults of any incident and to make recommendations to prevent any incidents recurring.

The MCIB did not consider the raising of the "Maggie B" to be required to complete its investigation as the cause of the incident was clearly a stability issue.

In relation to Ms. Hayes point about there being "so many guesses, estimates and assumptions in this stability investigation that in my opinion it renders meaningless". The MCIB does not agree that the amount of assumptions made render the analysis meaningless. The assumed loading condition may not be an exact replication of the condition at the time of the incident but it provides sufficient information for the Board to establish that when the vessel was intact, i.e. not flooding or filled with floodwater, it should have had sufficient stability not to capsize and it also allows the Board to gauge a point at which the flooding of the vessel would have reduced the stability such that the loss of the vessel was inevitable.

Additionally, the Board has no choice but to make such assumptions in this case as the only witness did not know how much fuel and fresh water was on board, did not know the precise make up of the fishing gear (weights, lengths of wires etc.) and did not have a precise recollection about other deadweight items on board. It may also be worth noting that once the vessel sank any evidence in relation to the precise make up of the loading condition is lost as the tanks will become compromised with sea water and other equipment may be washed away.

As found in the supplementary report "Revised Stability Investigation" the primary cause of the capsize of the "Maggie B" was lack of stability. The "Revised Stability Investigation" confirms the MCIB's original opinion that the cause of the incident was due to lack of stability.

Januta Sankowska
ul. Gryfitow 4/10
72-200 Nowogard
Poland

25 January, 2007.

Ms. Bridie Cullinane
Marine Casualty Investigation Board
Leeson Lane
Dublin 2, Ireland

BY FAX (+43 1 6783129)
BY E-MAIL (info@mcib.ie)
By COURIER

Re.: Draft Report of the Investigation into the loss of the MFV "Maggie B" on 29 March 2006, Your Ref.: MCIB/122

Dear Sirs,

With reference to your letter of 6 December 2006 (Your Ref.: MCIB/122) on the above captioned matter, below you will find my comments/observations on the Draft Report:

1. First of all, please note that the correct name of my husband is Jan Sankowski (and not "Jan Salkowski").

2. Your report states on page 5 that *"it is unclear if Mr. Cott and Mr. Sankowski had undertaken such (*i.e. safety*) training or a recognized equivalent"*. In this regard, please be informed that my husband completed safety training courses in Poland (see the relevant documents which I attach herewith).

3. Your report states on page 7 point 3.9 *"From witness statements taken, it appears that this hatch may not have been correctly secured*".
Why such statements have not been attached to the report? Who has made such statements and when? In my opinion, referring to "witness statements" only, without enclosing of the said documents to the report (they should be integral part of the Report) is incorrect and does not give any possibility of assessment of the documents in question.

- I find fully insufficient conclusions of MCIB made on page 11. In fact, MCIB by stating "*it has not been established where water entered the Engine Room and Fish Hold*" admitted that the real cause of the Maggie B's loss is still unknown.

In view of the above, I (and my daughter too) wish to inform you that we are deeply disappointed with not establishing by the MCIB of the real cause of the loss of "Maggie B"and in a result thereof the death of my husband Jan Sankowski. Taking into account the contents of the Report and lack of establishing of the cause of the accident, it is clear for me and my daughter that the only possibility of finding out what was the cause of the Maggie B's loss would be raising of the vessel from the sea-bed. Therefore, I hereby apply for raising of the vessel from the sea-bed so that it can be professionally surveyed and thoroughly examined.

Yours sincerely,

Danuta Sankowska

Danuta Sankowska

RZECZPOSPOLITA POLSKA
REPUBLIC OF POLAND

ŚWIADECTWO PRZESZKOLENIA
W ZAKRESIE
INDYWIDUALNYCH TECHNIK
RATUNKOWYCH

Certificate of Basic Safety Training in Personal Survival Techniques

Wystawione na podstawie postanowień
Konwencji STCW 1978 z poprawkami z 1995 r.,
z upoważnienia rządu Rzeczypospolitej Polskiej przez Urząd Morski w Szczecinie.

Issued under the provisions
of the STCW Convention 1978 as amended in 1995,
under the authority of the Government of the Republic of Poland by Maritime Office Szczecin.

No. UMS - 12-011109-02615/03

áświadcza się niniejszym, że:
his is to certify that:

SANKOWSKI JAN

Nazwisko / Surname Imię / Name

19-02-[illegible] PŁOTY

Data i miejsce urodzenia / Date and place of birth

osiada odpowiednie kwalifikacje zgodnie z wymaganiami prawidła
I/2.1 Konwencji STCW 78/95 i może dowodzić środkami ratunkowymi
odziami ratowniczymi innymi niż szybkie łodzie ratownicze.

as been found qualified in accordance with the provisions of Reg.
I/2.1 of the STCW 78/95 Convention and has been found proficient in
urvival craft and rescue boats other than fast rescue boats.

Szczecin 28-12-1999

Miejsce i data wydania / Place and date of issue of this Certificate

SANKOWSKI

ódnis posiadacza/ Holder's signature

URZĄD MORSKI W SZCZECINIE

E.Zięba

Nazwisko i podpis osoby upoważnionej
Name and signature of duly authorized person

RZECZPOSPOLITA POLSKA
REPUBLIC OF POLAND

ŚWIADECTWO
OBSERWATORA RADAROWEGO

Certificate of Radar Observation & Plotting Course

Wystawione na podstawie postanowień
Konwencji STCW 1978 z poprawkami z 1995 roku,
z upoważnienia rządu Rzeczypospolitej Polskiej przez Urząd Morski w Szczecinie.

Issued under the provisions of the
International Convention of Training, Certification and Watchkeeping for Seafarers 1978
as amended in 1995,
under the authority of the Government of Republic of Poland by Maritime Office Szczecin.

No. UMS - 01-011109-00096/02

Zaświadcza się niniejszym, że:
This is to certify that:

SANKOWSKI JAN

Nazwisko / Surname Imię / Name

19-02-1961 PŁOTY

Data i miejsce urodzenia / Date and place of birth

jest odpowiednio przeszkolony w zakresie elementarnych zasad udzielania pierwszej pomocy medycznej zgodnie z wymaganiami prawidła VI/1 Konwencji STCW .

has been duly trained in elementary first aid in acc. with the provisions of Reg. VI/1 of the STCW Convention.

Szczecin 22-08-2003

Miejsce i data wydania / Place and date of issue of this Certificate

Ważne do
Valid till 13-07-2008

URZĄD MORSKI W SZCZECINIE

B.Downar

Nazwisko i podpis osoby upoważnionej
Name and signature of duly authorized official

SANKOWSKI JAN

Nazwisko / Surname Imię / Name

19-02-1961 PŁOTY

Data i miejsce urodzenia / Date and place of birth

Szczecin 23-08-2002

Miejsce i data wydania
Place and date of issue of this certificate

Podpis posiadacza/ Holder's signature

E.Zięba

Nazwisko i podpis osoby upoważnionej
Name and signature of duly authorized official

No. UMS - 61-011109-00240/02

Na podstawie § 38 rozporządzenia Ministra Transportu i Gospodarki Morskiej z dnia 24 sierpnia 2000 r. w sprawie wyszkolenia i kwalifikacji zawodowych, pełnienia wacht oraz składu załóg statków morskich o polskiej przynależności (Dz.U. Nr 105 poz. 1117) posiadacz tego świadectwa może [illegible]ować stanowiska wymienione poniżej:

Under the provisions of §38 of Regulation of Minister of Transport and Maritime Economy of 24th August 2000 concerning seafarers' training and qualifications, watchkeeping, safe manning policy on Polish seagoing ships (Journal of Law No. 105 pos.1117) the lawful holder of this certificate may serve in the following capacities indicated below:

Stanowisko *Capacity*	Ograniczenia *Limitations applying*
Starszy rybak *Able fisherman*	Bez ograniczeń *None*
Kierownik łodzi rybackiej o długości całkowitej do 15 m i mocy silnika do 200 kW *Skipper of the fish boat of overall length up to 15 m and engine power up to 200 kW*	Ważne tylko w żegludze krajowej, pod warunkiem złożenia egzaminu z zakresu obsługi silników spalinowych *Valid only on home trade with passed examination on operation of the internal combustion engines*

Przyznane z dniem / Granted on: 22-12-2000

UWAGA: Ewentualna konieczność noszenia szkieł korekcyjnych należy odczytać z ważnego świadectwa zdrowia.
NOTE: possible necessity of wearing corrective lenses should be read from valid medical certificate

his is to certify that:

SANKOWSKI JAN

Nazwisko / Surname Imię / Name

19-02-19[illegible] PŁOTY

Data i miejsce urodzenia / Date and place of birth

st odpowiednio przeszkolony w zakresie bezpieczeństwa osobistego i dpowiedzialności społecznej zgodnie z wymaganiami prawidła VI/1 onwencji STCW.

as been duly trained in personal safety and social responsibilities in cc. with the provisions of Reg. VI/1 of the STCW Convention.

Szczecin 22-08-2003

Miejsce i data wydania / Place and date of issue of this Certificate

Ważne do
Valid till 13-07-2008

B.Downar

Nazwisko i podpis osoby upoważnionej
Name and signature of duly authorized official

This is to certify that:

SANKOWSKI JAN

Nazwisko / Surname Imię / Name

19-02-1961 PŁOTY

Data i miejsce urodzenia / Date and place of birth

posiada odpowiednie przeszkolenie zgodnie z wymaganiami prawidła VI/3 Konwencji STCW 78/95 i może nadzorować akcje gaszenia pożarów na statku.

has been duly trained in accordance with the provisions of Reg. VI/3 of the STCW 78/95 Convention and can be assigned to control fire fighting operation on board ship.

Szczecin 30-01-2002

Miejsce i data wydania / Place and date of issue of this Certificate

E.Zięba

Nazwisko i podpis osoby upoważnionej
Name and signature of duly authorized person

This is to certify that:

SANKOWSKI JAN

Nazwisko / Surname Imię / Name

19-02-1961 PŁOTY

Data i miejsce urodzenia / Date and place of birth

ukończył kurs obserwatora radarowego zgodny z wymaganiami sekcji A-II/1 i A-II/2 Kodu Konwencji STCW 78/95 i jest upoważniony do pełnienia wachty nawigacyjnej na statku.

has been duly trained in radar observation & plotting course in accordance with the provisions of sections A-II/1 and A-II/2 of the Code of the STCW 78/95 Convention and is entitled to take charge of a navigational watch on board ship.

Szczecin 30-01-2002

Miejsce i data wydania / Place and date of issue of this Certificate

E.Zięba

Nazwisko i podpis osoby upoważnionej
Name and signature of duly authorized person

Zaświadcza się niniejszym, że:
This is to certify that:

SANKOWSKI JAN

Nazwisko / Surname Imię / Name

19-02-1961 PŁOTY

Data i miejsce urodzenia / Date and place of birth

jest odpowiednio przeszkolony w zakresie podstawowym z Indywidualnych Technik Ratunkowych zgodnie z wymaganiami prawidła VI/1 Konwencji STCW .

has been duly trained in Personal Survival Techniques in acc. with the provisions of Reg. VI/1 of the STCW Convention.

Szczecin 22-08-2003

Miejsce i data wydania / Place and date of issue of this Certificate

Ważne do
Valid till 13-07-2008

B.Bownar

Nazwisko i podpis osoby upoważnionej
Name and signature of duly authorized official

Issued under the provisions
of the ILO Convention 108 dated 13 may 1958

KSIĄŻECZKA ŻEGLARSKA
SEAMAN'S BOOK

Uprawnia do żeglugi międzynarodowej
Authorize for international voyages
ważna na czas nieoznaczony
Ważna do for unlimited period
Date of expiry

Dalszy ciąg Ks. Żegl. Nr ....

pieczęć urzędowa

Podpis posiadacza/Signature

Adres najbliższej rodziny Danuta - żona
Next of kin
Nowogard ul. Gryfitów
4/10

Nazwisko, imiona Sankowski
Family name, given names
Jan

Data i miejsce urodzenia 19 - 02 - 1961
Date and place of birth
Płoty

Obywatelstwo polskie
Nationality

Rysopis
Physical characteristics

Wzrost 177 Twarz pociągła
Height Face

Włosy c. blond Oczy niebieskie
Hair Eyes

Znaki szczególne nie ma
Totoo or other recognition marks

Wydano na podstawie
Issued in acc. with
Ust. z dn. 23-05-91 o pracy na morskich statkach handl.

Urząd wydający Urząd Morski w Szczecinie
Issuing Authority Inspektorat Bezpieczeństwa Żeglugi

Podpis
Signature

URZĄD MORSKI W SZCZECINIE
pieczęć seal

Data wydania 11-06-1993
Date of issue

0149487

1

RZECZPOSPOLITA POLSKA
REPUBLIC OF POLAND

ŚWIADECTWO PRZESZKOLENIA
W ZAKRESIE
OCHRONY PRZECIWPOŻAROWEJ
STOPIEŃ WYŻSZY

Certificate of Training
in Advanced Fire Fighting

Wystawione na podstawie postanowień
Konwencji STCW 1978 z poprawkami z 1995 roku,
z upoważnienia rządu Rzeczypospolitej Polskiej przez Urząd Morski w Szczecinie.

Issued under the provisions of the
International Convention of Training, Certification and Watchkeeping for Seafarers 1978
as amended in 1995,
under the authority of the Government of Republic of Poland by Maritime Office Szczecin.

No. UMS - 15-011109-00262/02

RZECZPOSPOLITA POLSKA
REPUBLIC OF POLAND

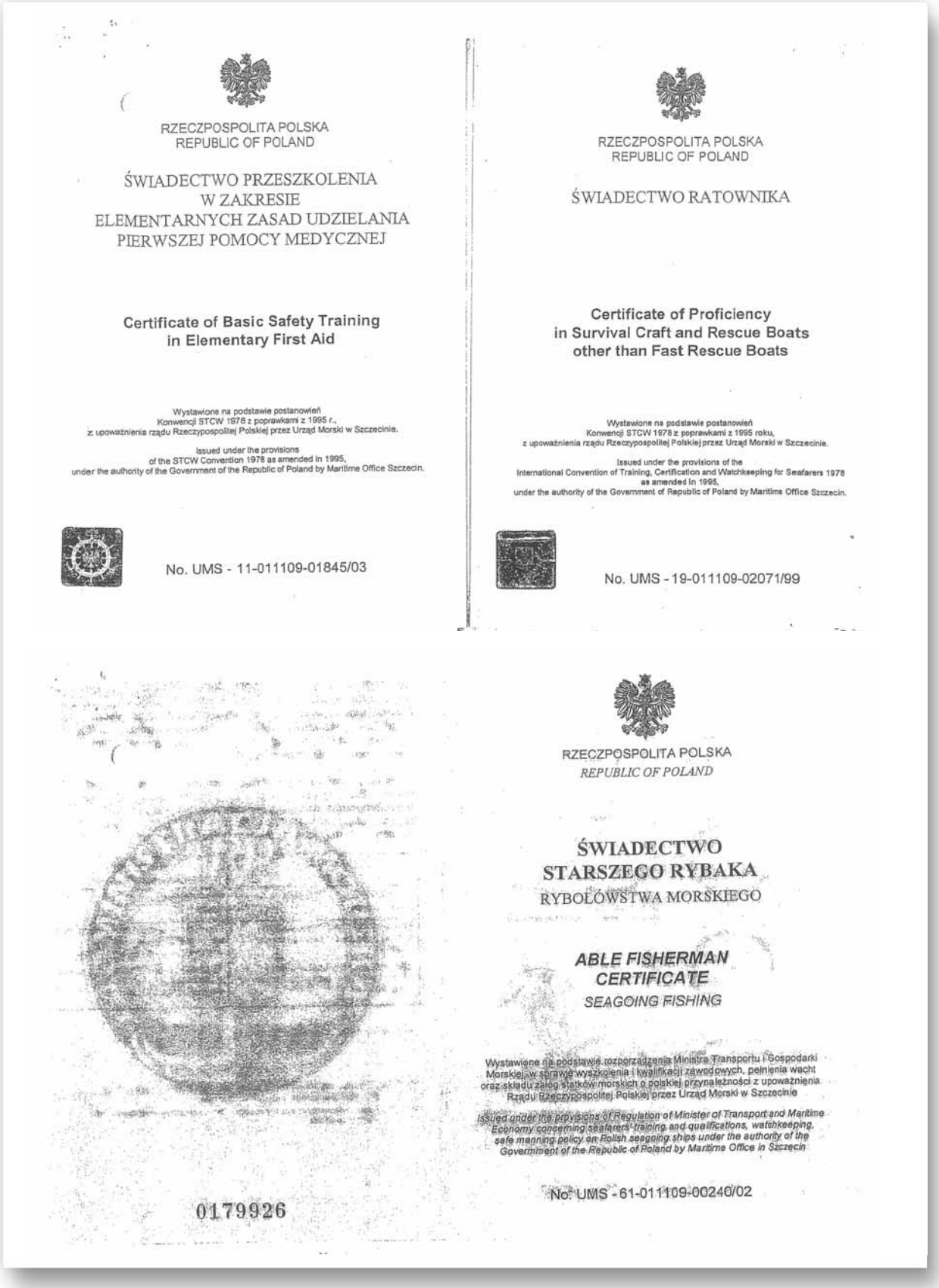
ŚWIADECTWO PRZESZKOLENIA W ZAKRESIE
BEZPIECZEŃSTWA WŁASNEGO
I ODPOWIEDZIALNOŚCI WSPÓLNEJ

Certificate of Basic Safety Training
in Personal Safety & Social Responsibilities

Wystawione na podstawie postanowień
Konwencji STCW 1978 z poprawkami z 1995 r.,
z upoważnienia rządu Rzeczypospolitej Polskiej przez Urząd Morski w Szczecinie.

Issued under the provisions
of the STCW Convention 1978 as amended in 1995,
under the authority of the Government of the Republic of Poland by Maritime Office Szczecin.

No. UMS - 08-011109-04512/03



RZECZPOSPOLITA POLSKA
REPUBLIC OF POLAND

ŚWIADECTWO PRZESZKOLENIA
W ZAKRESIE
ELEMENTARNYCH ZASAD UDZIELANIA
PIERWSZEJ POMOCY MEDYCZNEJ

Certificate of Basic Safety Training
in Elementary First Aid

Wystawione na podstawie postanowień
Konwencji STCW 1978 z poprawkami z 1995 r.,
z upoważnienia rządu Rzeczypospolitej Polskiej przez Urząd Morski w Szczecinie.

Issued under the provisions
of the STCW Convention 1978 as amended in 1995,
under the authority of the Government of the Republic of Poland by Maritime Office Szczecin.

No. UMS - 11-011109-01845/03

RZECZPOSPOLITA POLSKA
REPUBLIC OF POLAND

ŚWIADECTWO RATOWNIKA

Certificate of Proficiency
in Survival Craft and Rescue Boats
other than Fast Rescue Boats

Wystawione na podstawie postanowień
Konwencji STCW 1978 z poprawkami z 1995 roku,
z upoważnienia rządu Rzeczypospolitej Polskiej przez Urząd Morski w Szczecinie.

Issued under the provisions of the
International Convention of Training, Certification and Watchkeeping for Seafarers 1978
as amended in 1995,
under the authority of the Government of Republic of Poland by Maritime Office Szczecin.

No. UMS - 19-011109-02071/99

0179926

RZECZPOSPOLITA POLSKA
REPUBLIC OF POLAND

ŚWIADECTWO
STARSZEGO RYBAKA
RYBOŁÓWSTWA MORSKIEGO

ABLE FISHERMAN
CERTIFICATE
SEAGOING FISHING

Wystawione na podstawie rozporządzenia Ministra Transportu i Gospodarki
Morskiej, w sprawie wyszkolenia i kwalifikacji zawodowych, pełnienia wacht
oraz składu załóg statków morskich o polskiej przynależności z upoważnienia
Rządu Rzeczypospolitej Polskiej przez Urząd Morski w Szczecinie

Issued under the provisions of Regulation of Minister of Transport and Maritime
Economy concerning seafarers' training and qualifications, watchkeeping,
safe manning policy on Polish seagoing ships under the authority of the
Government of the Republic of Poland by Maritime Office in Szczecin

No. UMS - 61-011109-00240/02

RESPONSE TO LETTER FROM MS. DANUTA SANKOWSKA RECEIVED ON THE 30th JANUARY 2007.

The misspelling of Mr. Sankowski's name in the report was a typographical error, which has been corrected. Other documents on file have the correct spelling.

When making enquiries regarding qualifications, the Investigator contacted BIM who were unable to find any record of qualifications for Mr. Glynn Cott. The Investigator was unable to establish, through the owners whether Mr. Sankowski had any qualifications. It was believed that any documents he may have held would have been lost with the vessel.

Witness statements are not attached with MCIB reports as they are made in confidence.

Ballycotton Marine Services Limited

Marine Surveyors
Consulting Engineers
Representing American Bureau of Shipping
Representing ABS Group

Chapel Road
Ballycotton,
Co. Cork,
Ireland.

Telephone 021 4646839
Facsimile 021 4646873
Email ballycottonmarine@eircom.net

Our Ref. BMS/31b/06

14 December 2006

Mr John O'Donnell,
Marine Casualty Investigation Board,
Leeson Lane,
Dublin 2

Dear Mr O'Donnell

Re: MFV "Maggie B"

We are in receipt of your letter of the 6th December together with Draft Report of the Investigation into the loss of the MFV "Maggie B" on the 29th March 2006, as requested we respond to the draft report as follows:-

1. The information in the report as to the cause of sinking is largely based on statements alleged to have been received from Mr Krzysztof Pawtowski and others. The statements are not appendixed to the report. We are of the opinion that these statements should be attached to ensure transparency in the investigation process.

2. A stability investigation was undertaken by the MCIB, yet their calculations are not shown in the report. We are of the opinion that the stability calculations and assumptions made should be part of the final report.

3. From the Draft Report and from information available, it would be reasonable to conclude that the primary cause of the sinking was an unexplained ingress of water into the engine room and the fish hold. This information was known in April 2006.

4. There appears to be an inconsistency in the report, on page 11 paragraph 6.3 it states *"A crack on the hull situated on the port side forward had been identified by an independent surveyor employed by the owner at the time of the vessel's purchase"*. Yet in the appendices to the Draft Report, a survey report from Promara Limited states, *"A hull crack was detected on the starboard side forward of midships extending 200 mm"*. Which one is correct? If the crack was on the starboard side it would have been impossible for the navy dive team to have inspected the area of the previously sited deficiency in the hull structure.

continued.

Registered in Ireland No. 98790. Directors M. J. Connolly, C.T. Connolly. VAT No. IE 4682481 M

The cause of the ingress of water is not known and could only have been obtained by salvaging the vessel. This cause of action was proposed to the Minister of State at the Department of Transport at a meeting in Dublin on the 3rd August 2006 and by a letter to yourself on the 10th August 2006 and prior to the above dates by direct communications from the Cott family. Without the boat being raised it would be impossible to fully investigate and establish the cause of the casualty as required by the Merchant Shipping (Investigations of Marine Casualties) Act 2000. In this case the vessel was in a depth of water that salvaging was practical, the Minister stated that money was not a problem and precedent had already been set in raising the "Rising Sun".

From a practical perspective, salvaging the boat at this time is unlikely to yield any further information due to the extreme weather conditions that have occurred since the casualty.

Ireland being an island nation, one would have expected the government to have taken every reasonable action to establish the cause of the tragic accident so that lessons could be learnt to prevent such an incident occurring again. In this case, because the vessel was not raised, it can be considered that an incomplete investigation was carried out.

We would have no objection to this letter being included in the final report.

Yours sincerely

M J Connolly

Michael Connolly
Ballycotton Marine Services Limited

MCIB RESPONSE TO LETTER FROM BALLYCOTTON MARINE SERVICES LTD., RECEIVED ON 18TH JANUARY 2007.

1. Witness statements are never published as they are made in confidence.

2. Please see response to Ms. Elaine Hayes.

3. The cause of the sinking is illustrated in the stability calculations included in this report.

4. On reading the MCIB Draft Report Mr. Connolly who acts for the Cott Family contacted the Investigator to inform him that he believed that there was an error in the draft report. He correctly pointed out that in Section 6.3 the report stated that a crack had been identified on the Port side whereas the Promara report had stated that the crack was on the Starboard side. The Investigator advised Mr. Connolly that the error was in fact in the Promara report and that the author of the report Mr. Noel O'Regan had written to the Investigator and admitted that there was an error.

   On receipt of Mr. O'Regan's correction the report was written to include the reference to the crack as being on the Port side. Following the telephone conversation between Mr. Connolly and the Investigator he was fully aware of the error in the Promara report and the reason why the MCIB Draft Report differed from it. He was aware of this before he sought clarification about it from the MCIB.

   The MCIB did not consider the raising of the "Maggie B" to be required to complete its investigation, as the cause of the incident was clearly a stability issue. The MCIB also wishes to advise that the primary recommendation of this investigation is that regulations be enacted for the construction, stability and safety of fishing vessels between 15 – 24 metres as soon as possible. Lifting the vessel will not change this essential recommendation. It is clear to the MCIB that a safety regime is necessary for vessels in this size sector of the fleet as there is a safety regulatory scheme for fishing vessels under 15 metres and over 24 metres. This gap in the regulatory framework is clearly seen in regard to the trends in recent fishing vessel tragedies.

   The MCIB notes that the Merchants Shipping (Safety of Fishing Vessels) (15 – 24 Metres) Regulations 2007 (S.I. 640 of 2007) was signed by the Minister for Transport on 17 September 2007.

COMMISSIONERS OF IRISH LIGHTS

16 Lower Pembroke Street, Dublin 2

Tel: +353 1 632 1900 E-mail: marine@cil.ie
Fax: +353 1 632 1946 Web: www.cil.ie

Ms Bridie Cullinane,
Secretary,

Marine Casualty Investigation Board,
Leeson Lane,
Dublin 2

Your Reference: MCIB / 122

Our Reference:

04 JAN 2007 *Date:* 21st December 2006

Dear Sir ,

Thank you for forwarding the DRAFT Report of the Investigation into the loss of the MFV " Maggie B".

Apart from verifying the fact that the Irish Lights Aids to Navigation Vessel ILV " Granuaile" assisted The Irish Naval Service Diving operation between the 21st and 26th May 2006 the Commissioners of Irish Lights have no further observations to make on the contents of the Draft Report.

Yours sincerely,

Desmond A.O'Brien

For Head of Marine.

MCIB RESPONSE

The MCIB notes the contents of this letter.

Promara
Professional Marine Services

3 Castlecourt
St Josephs Rd
Mallow. Co.Cork
Ireland.
Tel +353 87 3435666
Fax +353 22 22467
sales@promara.ie

Ms. Bridie Cullinane
Secretary MCIB
Leeson Lane
Dublin 2
22 December 2006.

Re: MFV Maggie B

Dear Ms. Cullinane,

Thank you for the opportunity to comment on the Draft Report of the investigation into the loss of MFV Maggie B on 29th March 2006. At the outset we wish to convey our sympathy to the family, relatives and friends of Glynn Cott and Jan Slakowski.

With reference to the draft report, there was indeed a crack in the vessel's hull, as mentioned in para 6.3. The crack was not located in a highly loaded position and the recommendation made to owners in our survey report was that the 200mm crack "should be repaired by Veeing out and welding over the full extent of the crack".

This repair was to be carried out prior to sailing. We verbally recommended to owners that they monitor that repair regularly and effect a permanent repair by inserting a steel plate at the next dry-docking. We cannot comment on whether the temporary repair was carried out as we did not visit the vessel after the Survey date. The statement made in the draft report, para 6.3, is incorrect and we ask that it be amended prior to publication.

Otherwise we support the recommendations made.

Regards

Noel O'Regan

MCIB RESPONSE TO LETTER FROM PROMARA, RECEIVED ON 3rd JANUARY 2007.

Mr. O'Regan's report recommended a repair should be carried out but it did not specify that it should be carried out before the vessel sailed as suggested in his letter to the MCIB dated 22nd December 2006.

In a signed statement given by Mr. Anthony Walsh on the 7th April 2006 he stated that Promara surveyor Mr. Noel O'Regan was of the opinion that the crack did not compromise the integrity of the hull and its water tightness. He also stated that Mr. O'Regan indicated that a repair could be completed sometime around August 2006 when the vessel would be slipped for its annual re-fit.

In a signed statement given by Mr. Noel O'Regan on the 2nd May 2006 he stated that he surveyed the "Maggie B" at Kilmore Quay on two occasions and was satisfied that the vessel was in a seaworthy condition and a good investment for the owners. Mr. O'Regan also verbally advised the Investigator that he was not concerned about the hull crack as it was small and was situated in way of a small tank and above the waterline

MCIB
Marine Casualty Investigation Board

Leeson Lane, Dublin 2.
Telephone: 01-6782460.
Fax: 01-6783129.
email: info@mcib.ie
www.mcib.ie

SUPPLEMENTARY REPORT OF THE INVESTIGATION INTO THE LOSS OF THE MFV "MAGGIE B" ON 29th MARCH 2006

The Marine Casualty Investigation Board was established on the 25th March, 2003 under The Merchant Shipping (Investigation of Marine Casualties) Act 2000

REPORT No. MCIB/122

CONTENTS

1. SYNOPSIS

Following the raising and re-floating of this fishing vessel it was towed to Arklow where MCIB investigators attended and carried out an inclining test to establish its stability at the time of the incident.

In preparation for the test, all spaces were cleaned of any mud and water. During cleaning and preparation, any items removed from the vessel to allow cleaning to take place and which were on board at the time of the sinking were weighed to allow the weight and position to be recorded for inclusion in the stability calculations.

The inclining test was conducted at the Port of Arklow on 12th February 2008.

A trawl beam, which was recovered during the re-floating operation, was identified as the Starboard beam. The Port side beam remains on the sea bed.

During the salvaging operation an attempt was made to recover the Port trawl beam. However, this attempt failed in spite of a substantial force being applied in order to lift the beam and its attached components. It is not known if the un-recovered trawl beam became snagged at the time of the casualty or at a later date.

Samples of recovered parts of the Port and Starboard trawl beam wire ropes were sent to a laboratory, The Test House (Cambridge) Ltd. for examination to establish if the wires had been cut during the salvage operation or if they had failed due to excess force being applied. The result of the examination shows that the wires were cut and had not failed. See attached Test House report.

The beam trawling arrangement was fitted with a safety system which includes quick release Stenhouse Slips. These are used to release the pulley blocks fitted at the outer extremes of the trawl derricks should one or other of the trawl beams become fouled on the sea bed. Once operated, it has the effect of greatly reducing the heeling lever that results when a trawl beam becomes fouled. Neither of these Stenhouse Slips had been operated.

MCIB arranged for the vessel to be lifted out of the water by crane and placed on the dock at the Port of Arklow. The hull was inspected externally and no significant damage was found which could be attributed to causing the vessel to sink or to affect the result of the inclining test.

Despite some deformation at the bow the watertight integrity of the hull below the water has not been compromised. The damage in way of the ballast tank shown in the photographs below was largely the result of the vessels impact with the bottom and compression damage indicating that the tank was probably empty when the vessel capsized.

The Starboard bilge keel is bent inboard. As the vessel lay to starboard when on the seabed it is unsafe to attribute this damage to anything other than the interaction between the vessel and the seabed.

A tyre was found lodged between the propeller and hull in the bottom of the nozzle. As there is no evidence of gouging to the tyre, damage to the propeller blades or the nozzle coating, it is believed the tyre drifted into the nozzle shortly after the vessel capsized.

At this time the propeller would have been able to turn freely in the current. The lack of hydraulic pressure in the gearbox disengages the drive clutch. Note the steering nozzle is set to about 10 degrees to starboard. This indicates that the port beam placed a heavier towing load on the vessel than the starboard beam. This would have turned the boat across the Starboard trawl in the event of the load coming off the port side. The blue rope seen in this picture was used by salvors to ensure the tyre was not lost during the salvage operation.

The lack of damage to the tyre indicates that it drifted into the nozzle after the engine failed. The gearbox used on this vessel allowed current to turn the propeller after power was lost. The Keel cooling system is intact. It was largely protected by the keel and starboard bilge keel when the vessel lay on the bottom. However, there is some bending and denting of the tubes most probably the result of some interaction with the seabed.

2. CONCLUSIONS

From the evidence collected during the investigation it is not possible to be definite as to the cause of sinking except to say that there were a number of factors, which have been outlined in the revised stability investigation, that could have contributed to the sinking. There is no single outstanding factor that alone would cause the casualty to occur. Therefore, it must be assumed that a combination of factors mentioned in the stability report led to the vessel sinking.

3. LIST OF APPENDICES

Appendix 3.1 Revised Stability Investigation.

MAGGIE B

REVISED STABILITY INVESTIGATION

CONCLUSIONS

1. The "MFV Maggie B" lightship weight has substantially increased since the original stability information was approved by the Maritime Coastguard Agency. On the basis of the percentage variations in the Lightship particulars it would be recommended practice to re-compute the stability data. In the case of the "MFV Maggie B" there is no evidence that the vessels stability was re-assessed following modifications.

   The newly introduced legislation concerning the safety of 15-24m fishing vessels, while not in statute at the time of the "MFV Maggie B" incident will require that where there is a lightship weight deviation of more than 2% of the original weight or a shift of the LCG of more than 1% of the length between perpendiculars then the vessel should be re-inclined and new stability submitted to the Marine Survey Office for approval. The "MFV Maggie B" Lightship variations exceeded these limits.

2. On the basis of the loading conditions examined as part of this investigation, a Full Load Departure Condition and the assumed condition prior to the sinking, the "MFV Maggie B" stability would not have complied with acceptable stability criteria used for assessing beam trawler stability.

3. The deficiency in the "MFV Maggie B" stability arises from an assessment made against recommended minimum stability criteria for beam trawlers and therefore due to the margin of safety that exists in this stability criteria these deficiencies do not singularly explain why the vessel capsized and sank.

Appendix 3.1 Revised Stability Investigation.

4. Arising from an examination of all through hull penetrations, the bulkhead between the engine room and the fish hold and the damage to the deck inway of the fish hold, it is now apparent that the vessel did not suffer catastrophic flooding of either the engine room or fish hold, as suggested in the stability investigation included with the initial draft report, and it appears that this was not a contributing factor in the loss of the vessel.

5. The fuel suction arrangement to the main and auxiliary engines was not in accordance with good practice and ultimately required a fuel levelling cross over pipe to be kept open during vessel operations potentially permitting the transfer of fuel from one side of the vessel to the other thereby allowing adverse heeling moments to be created.

6. If as may be suspected, one set of trawl beams snagged on the bottom, given the large heeling lever that existed, a force of 1.5 tonnes would have been sufficient to capsize the vessel. This force is less than the potential thrust the vessels propeller could have exerted and so it is a possibility that an out of balance moment caused by snagged fishing gear could have capsized the vessel.

Appendix 3.1 Revised Stability Investigation.

PREFACE

Following the raising of the "MFV Maggie B" it was examined by the Marine Casualty Investigation Board to establish if a cause for the sinking could be found and if this concurred with the conclusions of the draft report.

On examination of the vessel it became apparent that there was no evidence to suggest that the vessel suffered such severe flooding that capsize and sinking was inevitable. Despite witness statements there was no evidence to suggest that the fish hold either flooded through the external shell plating or through the engine room bulkhead. Indeed the structural damage to the deck in way of the fish hold would suggest that the fish hold was watertight at the time of the sinking.

It was noted that the non return valve on the automatic electric bilge pump in the engine room was allowing some water to pass into the hull, however it is not thought that this was a significant source of flooding.

As a result of this finding the MCIB decided to conduct an inclining experiment to establish the stability profile of the vessel as accurately as possible at the time of the incident.

Appendix 3.1 Revised Stability Investigation.

INCLINING EXPERIMENT REPORT

GENERAL INFORMATION

Vessel:	"MFV Maggie B"
Location:	Arklow
Time & Date:	12:00 hrs. on 12th February 2008
Weather:	Calm
Witnesses:	Inclining carried out by two MCIB Investigators

Dockwater Density: 1.000 t/m3

FREEBOARD OBSERVED

The following freeboards were observed,

1. At the transom to the upperside of the deck
   - Port 575mm
   - Starboard 580mm
   - Centerline 650mm

2. 2250mm aft of the aft accommodation bulkhead at Frame Spacing 14, measured to the upper side of the deck
   - Port 565mm
   - Starboard 560mm

3. Along the bow profile measured from the tank top – 270mm

4. Along the bow profile measured from the top of the cope bar – 2190mm
   These were corrected to the following perpendicular draughts.
   - A.P. 2.682m (Measured from the computer model baseline)
   - F.P. 2.668m (Measured from the computer model baseline)
   - M.S. 2.675m (Measured from the computer model baseline)
   - Trim 0.014m (By Stern)

Appendix 3.1 Revised Stability Investigation.

HYDROSTATICS AND WATERPLANE PARTICULARS AS INCLINED

Specific gravity of water	1.00000	tonnes/cu.m
Extreme displacement	73.672	tonnes
Vertical centre of buoyancy (LCB)	1.943	metres
Long. centre of buoyancy from origin	7.531	metres
Long. centre of gravity from origin	7.531	metres
Waterplane area	66.254	sq.metres
Long. centre of flotation from origin	6.858	metres
Tonnes per unit immersion	0.663	tonnes/cm
Moment to change trim	0.693	tonnes-m/cm
Transverse metacentre above base	3.583	metres

Note: The LCG is corrected for trim and where relevant the other figures have been corrected for specific gravity.

INCLINING WEIGHT DETAILS

Identification	Mass (t)	L.C.G	V.C.G
Inclining Weight No.1	0.238	5.305	3.700
Inclining Weight No.2	0.238	4.685	3.700
Inclining Weight No.3	0.231	7.505	3.700
Inclining Weight No.4	0.238	8.085	3.700

L.C.G is measured in meters forward of the A.P.

V.C.G is measured in meters above the computer model baseline.

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Appendix 3.1 Revised Stability Investigation.

PENDULUM DEFLECTIONS, ANALYSIS & METACENTRIC HEIGHT CALCULATION

Two pendulums were set up for the inclining experiment however a problem arose during the course of the experiment with one of the pendulums and the results from this pendulum were deemed inaccurate and therefore discarded.

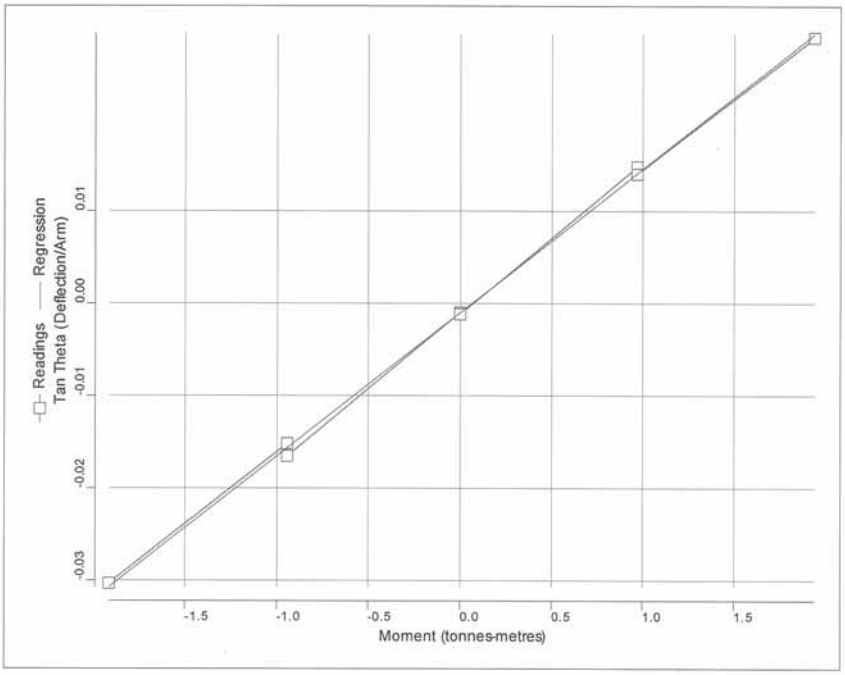
Pendulum Length: 2.540m

Shift	Description	Mass (t)	Distance (m)	Moment (tm)	Deflection (mm)
1	Wt. 1 (S-P)	0.238	4.080	0.971	37.5
2	Wt. 2 (S-P)	0.238	4.080	0.971	35.5
3	Wt. 2 (P-S)	0.238	4.080	-0.971	-37.5
4	Wt. 1 (P-S)	0.238	4.080	-0.971	-38.0
5	Wt. 3 (P-S)	0.231	4.080	-0.942	-36.0
6	Wt. 4 (P-S)	0.238	4.080	-0.971	-38.5
7	Wt. 4 (S-P)	0.238	4.080	0.971	35.0
8	Wt. 3 (S-P)	0.231	4.080	0.942	39.0

6

Appendix 3.1 Revised Stability Investigation.

Graph of Tan (List Angle) against Moment



Slope = 0.015528

GM(1) = 1.0/(73.67 * 0.015528) = 0.8742 metres

GM(average) = 0.8742 metres

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Appendix 3.1 Revised Stability Investigation.

FINAL LIGHTSHIP DERIVATION

Item	Weight (t)	LCG (m)	TCG (m)	VCG (m)
Ship as inclined	**73.67**	**7.532**	**0.000**	**2.709**
No Items to add				
Items to come off:				
Inclining Weight No.1	0.24	5.305	0.000	3.700
Inclining weight No.2	0.24	4.685	0.000	3.700
Inclining Weight No.3	0.23	7.505	0.000	3.700
Inclining Weight No.4	0.24	8.085	0.000	3.700
Observer 1	0.11	12.320	0.000	1.750
Observer 2	0.07	5.480	0.000	1.750
Total Items to come off	**1.13**	**6.904**	**0.000**	**3.381**
Tank contents				
Water Ballast Tk.	1.42	14.201	0.000	1.998
Total Tank contents	**1.42**	**14.201**	**0.000**	**1.998**
Lightship	**71.13**	**7.409**	**0.000**	**2.713**

This newly derived lightship may be compared with that of the original stability book as follows.

Description	Lightship Mass (t)	L.C.G (m)	V.C.G (m)
Original Lightship	59.625	8.118	2.779
Lightship (2008)	71.13	7.409	2.713
Differences	+ 11.505	-0.709	-0.066
As percentage of Original	+ 19.3 %	- 4.6 %	- 2.4 %

The only apparent discrepancy between the two figures is that the lightship derived in 2008 includes some residual trawl warps that were on the winches when the vessel was raised. These warps were not on the winch drums during the original inclining experiment. However as the original total allowance for the warps was 440 kgs it has little impact on the overall 11.5 tonne increase in lightship.

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Appendix 3.1 Revised Stability Investigation.

Therefore it appears that the vessel underwent modifications that substantially increased its lightship and following these modifications the vessels stability was never reassessed.

IMPLICATIONS OF THIS CHANGE OF LIGHTSHIP

To illustrate the implication of this change in lightship the original "Depart Port with 5T of Ice, 176 Boxes & 98% Consumables" loading condition was calculated with the newly derived lightship for comparison purposes.

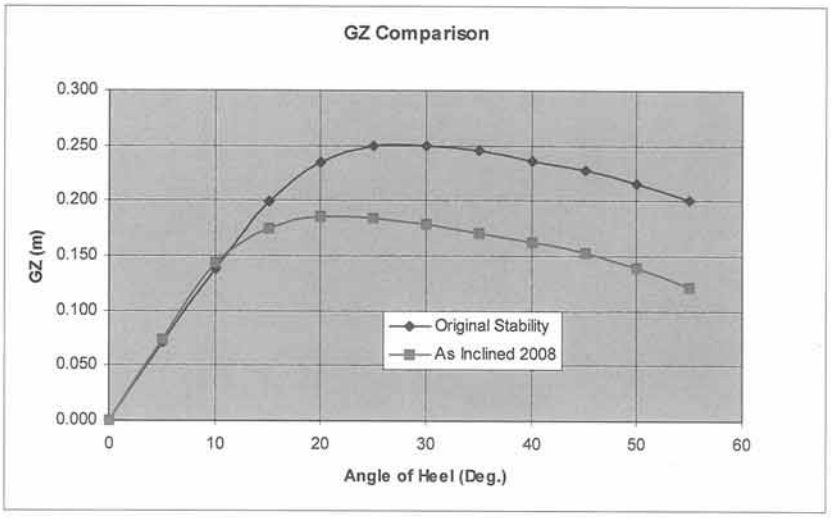
The results are summarised as follows, by looking at compliance with established stability criteria,

Stability Criteria	Recommended Minimum	Original Stability	As Inclined 2008
Area under the GZ Curve to 30 Degrees	0.066 (mrads)	0.089	0.075
Area under the GZ Curve to 40 Degrees	0.108 (mrads)	0.132	0.104
Area under the GZ curve between 30 & 40 Degrees	0.036 (mrads)	0.043	0.030
Maximum GZ at 30 degrees or above	0.240 (m)	0.250	0.178
Minimum angle of maximum GZ	25 (Deg.)	28	21.7
Initial GM	0.46 (m)	0.822	0.843

The above recommended minimum stability criteria have an increase of twenty percent over standard criteria in accordance with common practice. This increase is to provide an additional margin of safety for beam trawlers and is a reflection of the inherent dangers with beam trawling.

From the above it is apparent that the vessels stability profile was not compliant with recommended minimum stability criteria, failing on four counts. The reduction in the vessels stability profile can also be visualised in the following graph which compares the GZ data for both loading conditions,

Appendix 3.1 Revised Stability Investigation.



The difference between the two graphs represents the loss of stability due to the change in the lightship. As a comment on this graph two conclusions may be drawn. Firstly at small angles of heel, up to ten degrees, the stability profile appears to be marginally improved for the vessel as inclined, this can be attributed to the slightly lower vertical centre of gravity.

However above this angle the stability profile of the vessel as inclined reduces rapidly. This is attributable to a reduced freeboard due to the increase in lightship weight, thus with reduced freeboard, deck edge immersion occurs earlier and the loss of buoyancy caused by deck edge immersion reduces the stability profile.

Appendix 3.1 Revised Stability Investigation.

STABILITY PROFILE DURING THE INCIDENT

As commented in the draft stability report it is not possible to precisely establish the loading condition of the vessel on the 29th March 2006. However, the following loading condition has been derived from witness statements, evidence found on board the vessel following salvage and best guess assumptions when conclusive evidence could not be obtained. The loading condition was derived from the following.

Fresh Water — As it has not been possible to establish the levels of Fresh Water on board before the vessel sailed an assumed level of fifty percent, 600 litres has been used.

Fuel — Again it has not been possible to exactly establish the capacity on board. A level of sixty percent, 3000 litres has been used. It appears that the vessel did not bunker prior to departure on the trip.

Fishing Gear — One set of fishing gear, that is a beam, net and associated wire that was off the winch drum was recovered by the salvage operation. This recovered gear was weighted ashore in Arklow and was 1900 kgs. It is assumed that the un-recovered gear was of similar weight. The remaining trawl wire is included in the derived lightship.

Additionally 72 empty fish boxes were recovered from the hold and 30 pound boards. These have also been included.

Catch — Witness statement estimates that approximately six boxes of fish were stored in the hold prior to the sinking. An allowance of 500 kgs was included for crew and victuals.

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Appendix 3.1 Revised Stability Investigation.

The results of the stability assessment for this loading condition are summarised below,

Stability Criteria	Recommended Minimum	Loading Condition
Area under the GZ Curve to 30 Degrees	0.066 (mrads)	0.082
Area under the GZ Curve to 40 Degrees	0.108 (mrads)	0.116
Area under the GZ curve between 30 & 40 Degrees	0.036 (mrads)	0.034
Maximum GZ at 30 degrees or above	0.240 (m)	0.204
Minimum angle of maximum GZ	25 (Deg.)	21.6
Initial GM	0.46 (m)	0.834

From the above it is apparent that the vessel may not have complied with three of the recommended stability criteria, that it was deficient in the area under the GZ Curve between 30 and 40 degrees, the length of the righting lever at an angle of 30 degrees or more and the minimum angle of maximum GZ.

However it should be noted that such deficiencies would not lead to or explain the catastrophic capsize and loss of a vessel.

FREE SURFACE EFFECT

When the vessel was examined in Arklow it was found that the two fuel tanks, port and starboard, were cross-coupled, as the isolation valves between the tanks were open. Additionally it was noted that the fuel supply to the main and auxiliary engines were taken as a direct feed from this cross connection pipe. Therefore when the engine is drawing fuel this cross connection pipe will normally be open to ensure equal quantities of fuel are drawn out of each tank, port and starboard, and a list is not created by drawing fuel out of one tank only. This is not good practice as it allows for substantially larger free surface effects to occur between the tanks.

Appendix 3.1 Revised Stability Investigation.

Fundamentally free surface accounts for the transverse shift of the centroid of a fluid when a vessel heels. The effect of this shift in the centroid is limited by the rate of fluid flow capable within the pipe and normally this would restrict the effect. However it is possible that if the vessel were subject to another external force that caused it to heel, over time the transfer of fluid would have created an additional moment.

Assuming the fuel tanks were sixty percent full it is possible that 1.1 tonnes of fuel could have transferred and the transverse shift moment would have been 3.22m leading to a possible adverse heeling moment of 3.55 tonne meters. Given the cross connection pipe is 50mm in diameter and assuming a flow velocity of 2m/s, 1.1 tonnes of fuel could have transferred in approximately 5 ½ minutes.

SNAGGED FISHING GEAR

During the salvage operation the intention was to raise the fishing gear. It was reported back to the M.C.I.B that one set of fishing gear, beam and trawl net, could not be recovered from the seabed and it appeared to be snagged on the bottom. Attempts to raise this gear were abandoned after a load of four tonnes was applied to the gear and it could not be raised.

On the basis of the analysed loading condition, a moment of 17 tonne meters would be sufficient to capsize the vessel. The Maggie B engine was rated at 172 kW according to the Certificate of Registration. At this power the vessel could exert a bollard pull of approximately 3 tonnes.

From an examination of the derrick arrangement on the vessel it is possible that if the beam trawl got snagged on the bottom, one of two heeling levers could have been applied to the vessel. These are 8.90m to the end of the derrick or 7.56m to the top of the gantry. Under such circumstances a force of 1.91 tonnes would have been sufficient to capsize the vessel. If the free surface that existed between the two fuel tanks is also considered a force of 1.51 tonnes would be sufficient to exact the same capsize.

Appendix 3.1 Revised Stability Investigation.

Appendix 1

Note:
This is the initial Stability Investigation Report included in the Draft Report prior to the vessel being raised and examined at Arklow by the MCIB.

1. Stability information for the "MFV Maggie B" and associated documentation was obtained from the Maritime and Coastguard Agency with a view to understanding the stability profile of the vessel prior to the sinking.

2. The stability information for the vessel had been approved by the Maritime and Coastguard Agency on the 17th January 1997 as complying with the Fishing Vessels (Safety Provisions) Rules 1975.

3. The approved stability information provided for and increase of 20% to the stability criteria for vessels engaged in beam trawling.

4. For UK registered fishing vessels minimum freeboards are specified in Fishing Vessel Notice M975. The "MFV Maggie B" had been permitted a 20% deficiency in the aft freeboard requirement while registered in the UK.

5. A minor alteration for the inclusion of a net drum (750kgs) and ballast (500kgs) was recorded in the stability information in November 1999.

6. Unfortunately it has not been possible to precisely establish the loading condition of the vessel on the 29th March 2006, however the follow scenario was assumed on the basis of information from witness statements and the original stability book.

   Fresh Water — This was assumed at fifty percent of total capacity, approximately 600 litres.

   Fuel — This was assumed at sixty percent of total capacity, approximately 3000 litres. The vessel did not bunker prior to departure.

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Fishing Gear — An allowance for trawl warps and beams was made following the allowance in the original stability information. Additionally a witness statement suggests that approximately 100 fish boxes were loaded into the hold prior to departure.

Catch — Witness statement estimates that approximately six boxes of fish were stored in the hold prior to the sinking.

Ballast — The amount of ballast was assumed to be the same as the original stability information including the 500 kgs added in November 1999. While there is evidence that ballast was removed and subsequently added it is not possible to establish what final amount of ballast was onboard. An allowance of 500 kgs was made for crew and victuals.

7. On the basis of the estimated loading condition it appears that the vessel would have complied with the enhanced stability criteria for beam trawlers.

8. According to the witness statement from the survivor the engine room was flooding just prior to the vessel rolling over to starboard. Stability analysis of the vessel with the engine room flooded indicates that it could sustain flooding of this compartment provided the vertical extent of such flooding was limited to the engine room only and that floodwater did not enter into the accommodation space through doors, hatches or penetrations etc.

9. If as suggested the fish hold was flooded and was in equilibrium with the engine room the loss of buoyancy and stability would have resulted in the vessels loss. This would have occurred when approximately 40 tonnes of water entered the hull or to a level of approximately 1.90m above the moulded keel line. These calculations are based on still water analysis and therefore do not take into account any external moments applied to the hull from fishing gear, wind or waves. Therefore almost certainly the vessel lost sufficient stability and began to roll over to starboard at an earlier indeterminate stage.

Appendix 3.1 Revised Stability Investigation.

10. On the basis of the evidence from the witness statement regarding both the engine room and fish hold being flooded, the potential survivability with just the engine room being flooded and the relatively short time frame from the witness seeing water at the flywheel of the main engine and the vessel rolling over to starboard it would appear reasonable to assume that both the engine room and fish hold were flooding together.

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THE TEST HOUSE (CAMBRIDGE) JOB AND REPORT REFERENCE: T80791

LABORATORY REPORT

EXAMINATION OF SIX PIECES OF TRAWL GEAR WIRE ROPE RECOVERED FROM THE BEAM TRAWLER *FV MAGGIE B*

FOR:
Marine Casualty Investigation Board
Leeson Lane
Dublin 2

This report comprises:

Title Page 1
Text Pages 1 to 5
Figure Sheets 1 to 21

UKAS DISCLAIMER
This project includes tests and examinations, some of which were completed against UKAS accredited procedures. The scope of laboratory accreditation does not, however, include the analysis of test data or the offering of professional opinions.

Appendix 3.2 Laboratory Report.

LABORATORY REPORT

EXAMINATION OF SIX PIECES OF TRAWL GEAR WIRE ROPE RECOVERED FROM THE BEAM TRAWLER *FV MAGGIE B*

FOR: Marine Casualty Investigation Board
Leeson Lane
Dublin2

THE TEST HOUSE (CAMBRIDGE) LTD REFERENCE: T80791
RECEIPT DATE (SAMPLE MATERIAL): 7 April 2008
REPORT DATE: 16 May 2008

1. INTRODUCTION AND BACKGROUND

Instructions to examine the six wire rope pieces were received from of Marine Casualty Investigation Board (MCIB).

The laboratory was provided with six pieces of wire rope, which were reported to have been recovered from the trawl gear of the sunken beam trawler *FV MAGGIE B*. The six rope pieces were identified with the vessel name, their installed location and the sample end of interest to MCIB.

The laboratory was not provided with technical information in respect of the ropes specification, construction or lay pattern. Similarly, the laboratory was not made privy to the circumstances surrounding the vessels sinking or salvage.

Each of the six rope samples exhibited what appeared to be a fractured end and objectives of the laboratory based failure analysis were to identify the ropes construction type, their mode of failure, and in particular whether failure could be attributed to a trawling incident or to damage that had occurred during the vessel salvage operation.

The sample material provided was received and examined in the metallurgical laboratory of The Test House (Cambridge) Ltd as follows.

Appendix 3.2 Laboratory Report.

2. SAMPLE MATERIAL, ROPE CONSTRUCTION AND RECEIPT IDENTIFICATION OF INDIVIDUAL PIECES

Sample material provided by MCIB comprised six short lengths of steel wire rope of 16mm nominal diameter (Figure 1).

The rope was of flexible construction comprising six composite multiple strand wires laid on a polymer core, each composite strand comprising seven individual wires (Figure 2).

The six samples provided to the laboratory for metallurgical examination were identified and received as follows.

Recovered Trawl "A" (Figures 3 and 4)
Recovered Trawl "B" (Figures 5 and 6)
Port Side Winch End (Figures 7 and 8)
Port Side Fixed End (Figures 9 and 10)
Starboard Side Winch End (Figures 11 and 12)
Starboard Side Fixed End (Figures 13 and 14)

3. VISUAL AND MICROSCOPE AIDED EXAMINATIONS OF STRANDS AND INDIVIDUAL WIRES AT THE ROPE ENDS OF INTEREST

The rope ends of interest were cropped from their parent pieces after application of Jubilee type pipe clips to retain the rope lay pattern. The cropped samples were then cleaned in inhibited aqueous phosphoric acid to facilitate subsequent examination by visual, optical stereo microscope and Scanning Electron Microscope (SEM) facilities.

Each of the six ends of interest exhibited consistent and extensive evidence of melting or thermal cutting type damage and occasional evidence of transverse fatigue type wire breaks; but with no evidence of tensile overload cup and cone type fractures of the individual construction wires (Figures 15 through to 30). The wire ends appeared similarly free from both wear and shear type "slant" fractures.

The port side rope samples exhibited additional evidence of transverse fatigue type wire fractures some distance back from the rope ends of interest (Figures 30 and 31). The presence of the transverse fatigue like secondary

Appendix 3.2 Laboratory Report.

fractures in individual wires would suggest that the rope was coming towards the end of its available service life, and that the fatigue damage would have had a significant weakening effect on the rope.

What appeared to be the cleanest damage free broken wire ends were subsequently examined via the SEM. The examinations confirmed a presence of wire end melting (Figures 33, 34 and 35), but failed to generate any additional failure mode evidence due to the presence of either melting damage or heavy scaling of the fracture surfaces (Figures 36 and 37).

4. METALLOGRAPHIC EXAMINATION

Samples of composite wire strands and individual wires from the MCIB nominated ends of interest were hot mounted and prepared for examination by conventional metallographic techniques. The prepared specimens were subsequently examined in both the unetched and Nital etched conditions.

The composite strands and individual wire ends exhibited extensive evidence of melting damage and all exhibited an Heat Affected Zone (HAZ) resulting from what appears to represent thermal cutting (Figures 38,39,and 40).

The transverse fractured ends examined exhibited no melting damage and a much shallower HAZ, and such ends were thought to represent thermally damaged earlier fatigue fracture wire break sites (Figure 41).

The parent wire microstructure appeared typical of the patenting process and was consistent with an anomaly free high strength product (Figure 42).

5. VICKERS HARDNESS TEST

A Vickers hardness test (HV1) was completed on a single wire in the Port Side Fixed End metallographic specimen. The recorded hardness values were 528, 525 and 519, with an average of 524 (HV1) for the three indents. The apparent hardness was consistent with the prevailing parent wire microstructure, and served to confirm that the rope was of an anomaly free high strength type.

Appendix 3.2 Laboratory Report.

6. SUMMARY

6.1 The rope samples measured 16mm nominal diameter, were of flexible construction and comprised six composite multiple strand wires laid on a polymer core. Each of the six composite wire strands was confirmed to comprise seven individual wires.

6.2 Each of the six nominated ends of interest exhibited extensive evidence of melting damage, consistent with them having been thermally cut.

6.3 The rope sample set exhibited no evidence of classical cup and cone type tensile overload type fractures of individual wires, as should have been the case if the rope breaks of interest had occurred during trawling.

6.4 The ropes exhibited some evidence of accumulated fatigue damage, the extent of which was at its most severe in the port side rope samples.

6.5 The presence of accumulating fatigue damage and the associated transversely broken wires would have weakened the ropes, and this weakening process would, based on the samples provided, have been at its most severe in the case of the port side rope.

6.6 The metallographic examinations served to further confirm that the broken rope ends had largely been thermally cut. A number of wire ends exhibiting sharper breaks and a much shallower HAZ were thought to represent thermally re-heated earlier fatigue fractures.

6.7 The parent wire microstructure appeared consistent with a high strength patented product and was free from manufacturing and processing anomalies.

6.8 The Vickers hardness of the parent wires was consistent with the residual microstructure and confirmed that the rope was of an anomaly free high strength type.

6.9 Though the rope samples retained no evidence of greasing and the rope core was completely dry, the rope samples were found to be generally free from both surface and interlay wear and pitting corrosion.

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7. CONCLUSIONS, DISCUSSION AND OPINION

Based on our examination of the six wire rope samples provided, we conclude that all the MCIB nominated ends of interest had resulted from thermal cutting.

Our examinations failed to find any evidence of classical cup and cone type tensile overload type fractures, as would have been the case had any of the rope breaks occurred during trawling service.

The presence of a number of transverse wire fractures in the samples suggested that the ropes were starting to show signs of accumulated fatigue damage. The fatigue damage appeared at its most severe in the port side samples and this rope would have become significantly weakened as a consequence of the accumulating damage. In our opinion and experience the degree of weakening would not, however, have rendered the rope unsafe at the time of the casualty.

Due to the process that had been used to cut the ropes, it was not possible in absolute terms, to confirm that the port and starboard rope pieces were matching halves.

The apparent evidence of consistently more fatigue damage in the two port side rope pieces did, however, serve to confirm on a balance of probability basis, that the two rope pieces were from a common parent rope and this in turn suggested that the ropes identified as Recovered Trawl "A", Recovered Trawl "B", Starboard Winch End and Starboard Side Fixed End were also, on a balance of probability basis, from a common parent rope.

The examinations failed to identify any significant evidence of both wear and shear type "slant" fractures of individual wires, which suggested that the ropes had been maintained in reasonable order and were not been pushed beyond a safe sensible working life.

Appendix 3.2 Laboratory Report.

Report prepared and authorised by

D Ellin
Director and Head of Laboratory

Appendix 3.2 Laboratory Report.

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Client: MCIB, Leeson Lane, Dublin 2
Job reference: T80791 **FV MAGGIE B**

Figure 1: Trawl gear wire rope sample set, shown as received and identified to the laboratory.

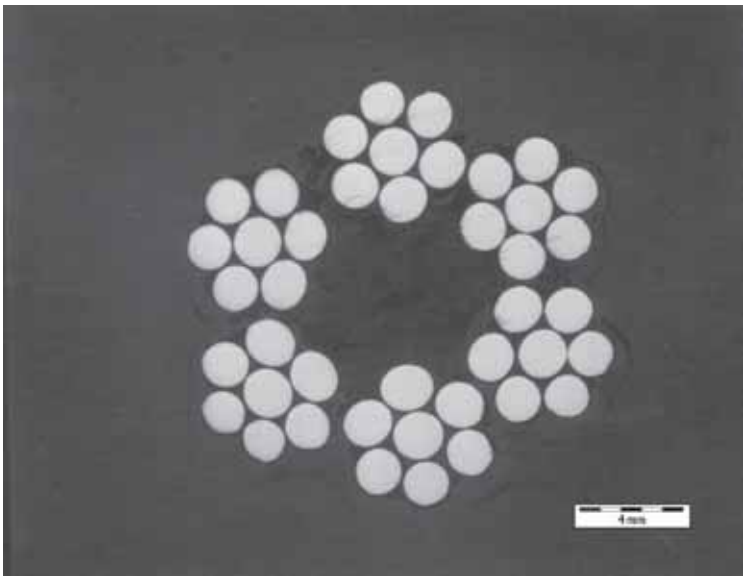

Figure 2: Rope cross section (Port Side Fixed End sample), prepared to illustrate the mode of construction and lay pattern.

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Figure 3: Recovered Trawl "A" sample, shown as received and with the end of interest to the fields right hand side.

Figure 4: Detail of above, showing the rope end of interest to MCIB.

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Client: MCIB, Leeson Lane, Dublin 2
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Figure 5: Recovered Trawl "B" sample, shown as received and with the end of interest to the fields right hand side.

Figure 6: Detail of above, showing the rope end of interest to MCIB.

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Figure Sheet 4 of 21

Client: MCIB, Leeson Lane, Dublin 2
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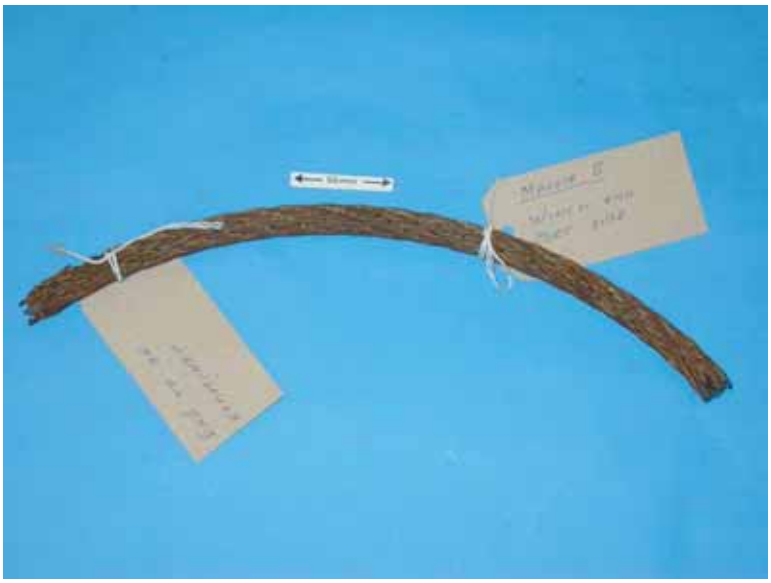

Figure 7: Port Side Winch End sample, shown as received and with the end of interest to the fields left hand side.

Figure 8: Detail of above, showing the rope end of interest to MCIB.

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Figure Sheet 5 of 21

Client: MCIB, Leeson Lane, Dublin 2
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Figure 9: Port Side Fixed End sample, shown as received and with the end of interest at the figures lower left hand side.

Figure 10: Detail of above, showing the rope end of interest to MCIB.

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Client: MCIB, Leeson Lane, Dublin 2
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Figure 11: Starboard Side Winch End sample, shown as received and with the end of interest at the figures lower edge.

Figure 12: Detail of above, showing the rope end of interest to MCIB.

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Figure Sheet 7 of 21

Client: MCIB, Leeson Lane, Dublin 2
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Figure 13: Starboard Side Fixed End sample, shown as received and with the end of interest at the figures lower right hand side.

Figure 14: Detail of above, showing the rope end of interest to MCIB.

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Client: MCIB, Leeson Lane, Dublin 2
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Figure 15: Recovered Trawl "A" sample showing melting of strands, individual wires and the polymer core.

Figure 16: Detail of above.

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Client: MCIB, Leeson Lane, Dublin 2
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Figure 17: Recovered Trawl "B" sample showing melting of strands, individual wires and the polymer core.

Figure 18: Detail of above.

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Client: MCIB, Leeson Lane, Dublin 2
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Figure 19: Port Side winch End sample, showing melting of strands, individual wires and the polymer core.

Figure 20: As above and viewed from a different camera angle to show a transverse fatigue like wire fracture (arrowed).

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Client: MCIB, Leeson Lane, Dublin 2
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Figure 21: Detail of figure 20, showing fatigue like wire fracture (wire exhibiting unmelted relatively clean grey fracture surface).

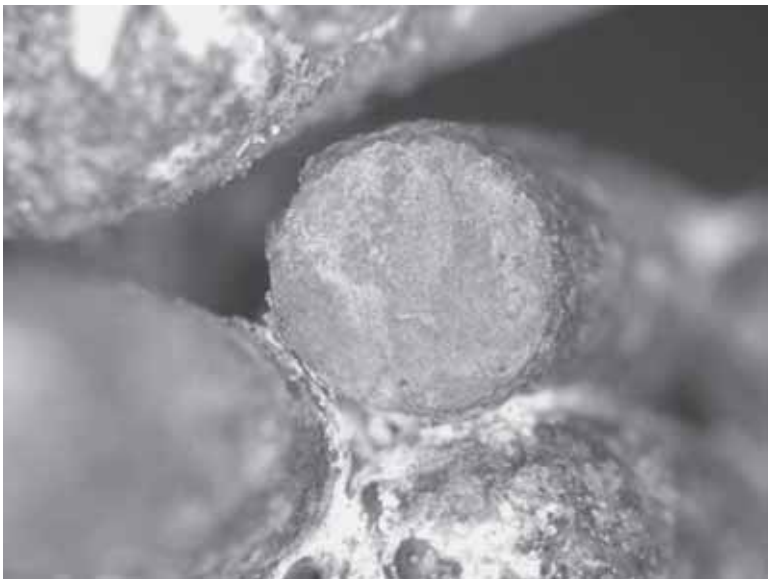

Figure 22: Detail of above.

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Client: MCIB, Leeson Lane, Dublin 2
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Figure 23: Port Side Fixed End sample, showing melting of strands, individual wires and the polymer core.

Figure 24: Detail of above.

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Client: MCIB, Leeson Lane, Dublin 2
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Figure 25: Starboard Side Winch End sample, showing melting of strands, individual wires and the polymer core.

Figure 26: Detail of above.

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Client: MCIB, Leeson Lane, Dublin 2
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Figure 27: Starboard Side Fixed End sample, showing melting of strands, individual wires and the polymer core.

Figure 28: Detail of above.

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Client: MCIB, Leeson Lane, Dublin 2
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Figure 29: Detail of figure 27.

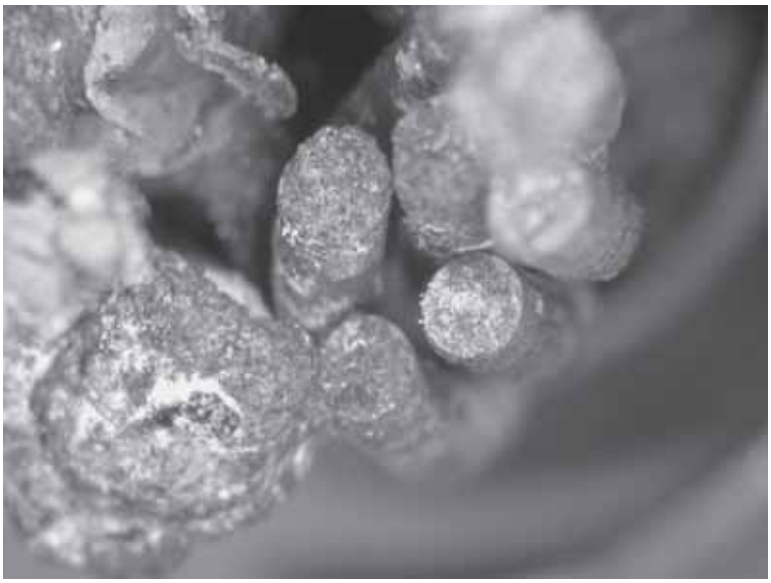

Figure 30: As above.

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Client: MCIB, Leeson Lane, Dublin 2
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Figure 31: Port Side Winch End sample, showing a site of transverse fatigue like fractures of individual wires.

Figure 32: Port Side Fixed End sample, showing sites of transverse fatigue like fractures of individual wires.

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Client: MCIB, Leeson Lane, Dublin 2
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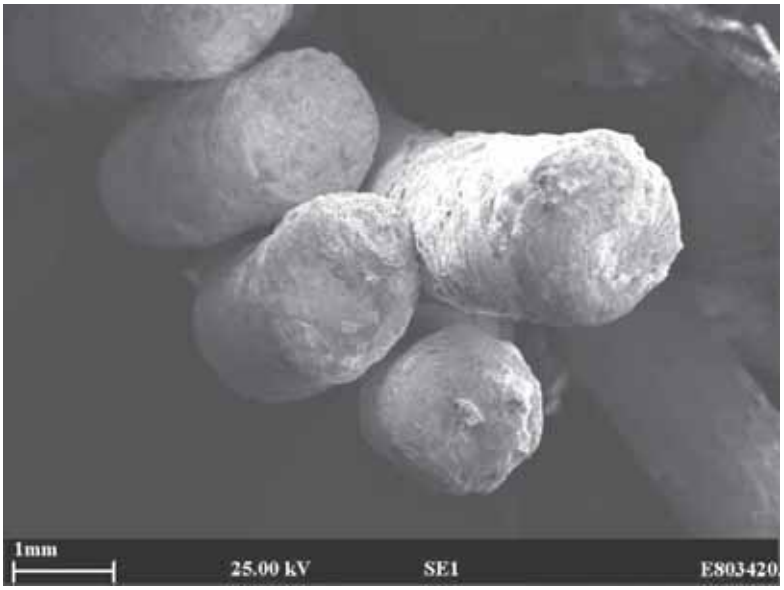

Figure 33: SEM fractograph, showing a group of wires exhibiting transverse fractures (Starboard Side Fixed End sample).

Figure 34: SEM fractograph, showing clear evidence of melting damage in one of the wires shown in figure 33.

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Client: MCIB, Leeson Lane, Dublin 2
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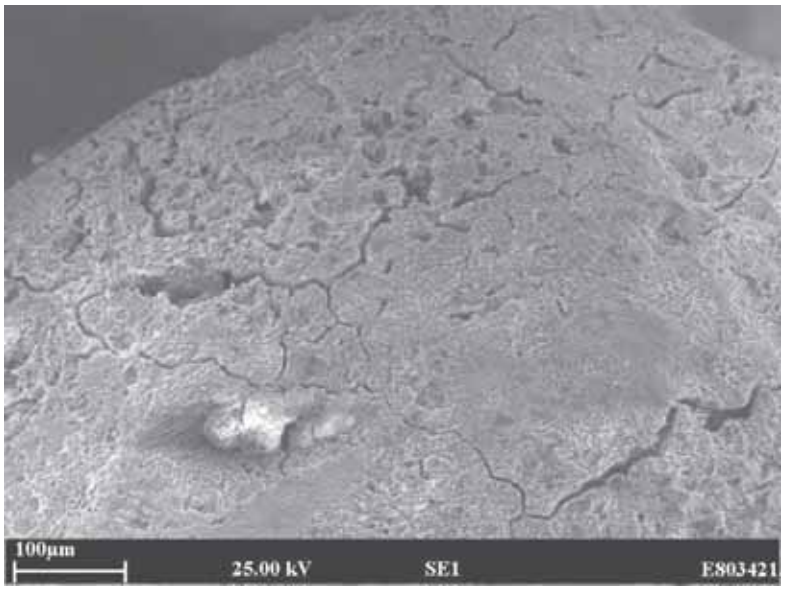

Figure 35: SEM fractograph, showing deep high temperature scale at the break surface of the wire shown in figure 34.

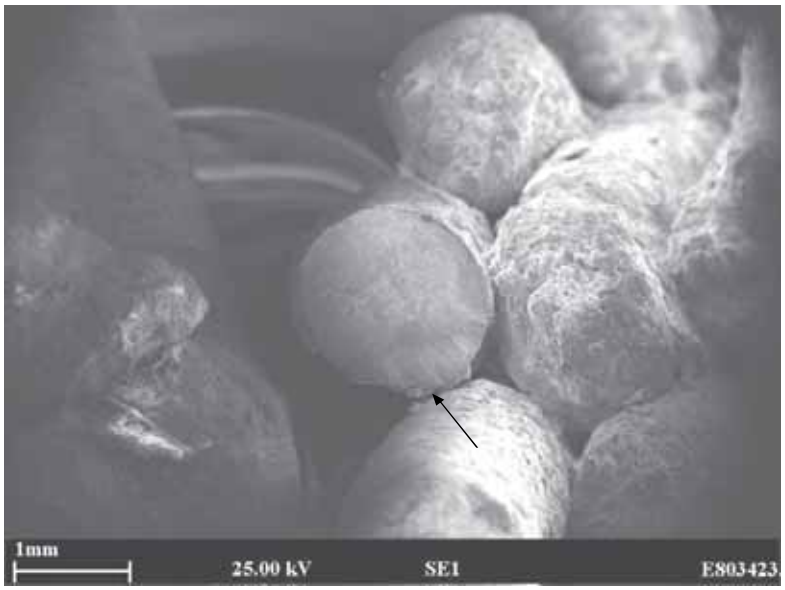

Figure 36: SEM fractograph, showing a transverse wire fracture (arrowed) exhibiting no apparent melting damage (Winch End Port Side sample).

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Client: MCIB, Leeson Lane, Dublin 2
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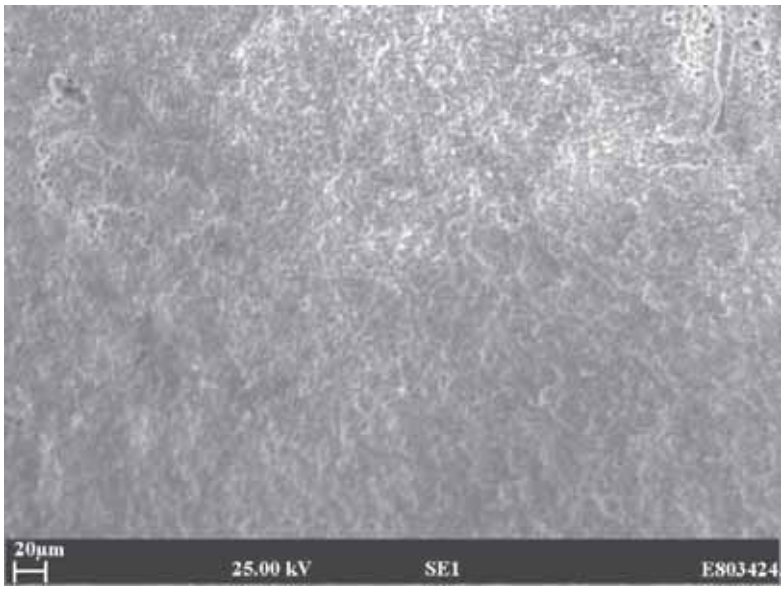

Figure 37: SEM fractograph, showing detail of figure 36 and deeply scaled indeterminate nature of the wires fracture surface in particular.

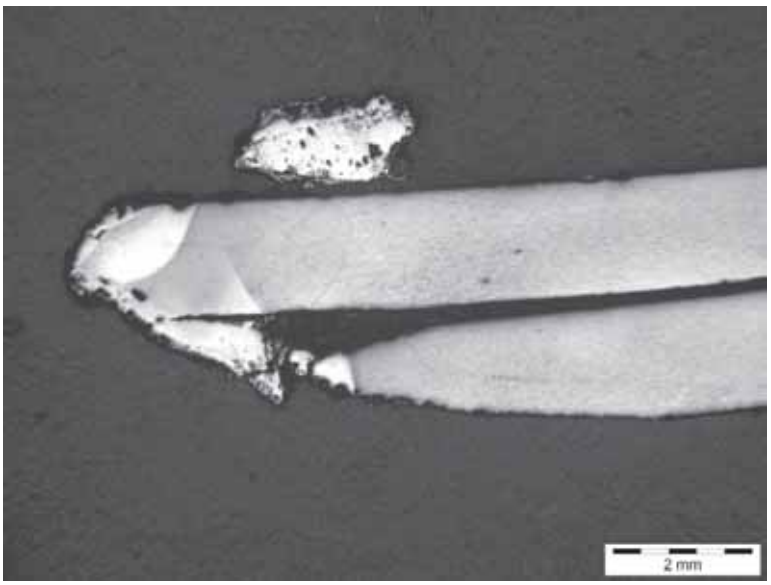

Figure 38: Macrograph (image captured at X12.5) specimen etched in Nital. Strand from the Starboard Fixed End sample showing melting and HAZ damage.

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Client: MCIB, Leeson Lane, Dublin 2
Job reference: T80791 **FV MAGGIE B**

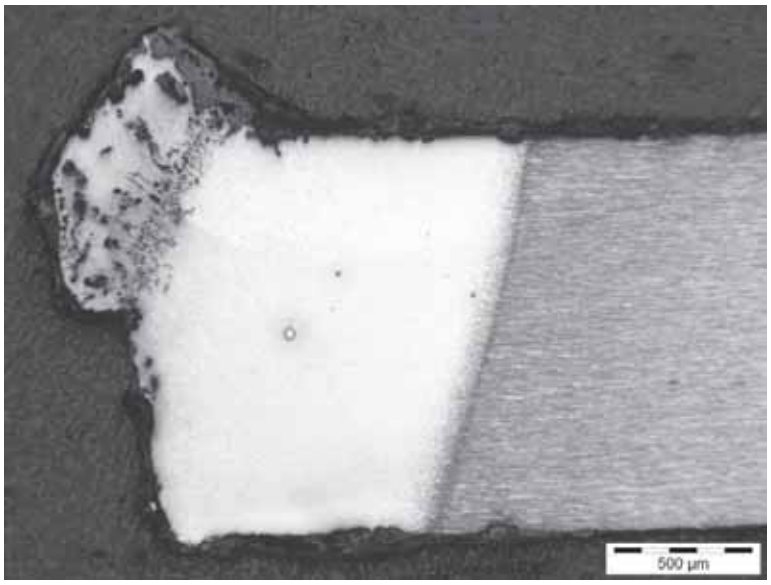

Figure 39: Micrograph (image captured at X50) specimen etched in Nital. Port Side Winch End sample, showing melting and HAZ damage.

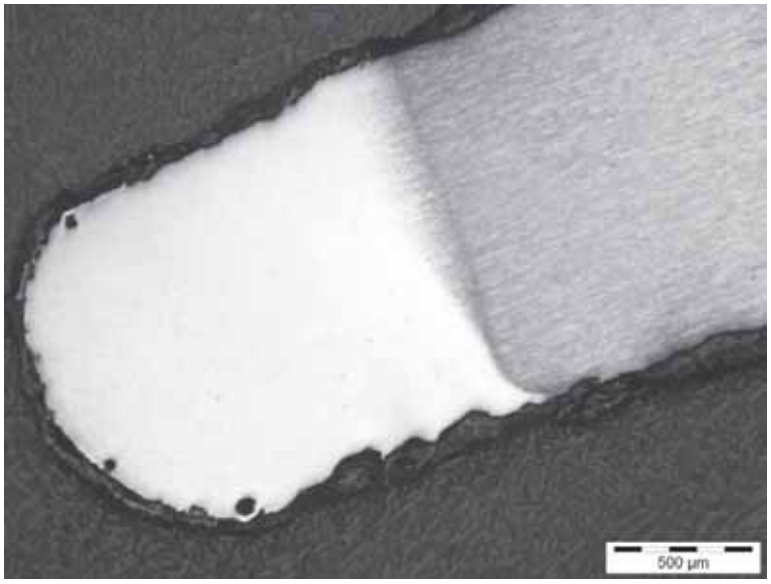

Figure 40: Micrograph (image captured at X50) specimen etched in Nital. Port Side Winch End sample, showing deep HAZ and thermally rounded wire end.

Appendix 3.2 Laboratory Report.

Figure Sheet 21 of 21

Client: MCIB, Leeson Lane, Dublin 2
Job reference: T80791 **FV MAGGIE B**

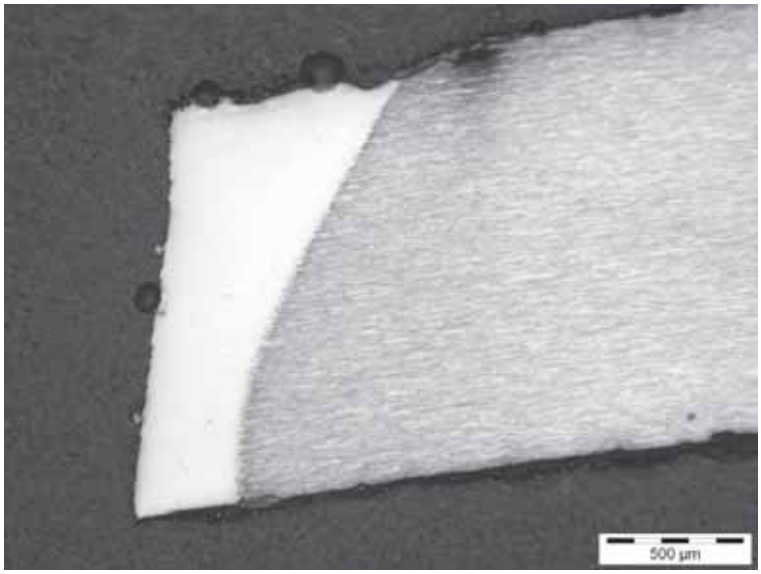

Figure 41: Micrograph (image captured at X50) specimen etched in Nital. Port Side Fixed End sample, showing a relatively shallow HAZ superimposed on what was thought to be an earlier fatigue fracture site.

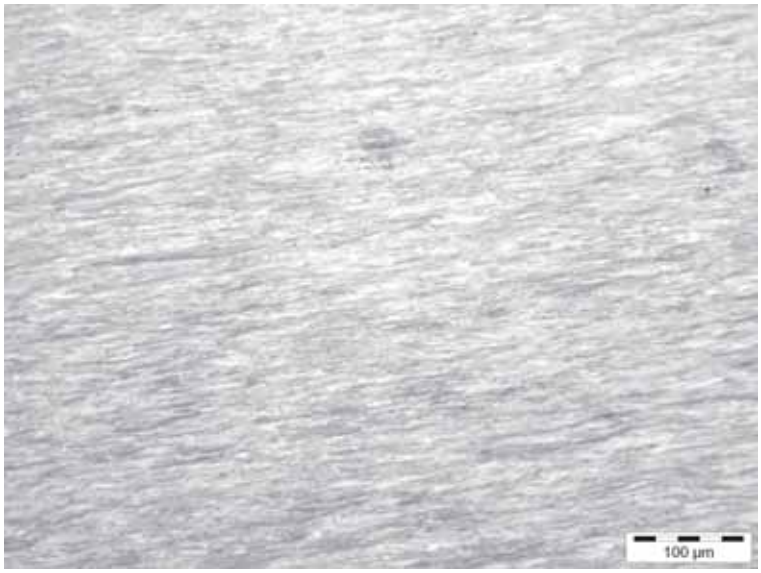

Figure 42: Micrograph (image captured at X200) specimen etched in Nital. Starboard Fixed End sample, showing an anomaly free microstructure typical of the patenting process.

Appendix 3.3 Photo 1 showing hull exterior.

Appendix 3.3 Photo 2 showing steering nozzle and propeller.

Appendix 3.3 Photo 3 showing bent bilge keel on starboard side.

Appendix 3.3 Photo 4 showing keel cooler.

Appendix 3.3 Photo 5 showing keel cooler.

Appendix 3.3 Photo 6 showing keel cooler.

Appendix 3.3 Photo 7 showing tyre in steering nozzle

4 LIST OF CORRESPONDENCE RECEIVED

Ballycotton Marine Services Limited

Marine Surveyors
Consulting Engineers
Representing American Bureau of Shipping
Representing ABS Group

Chapel Road
Ballycotton,
Co. Cork,
Ireland.

Telephone 021 4646839
Facsimile 021 4646873
Email ballycottonmarine@eircom.net

Our Ref. BMS/31d/06

17 November 2008

Mr John O'Donnell,
Marine Casualty Investigation Board,
Leeson Lane,
Dublin 2

Dear Mr O'Donnell

Re: MFV "Maggie B"

Further to your letter of the 3rd October 2008 together with Draft Report and supplementary report of the Investigation into the loss of the MFV "Maggie B" on the 29th March 2006 and our reply of the 7th October 2008. We are now in a position to respond as follows:-

You are aware that in this case we are technical consultants to the Cott family whose son Glenn was tragically lost in the incident under review. It was only after protracted legal argument and the case going to the Master of the High Court that we were given permission to inspect the vessel on behalf of the Cott family.

In this case the fair procedures and principals of natural justice were not afforded to the Cott family. Their nominated technical representative was precluded from examining the vessel. When the Department of Marine/Transport spend millions of euro in carrying out search, salvage and investigation into the loss of a vessel. To ensure the principals of natural justice are afforded, they should at least make certain that all interested parties have equal access to the vessel and not the chosen few. It is a great pity that there is not a more open and cooperative approach taken by the MCIB when investigating marine casualties.

We would reiterate our comments of our letter of the 14th December 2007 namely. A considerable amount of information in the report is largely based on statements alleged to have been received from Mr Krzysztof Pawtowski and others. The statements are not appendixed to the report. We are of the opinion that these statements should be attached to ensure transparency in the investigation process.

continued.

We examined the vessel on the 7th November, reviewed the draft report and wish to comment as follows:-

We were given to understand by the survivor Krzysztof Pawtowski that the prior to the casualty that the port beam was banging on the bulwark. There are marks on the port bulwark that would be consistent with the beam banging on the bulwark. This would be indicative that the port side beam became snagged on the bottom.

Mr Pawtowski also informed us that it was common for the toilet to flood back into the vessel when flushing. The best we could determine without dismantling the w.c. non return discharge valve was, that it was jammed in the partially open position. If this was the case at the time of the casualty, it would have been possible particularly if the vessel developed a port list, for the W.C. to overflow into the starboard working alleyway. There are only 8cm high sills on doors on the working alleyway it would therefore have been possible for water to have entered messroom/galley, cabin and engine room via an overflowing w.c bowl.

A general comment on the reports assertion that it is not good practice to operate with suctions on fuel tanks common. The majority of small fishing vessels operate in this manner as they are not provided with day tanks and transfer pumps. If equalising of the fuel tanks is not carried out the vessel will quickly develop a list, which can then only be corrected by opening valves to equalise the quantity of fuel in the tanks. It could be considered very poor practice to operate a small fishing vessel with a list, in particular a beam trawler.

We would have no objection to this letter being included in the final report.

Yours sincerely

M. J. Connolly

Michael Connolly
Ballycotton Marine Services Limited

MCIB RESPONSE TO LETTER FROM MICHAEL CONNOLLY, BALLYCOTTON MARINE SERVICES LTD., RECEIVED ON 20TH NOVEMBER 2008

The MCIB has been and is aware that Mr. Connolly is the technical consultant to the Cott Family. It should be noted that application to the High Court to inspect the Vessel was to legally require the owner of "Maggie B" to allow the inspection. The MCIB had no part in the High Court proceedings.

The MCIB absolutely refutes the allegation that Mr. Connolly or any person from Ballycotton Marine Services Ltd. was precluded from examining the Vessel. In fact Mr. Connolly was specifically invited to observe all the Stability Tests but for whatever reason, decided not to attend. Furthermore Mr. Connolly was specifically invited by letter dated the 7th December 2007 from Lennon Heather, Solicitors to the MCIB. Mr. Connolly did not seem fit to acknowledge or respond to this invitation.

The MCIB interviewed all parties to this incident. The statements were taken in the strictest confidence. The MCIB does not disclose or publish statements given to it. The MCIB assures Mr. Connolly that all investigations are unbiased and fair. The Board seeks to find fact not fault and rejects any such implication otherwise. The Board also regrets the attitude taken by Mr. Connolly throughout this case and regrets the implication made by him.

The MCIB endeavoured by means of expert analysis of the trawl wires to determine which one may have snagged on the bottom but the result of this analysis was not conclusive.

The witness statement stated that the vessel listed and capsized to starboard. There was no reference made to a port list or to water flooding through the accommodation corridor or messroom/galley. (Note that the "working alleyway" is located on the port side of the vessel and not the starboard side.

This comment is noted, however the arrangement that existed did potentially facilitate the transfer of fuel between the tanks. Other design arrangements would be available to considerably restrict the transverse flow rate between tanks.

c·m

COAKLEY MOLONEY SOLICITORS

Mr. Thomas R. Power,
Deputy Chairperson,
Marine Casualty Investigation Board,
Leeson Lane,
Dublin 2.

Your Ref.

Our Ref.

KOK/COT043/0001

28 October 2008

RE: Draft Report – MV "Maggie B", 29th March, 2006
Con Cott, Margaret Cott and Sharon Cott -v- Walsh Brothers Fishing Limited, Anthony Walsh, Adrian Walshe, Joseph Walsh

Dear Sir,

Thank you for your letter of the 22nd inst., confirming extension of time in this matter to 21st November next.

We accept fully that access to the wreck was not denied to our clients by the Board. In fact, access was refused by the owners of the vessel.

We will be in further contact with you in due course.

Yours faithfully,

KEVIN O'KEEFFE
COAKLEY MOLONEY

kokeeffe@como.ie

MARINE CASUALTY
29 OCT 2008
EIRE

MCIB RESPONSE
The MCIB notes the contents of these letters.

49 South Mall, Cork, Ireland T 021 4273133 F 021 4276948 E firstinitialsurname@como.ie W www.como.ie

Nicholas J. O'Keeffe, Sylvester Duane, Eugene M. Glendon, Kevin O'Keeffe, Patrick F. Dorgan, Eileen M. Nagle, Julian M. Kahn, Shane Moloney, Jean Murphy, David Gaffney, Robert O'Keeffe, Kate Cunningham, Lisa Kenny, Dermot J. Moloney (Consultant)

MCIB RESPONSE
The MCIB notes the contents of this letter.

c·m

COAKLEY MOLONEY SOLICITORS

Mr. John G. O'Donnell, B.L.,
Marine Casualty Investigation Board,
Leeson Lane,
Dublin 2.

Your Ref.

Our Ref. MCIB/122

KOK/COT043/0001

21 October 2008

RE: Draft Report MFV "Maggie B", 29th March, 2006
Con Cott, Margaret Cott and Sharon Cott -v- Walsh Brothers Fishing Limited, Anthony Walsh, Adrian Walshe, Joseph Walsh

Dear Mr. O'Donnell,

We act on behalf of Margaret Cott, Con Cott and Sharon Cott of Island View, Ballycotton, Co. Cork. Our clients are in receipt of your letter of the 3rd inst., enclosing draft report.

As you know, our clients' marine engineer, Mr. Michael Connolly, has not been given access to inspect the "Maggie B". In that regard, we had to obtain a High Court Order, seeking permission to allow Mr. Connolly carry out the examination. We enclose copy of the High Court Order.

As our clients do not have the benefit of an expert report, they are not in a position to respond to your queries regarding the draft report. In these circumstances, we would ask you to extend the time for making comments and observations, to allow them an opportunity to seek an expert report.

We would be obliged if you would confirm your agreement to the foregoing.

We look forward to hearing from you.

Yours faithfully,

KEVIN O'KEEFFE
COAKLEY MOLONEY

kokeeffe@como.ie

MARINE CASUALTY INVESTIGATION BOARD
IRELAND
22 OCT 2008
EIRE

49 South Mall, Cork, Ireland **T** 021 4273133 **F** 021 4276948 **E** firstinitialsurname@como.ie **W** www.como.ie

THE HIGH COURT

2008 No.2412 P

Friday the 10th day of October 2008

BEFORE THE MASTER

BETWEEN

MARGARET COTT

PLAINTIFF

AND

WALSH BROTHERS FISHING LIMITED
ANTHONY WALSH JOSEPH WALSH AND DECLAN BATES

DEFENDANTS

Upon Motion of Counsel for the Plaintiff pursuant to Notice of Motion dated the 12th day of June 2008 and on reading said Notice the Affidavit of service thereof the Pleadings herein and Affidavit of Kevin O Keeffe filed the said date and on hearing said Counsel and Counsel for the Defendant

By Consent IT IS ORDERED that the Plaintiff be at liberty within six weeks from the date hereof (or such further time as may be agreed between the parties) to have the Defendants Vessel known as MFV "the Maggie B" inspected and examined and or tested by the Plaintiff's agent Michael Connolly Marine Assessor and for the Plaintiff to be present at the examination

And IT IS FURTHER ORDERED that the question of costs of this Motion and Order be reserved

MARGARET MULLIGAN
MASTER'S REGISTRAR
PERFECTED 13-10-2008

Coakley Moloney
Solicitors for the Plaintiff

The Defendants

A COPY WHICH ...

FOR REGISTRAR

MCIB
Marine Casualty Investigation Board
Bord Imscrúdú Talsmí Mulrí

Please reply to:
Marine Casualty Investigation Board
Leeson Lane
Dublin 2
Telephone: 01 678 2460
Fax: 01 678 3129
FREEFONE: 1800 202 614
Email: info@mcib.ie
Web: www.mcib.ie

Our Ref: MCIB/122
Your Ref: KOK/COT043/0001

22 October 2008

Mr. Kevin O'Keeffe
Coakley Moloney Solicitors
49 South Mall
Cork

Re: Draft Report MFV "Maggie B" – 29th March 2006
Con Cott, Margaret Cott and Sharon Cott
v Walsh Brothers Fishing Limited, Anthony Walsh, Adrian Walshe, Joseph Walsh

Dear Sir

Further to your letter of 21st instant in relation to the above matter, the Marine Casualty Investigation Board has considered your request for an extension of time to respond to the Draft Report into the above casualty. The Board agrees to extend the response time until 21st November 2008.

You mention that the Marine Engineer, Mr. Michael Connolly was not given access to the wreck. The Board wishes to make it clear that the MCIB did not refuse access to Mr. Connolly and, in fact, specifically invited him in writing on 7th December 2007 to inspect the said wreck.

Yours sincerely

p.p. B. Cullinane
Thomas R. Power
Deputy Chairperson
MCIB

Promara
Professional Marine Services

3 Castlecourt
St Josephs Rd
Mallow Co Cork
Ireland
Tel +353 22 53386
Fax +353 22 22467
sales@promara.ie

Ms Bridie Cullinane
MCIB
Dept of Transport
Leeson Lane
Dublin 2
28 October 2008.

Re: Draft Report & Supplementary Report - Maggie B

Dear Ms Cullinane,
We are in receipt of your correspondence dated 3 Oct 2008. We have no comments or observations to make at this time.

Regards

Noel O'Regan
MD Promara Ltd

MCIB RESPONSE
The MCIB notes the contents of this letter.

COMMISSIONERS OF IRISH LIGHTS
Harbour Road, Dun Laoghaire, Co. Dublin, Ireland
Tel: +353 1 271 5400 E-mail: engineering@cil.ie
Fax: +353 1 271 5565 Web: www.cil.ie

The Secretary
Marine Casualty Investigation Board
Leeson Lane
Dublin 2

Your Reference:
Our Reference: IMS/RMcC/AJM
Date: 23rd October, 2008

Re: Draft Report and Supplementary Report – Maggie B

Dear Secretary

Thank you for forwarding the above reports.

The Commissioners of Irish Lights Have no comments or observations to offer.

Yours sincerely

Captain Robert McCabe
Deputy Head of Marine

MCIB RESPONSE
The MCIB notes the contents of this letter.

Danuta Sankowska
ul. Gryfitow 4/10
72-200 Nowogard
Poland

20 October, 2008.

Mr. John G. O'Donnell
Chairman of Marine Casualty Investigation Board
Leeson Lane
Dublin 2, Ireland

BY FAX (+43 1 6783129)
BY E-MAIL (info@mcib.ie)
BY REGISTERED MAIL

Re.: Re-Issue of the Draft Report and The Supplementary report of the Investigation into the loss of the MFV "Maggie B" on 29 March 2006, Your Ref.: MCIB/122

Dear Sirs,

With reference to your letter of 03 October, 2008 (Your Ref.: MCIB/122) on the above captioned matter, below you will find my comments/observations on the Draft Report:

1. First of all, please note that the correct name of my husband is Jan Sankowski (and not "Jan Salkowski").

2. Your report states on page 7 that *"it is unclear if Mr. Cott and Mr. Sankowski had undertaken such (*i.e. safety*) training or a recognized equivalent"*. In this regard, please be informed that the documents evidencing that my husband completed safety training courses in Poland I already sent to you together with my letter of 25 January, 2007 (however, for the sake of good order, please find enclosed the said documents again).

3. Your report states on page 9 point 3.9 *"From witness statements taken, it appears that this hatch may not have been correctly secured*".
Why such statements have not been attached to the report? Who has made such statements and when? In my opinion, referring to "witness statements" only, without enclosing of the said documents to the report (they should be integral part of the Report) is incorrect and does not give any possibility of assessment of the documents in question.

4. We have noted from the provided documents that the vessel was raised and that it was examined by MCIB investigators to establish if a cause for the sinking could be found. In particular, the MCIB conducted an inclining experiment to establish the stability profile of the vessel.

5. In conclusions included in the Supplementary report of the investigation into the loss of the "mfv Maggie B" it is stated that : *"there is no single outstanding factor that alone would cause the casualty to occur. Therefore, it must be assumed that a combination of factors mentioned in the stability report led to the vessel sinking*".

The problem is that after very thorough perusal of the Revised Stability Investigation I cannot find any factors which, in the opinion of the MCIB investigators led to the sinking. Although, on page 13 of the said document it is stated that "*on the basis of the analysed loading condition, a moment of 17 tonne meters would be sufficient to capsize the vessel*" and further on page 13: *"under such circumstances a force of 1.91 tonnes would have been sufficient to capsize the vessel*" - it is still hypothesis only.

In view of the above, I (and my daughter too) wish to inform you that we are deeply disappointed with not establishing by the MCIB of the real cause of the loss of "Maggie B"and in a result thereof the death of my husband Jan Sankowski.

Yours sincerely,

Danuta Sankowska

Danuta Sankowska

2

Issued under the provisions
of the ILO Convention 108 dated 13 may 1958

KSIĄŻECZKA ŻEGLARSKA

SEAMAN'S BOOK

Uprawnia do żeglugi międzynarodowej
Authorize for international voyages
~~ważna na czas nieoznaczony~~
Ważna do ~~valid for unlimited period~~
Date of expiry

dotychczas ciąg Ks. żegl. Nr 0125434

Podpis posiadacza/Signature

Adres najbliższej rodziny Danuta - żona
Next of kin
Nowogard ul. Gryfitów 4/10

Nazwisko, imiona Sankowski Jan
Family name, given names

Data i miejsce urodzenia 19-02-1961 Płoty
Date and place of birth

Obywatelstwo polskie
Nationality

Rysopis
Physical characteristics

Wzrost 170 Twarz pociągła
Height Face

Włosy c. blond Oczy niebieskie
Hair Eyes

Znaki szczególne nie ma
Totoo or other recognition marks

Wydano na podstawie
Issued in acc. with
Ust. z dn. 23-05-91 o prawie na morskich statkach handl.

Urząd wydający: Urząd Morski w Szczecinie
Issuing Authority: Inspektorat Bezpieczeństwa Żeglugi
Podpis
Signature

Data wydania 11-06-1993
Date of issue

URZĄD MORSKI W SZCZECINIE pieczęć urzędu

0149487

1

RZECZPOSPOLITA POLSKA
REPUBLIC OF POLAND

ŚWIADECTWO PRZESZKOLENIA
W ZAKRESIE
ELEMENTARNYCH ZASAD UDZIELANIA
PIERWSZEJ POMOCY MEDYCZNEJ

Certificate of Basic Safety Training in Elementary First Aid

Wystawione na podstawie postanowień
Konwencji STCW 1978 z poprawkami z 1995 r.,
z upoważnienia rządu Rzeczypospolitej Polskiej przez Urząd Morski w Szczecinie.

Issued under the provisions
of the STCW Convention 1978 as amended in 1995,
under the authority of the Government of the Republic of Poland by Maritime Office Szczecin.

No. UMS - 11-011109-01845/03

Zaświadcza się niniejszym, że:
This is to certify that:

SANKOWSKI JAN
Nazwisko / Surname Imię / Name

19-02-1961 PŁOTY
Data i miejsce urodzenia / Date and place of birth

jest odpowiednio przeszkolony w zakresie elementarnych zasad udzielania pierwszej pomocy medycznej zgodnie z wymaganiami prawidła VI/1 Konwencji STCW .

has been duly trained in elementary first aid in acc. with the provisions of Reg. VI/1 of the STCW Convention.

Szczecin 22-08-2003
Miejsce i data wydania / Place and date of issue of this Certificate

Ważne do
Valid till 13-07-2008

URZĄD MORSKI W SZCZECINIE

B.Downar
Nazwisko i podpis osoby upoważnionej
Name and signature of duly authorized official

Zaświadcza się niniejszym, że:
This is to certify that:

SANKOWSKI JAN
Nazwisko / Surname Imię / Name

19-02-1961 PŁOTY
Data i miejsce urodzenia / Date and place of birth

posiada odpowiednie kwalifikacje zgodnie z wymaganiami prawidła VI/2.1 Konwencji STCW 78/95 i może dowodzić środkami ratunkowymi i łodziami ratowniczymi innymi niż szybkie łodzie ratownicze.

has been found qualified in accordance with the provisions of Reg. VI/2.1 of the STCW 78/95 Convention and has been found proficient in survival craft and rescue boats other than fast rescue boats.

Szczecin 28-12-1999
Miejsce i data wydania / Place and date of issue of this Certificate

SANKOWSKI
Podpis posiadacza/ Holder's signature

URZĄD MORSKI W SZCZECINIE

E.Zięba
Nazwisko i podpis osoby upoważnionej
Name and signature of duly authorized person

RZECZPOSPOLITA POLSKA
REPUBLIC OF POLAND

ŚWIADECTWO RATOWNIKA

Certificate of Proficiency in Survival Craft and Rescue Boats other than Fast Rescue Boats

Wystawione na podstawie postanowień
Konwencji STCW 1978 z poprawkami z 1995 roku,
z upoważnienia rządu Rzeczypospolitej Polskiej przez Urząd Morski w Szczecinie.

Issued under the provisions of the
International Convention of Training, Certification and Watchkeeping for Seafarers 1978
as amended in 1995,
under the authority of the Government of Republic of Poland by Maritime Office Szczecin.

No. UMS - 19-011109-02071/99

MCIB RESPONSE TO LETTER FROM MS. DANUTA SANKOWSKA RECEIVED ON THE 21ST OCTOBER 2008

The MCIB has corrected Mr. Sankowski name.

Whilst it is agreed that Mr. Sankowski had some certificates i.e. Proficiency in Survival Craft and Basic First Aid: These fall short of the certifications required by Irish law.

Board Iascaish Mhara safety Training is the basic requirement as stipulated in the Fishing Vessel (Basic Safety Training Regulations 2001).

Any statements given to the MCIB are given in strictest confidence and are never published or disclosed. The MCIB assures Mrs. Sankowska that all it's investigations are unbiased and fair.

The MCIB agrees with Ms. Sankowska that the findings of the report cannot in the circumstances be more definite as it is impossible to precisely establish the actual cause of the capsize. However the findings point to low level stability combined with the possibility of and excessive heeling moment caused by snagged fishing gear. During the recovery of the wreck the Port Trawl Beam could not be recovered as the trawl beam was snagged on the bottom and a force in excess of 4 tonnes did not free it. The speed and weight of the boat exerted a force of approximately 3 tonnes on the trawl beam but a force of approximately 1.9 tonnes was sufficient to cause a capsize.

The MCIB again offers it's deepest sympathy to Ms. Sankowska and her daughter on the tragic loss of a husband and father.

Irish Coast Guard
GARDA CÓSTA na hÉIREANN
Department of Transport
Leeson Lane,
Dublin 2.

Ref. MCIB/122

Ms. Bridie Cullinane,
Marine Casualty Investigation Board,
Leeson Lane.

20th October 2008

Dear Ms.Cullinane,

With reference to the draft report and supplementary report of the investigation into the loss of the MFV Maggie B, the Irish Coast Guard has no comment or observation to offer.

Yours sincerely,

Hugh Barry
Pollution and Salvage Branch
Irish Coast Guard

MCIB RESPONSE
The MCIB notes the contents of this letter.

Ceanncheathrú
Ceannasaíocht Oibríochtaí Cabhlaigh
Bunáit Chabhlaigh
Inis Sionnach
Co Chorcaí
Éire

Headquarters
Naval Operations Command
Naval Base
Haulbowline
Co. Cork
Ireland

09 Oct 2008

NOC/PSO/01

Ms Bridie Cullinane,
Secretary,
MCIB,
Leeson Lane,
Dublin 2.

Ms Cullinane,

DRAFT Report and SUPPLEMENTARY Report of the Investigation into the loss of the "MFV Maggie B" on 29th March 2006

1. I have reviewed the above-mentioned DRAFT Reports and have no additional comments or observations.

Yours sincerely,

J.A. ROBINSON
CAPTAIN NS
O/C Naval Operations Command & 2IC Naval Service
Oifigeach i gCeannas Cheannasaíocht Oibríochtaí Chabhlaigh agus Leascheannasaí na Seirbhíse Cabhlaigh

MCIB RESPONSE
The MCIB notes the contents of this letter.

Ballycotton Marine Services Limited

Marine Surveyors
Consulting Engineers
Representing American Bureau of Shipping
Representing ABS Group

Chapel Road
Ballycotton,
Co. Cork,
Ireland

Telephone [illegible]
Facsimile [illegible]
Email [illegible]

- 8 OCT 2008

Our Ref. BMS/31c/06

7 October 2008

Mr John O'Donnell,
Marine Casualty Investigation Board,
Leeson Lane,
Dublin 2

Dear Mr O'Donnell

<u>Re: MFV "Maggie B"</u>

We are in receipt of your letter of the 3rd October 2008 together with Draft Report and supplementary report of the Investigation into the loss of the MFV "Maggie B" on the 29th March 2006, as requested we respond as follows:-

You are aware that in this case we are technical consultants to the Cott family whose son Glenn was tragically lost in the incident under review.

At present we are not in a position to comment on the reports as we have not been granted permission to examine the vessel. Permission for us to examine the vessel is to be heard before the Master of the High Court on the 10th October. Once we have permission and have inspected the vessel we may or may not wish to comment upon the reports depending on our findings.

In this case the fair procedures and principals of natural justice have not to date been afforded to the Cott family. Their nominated technical representative has been precluded from examining the vessel. When the Department of Marine/Transport spend millions of euro in carrying out search, salvage and investigation into the loss of a vessel, to ensure the principals of natural justice are afforded, they should at least make certain that all interested parties have equal access to the vessel and not the chosen few.

We would reiterate our comments of our letter of the 14th December 2007 namely. A considerable amount of information in the report is largely based on statements alleged to have been received from Mr Krzysztof Pawtowski and others. The statements are not appendixed to the report. We are of the opinion that these statements should be attached to ensure transparency in the investigation process.

continued.

Once we have inspected the vessel we will revert if we wish to comment on the report. In the meantime it would be helpful to receive copies of the various statements in particular the ones from Mr Krzysztof Pawtowski.

We would have no objection to this letter being included in the final report.

Yours sincerely

M J Connolly

Michael Connolly
Ballycotton Marine Services Limited

MCIB RESPONSE TO LETTER FROM MR. MICHAEL CONNOLLY, BALLYCOTTON MARINE SERVICES LTD, RECEIVED ON 8TH OCTOBER 2008

The MCIB confirms that it was and is aware that Mr. Connolly was the Technical Consultant to the Cott family.

Since this response was received the solicitors for the Cott family, Coakley Moloney, obtained a High Court Order granting permission for Mr. Connolly to have access to the wreck of the Maggie B. This action was taken against the owners of the Maggie B and not the MCIB (see correspondence with Coakley Moloney Solicitors).

The MCIB wishes to make it abundantly clear that Mr. Connolly was invited to be present at all stages of the Stability Test but declined the invitation. Secondly Mr. Connolly was specifically and personally invited by letter dated December 7th 2007 from Lennon Heather Solicitors to the MCIB. Mr. Connolly did not see fit to respond to this invitation and did not take it up.

All statements given to the MCIB are given in strictest confidence and are never published nor disclosed. The MCIB assures Mr. Connolly that all its investigations are unbiased and fair. The Board seeks to find fact not fault. The Board rejects any such implication or suggestion that otherwise is the case. The MCIB interviewed, in as far as it was possible, and received statements from all persons that worked on the vessel modifications.

Elaine Hayes

2 O'Briens Terrace

Ballycotton

Co. Cork

Marine Casualty Investigation Board

Leeson Lane

Dublin 2

F.A.O. Mr John G. O'Donnell

Re: Draft Report of The Investigation into the loss of the MFV Maggie B

Thank you for forwarding the above report, I have included various questions and comments which are listed below.

My understanding of your report seems to indicate that it was a stability issue that sank the Maggie B and not flooding of the engine bay/fish hold as originally thought and as described by the sole survivor.

You mention "Senhouse Slips" as safety devices for releasing the fishing gear, can you confirm if these are manual or automatically activated and in the case of manual how effective would these be had they been released and what realistic time scale would there have been to activate these before the boat heeled? Have both Slips been recovered in an un-activated state?

It was also mentioned that the fueling for the boat was taken from the incorrect pipe(crossover pipe), why was this not mentioned on the Survey Report by Proma Ltd on 27th Feb. 2006. ?.

In your report you state that there was only one small leak found in the engine room from a bilge pump non-return valve, in your opinion how long would this leak have to be unattended that the engine bay would flood to the level of the centre of the engine flywheel (as witnessed by the sole survivor and who also stated that the Skipper was checking the engine room on a regular basis)?.

I would like to point out what I see to be important factual errors in the MCIB Draft Report.

Glynn was an employee of Walsh Brothers and Ltd carried out his duties as requested by his employer. It is important to point out that all decisions regarding licensing and modification of the boat were the responsibility of the Walsh Brothers.

Glynn and his crewmates provided only their time and labour by assisting the previous owner of the boat, Mr Declan Bates in making modifications to the boat. Mr Bates was responsible for the significant changes that were made to the boat, under direction from the Walsh Brothers, and he made all engineering decisions. Glynn was not an engineer, welder or electrician and it is incorrect to apportion responsibility for the modifications made to the boat to Glynn. There is no record of this in the report and again, I ask that this be reflected in the report.

- I would like the MCIB to comment on the reasons behind why the Waterford search and rescue helicopter was unable to attend the scene of the incident after the mayday call had been issued. As the nearest helicopter to the incident, it would arrived on the scene much faster than the helicopter from Shannon which was first to attend.

- I would also like the MCIB to identify the reasons as to why they did not request a professional dive to be carried out on the "Maggie B". This Irish Naval dive was carried out only at the request of Mr Pat "the Cope" Gallagher, after a great deal of lobbying by Glynn's family and I, nearly two months after the vessel sank.

I would like to go on record as thanking the volunteers who took place in the search effort. Their efforts were hugely appreciated at a very difficult time.

Finally, Glynn to me was, still is and always will be a person, a human being. He was my partner, a brother, an uncle, a friend, a cousin and a son and is loved by many people. Glynn did his duty till the end.

He was a very brave and respected man who will always be loved and never forgotten.

Yours sincerely,

Elaine Hayes

MCIB RESPONSE TO LETTER FROM MS. ELAINE HAYES, RECEIVED ON 29TH OCTOBER 2008.

The MCIB notes the contents of this response and would make the following points.

Senhouse Slips are manual. It is not possible to state with any certainty if their release would have had any effect on the capsize of the Maggie B.
The incident happened so suddenly that it would have required instantaneous reaction to activate the Slips, which would have needed a person to be standing right beside the Slip as the Maggie B heeled.
Both Slips were recovered un-activated.

The MCIB cannot make any comment as to why Promara Ltd did not mention the fuelling system in their summary report of 27th February 2006. The report does not state that the fuel was taken from the incorrect pipe (crossover pipe). It states the arrangement for the fuel supply was not good practise as it allows for the transfer of fuel between the tanks when the vessel is heeled, thereby causing a small adverse heeling moment. While this was not singularly a cause of the capsize it is one of a number of contributing factors.

The leak observed in the engine room was insignificant and did not in any considerable way contribute to the capsize. The leak was not considered of such magnitude that required the flow to be measured. Additionally the overboard discharge was located above the static waterline and therefore was not continuously immersed, consequently it is not possible to estimate the theoretical time it would take to flood the engine bay to the centre of the flywheel.

Glynn Cott was the Skipper of the Maggie B and the responsibility to take the boat to sea was entirely his. Furthermore the owners, the Walsh brothers had given Mr. Cott Carte Blanche to make what modifications he wished. It is not accurate to state that Mr. Cott assisted Mr. Bates in making the modifications. In fact Mr. Bates has stated that he offered his assistance and advice to Mr. Cott who felt that he had sufficient knowledge to carry out the modifications himself.

The MCIB cannot comment on the operational movements of the SAR Helicopter. This query should be directed to the relevant authority.

The MCIB had sufficient evidence to carry out its investigation without requesting divers to survey the wreck. The supplementary report clearly shows that the conclusions in original draft were largely correct and that the Stability Test done on the wreck confirmed those findings.

Again the MCIB offers you and all those who suffered loss and pain it's deepest sympathy's and would point out the MCIB's function is to investigate casualties to find the fact of an incident and to make the necessary recommendations to prevent similar incidents from reoccurring.