



DANISH MARITIME AUTHORITY



**MARINE ACCIDENT REPORT
DIVISION FOR INVESTIGATION OF MARITIME ACCIDENTS**

**Accident to seafarer HELGOLAND
Fall overboard on 16 November 2008**

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The casualty report is available on our homepage: www.dma.dk.

The Division for Investigation of Maritime Accidents

The Division for Investigation of Maritime Accidents is responsible for investigating accidents and serious occupational accidents on Danish merchant and fishing vessels. The Division also investigates accidents at sea on foreign ships in Danish waters.

Purpose

The purpose of the investigation is to clarify the actual sequence of events leading to the accident. With this information in hand, others can take measures to prevent similar accidents in the future.

The aim of the investigations is not to establish legal or economic liability.

The Division's work is separated from other functions and activities of the Danish Maritime Authority.

Reporting obligation

When a Danish merchant or fishing vessel has been involved in a serious accident at sea, the Division for Investigation of Maritime Accidents must be informed immediately.

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1 Summary

HELGOLAND sailed from Thyborøn on 13 November at 1330 to fish in the Norwegian zone of the North Sea. There was a 5 men crew on board.

In the morning on 16 November the seine was shot using the fly-shooting method. From the forecastle two fishermen caught the buoy-line with the three buoys (gajer) using a grapnel. The one fisherman held the buoy-line and was hauling it on board in order that the other fisherman could connect the in-hauler to the buoy-line.

When approximately 10m of the buoy-line was hauled on board, the fisherman, who held the buoy-line, was suddenly pulled over board above the railing on the forecastle. He continued to hold on to the buoy-line, and the other fisherman took hold in the part of the line, which was lying on the forecastle and kept it tight. The fallen overboard fisherman, however, quickly let go the buoy-line, but there after he succeeded in entering a life buoy, which from the vessel was placed in the sea close to him. Shortly after, however, he again slipped out of the life buoy, and the other fishermen did not succeed to haul him on board before he disappeared.

There was a hard breeze from NW and 5 – 7m high waves.

Alarm was raised, and the Norwegian salvage service quickly launched a search. The fisherman fallen overboard was, however, not found, and the search was abandoned at approximately 1700.

2 Conclusion

The fall overboard was caused by an unexpected drive in the buoy-line, while the fisherman held the line. It is not possible with certainty to establish the cause to this drive, or why the fisherman did not let go the line, when the drive occurred. (6.1)

The drive could occur by an unexpected movement of the vessel in the high waves or it could have been by a sudden and forceful influence of the buoys or by a combination of the two. (6.1)

Then risk of falling over board was not recognised and discussed prior to the accident. (6.2)

Lifejacket was not used during work on deck although a high sea. (6.2 and 6.4)

The vessel was not equipped to rescue a person fallen over board from a vessel with a large deck height, and the crew was not prepared trough instruction/dialogue or exercises in the most effective method of the rescue.

3 Recommendations

The owner of HELGOLAND is recommended,

- to work out risk assessments for the working processes concerning the shooting and the hauling of gear, so that they are always safe, e.g. by using lifejackets / lifeline during work on deck under certain weather conditions and possibly by enlargement of the height of railings, and
- to procure equipment suitable for rescue of a fallen over board person, and to see to that the crew is exercised in the use of the equipment. In this respect inspiration can be found in the pamphlet "*Rapport om bjergning af overbordfaldne fra fiskeskibe*" (Report on the rescue of fallen over board persons in fishing vessels) from the Danish Fishermen's Occupational Health Council, look at www.f-a.dk, publications.

4 The investigation

During this investigation the Investigation Division has communicated with Bundesstelle für Seeunfalluntersuchung (Federal Bureau of Maritime Casualty Investigation) in Hamburg, and we have agreed that the Investigation Division is taken the lead in this investigation.

On the 20 November the Investigation Division has surveyed HELGOLAND in Thyborøn and has taken statements from the four fishermen concerning the circumstances of the accident.

5 Factual Information

5.1 Accident data

Type of accident (the incident in details)	Occupational accident – fall over board
Character of the accident	Accident to person
Time and date of the accident	16 November 2008 at 1125
Position of the accident	58°48,1' N - 003°27,5' E
Area of accident	North Sea
Injured persons	1 fisherman disappeared
IMO Casualty Class	Very serious

5.2 Navigation Data

Stage of navigation	Open sea
Stage of fishing	During fishing
Port of departure	Thyborøn
Date and time of departure	13 November at 1330

5.3 Ship data

Name	HELGOLAND
Home port	Cuxhaven
Call sign	DEUR
Registration No	NC 302
Register	German

Flag State	Germany
Construction year	1984
Type of ship	Fishing vessel
Type of fishing ship	Fly-shooter / Trawler
Tonnage	263 GT
Length	30,28m
Engine power	415 kW
Hull construction	Steel
Area served	Kleine Hochseefischerei
Company /Owner	Danish privately owned
Regulation	German Seaman's Law and Ships Safety Act

5.4 Weather data

Wind – direction and speed	NW – 15 m/sec.
Sea	5 – 7m
Visibility	Good
Light/dark	Light

5.5 The Crew

Number of crewmembers	5
Number of crewmembers certified to act as bridge watch	No one
Watch on the bridge	All as “styrevagt”, shifting.
Minimum Safe Manning	5 – see appendix 1
Occupation on board the ship at the time of the accident (crewmembers relevant to the accident)	Age, Certificate of Competency, other certificates, training, sailing time.
Skipper	40 years of age. No certificate. Been a fisherman since 1989, on HELGOLAND since 2000.
Fisherman 1	43 years of age. No certificate. Been a fisherman for about 25 years.
Fisherman 2	31 years of age. No certificate. Been a fisherman since 1999 – on HELGOLAND.
Fisherman 3	20 years of age. Certificate of competence of fisherman and of motor handling. General radio certificate. As a fisherman in HELGOLAND in app. 3 years.
Fisherman 4 (the diseased fisherman)	48 years of age. Experienced fisherman.

5.6 Narratives

The following description of the sequence of events is based upon the statements of HELGOLAND's four fishermen.

HELGOLAND sailed from Thyborøn on 13 November at 1330 for trawl and fly-shooting fishing in the Norwegian zone of the North Sea. They were 5 fishermen on board. The wind was SW, app. 10m/sec.

HELGOLAND arrived at the fishing ground in the evening of the same day, and they began fishing at about 1930. It was trawl fishing. The trawl was hauled about midnight and here after they steamed for about 5 hours towards a new fishing ground. It was their only trawl fishing on this voyage.

They started the seine fishing in the morning on 14 November, and during the day they shot 3 times. It must be light when seine fishing. The last shoot was about 1600 hours.

During the night they steamed again towards a new fishing ground. On 15 November they also shot 3 times, last haul at about 1600 hours. During the following night they were drifting around.

On 16 November their first shoot was at about 0800. The wind was then NW, about 15 m/sec., and 5 – 7m waves. The weather was not a problem for the fishing, and the vessel did not take water on deck.

At about 1000 they started the second shoot of the day.

First the 3 buoys were launched and here after the seine and seine ropes.

At about 1045 the seine was in the water and during the next phase the buoy-line should be hauled in to the forecastle to connect the in-hauler line to the first seine rope so that it could be taken to the winch on the deck aft.

At that time the skipper was manoeuvring from the wheel-house, fisherman 1 and fisherman 4 were on the forecastle, and fisherman 2 and fisherman 3 were in the fish hold packing fish.

The skipper was steering into the sea at manoeuvring speed. Fisherman 1 was in starboard side holding the grapnel and the grapnel-line, and he threw the grapnel and got hold on the buoy-line, which was hauled to the deck. Fisherman 4 was also in starboard side of the forecastle approximately 2m forward fisherman 1. Fisherman 4 got hold in the buoy-line and began hauling it in.



A fisherman holding the grapnel and the grapnel line. Photo by the Investigation Division

Gradually 10m slack of the buoy-line was hauled onto the deck, which was plentiful to have the buoy-line connected to the in-hauler line. The slack buoy-line was laying on the deck, and fisherman 4 was still holding on to the line.



A fisherman holding the buoy-line. Photo by the Investigation Division.

Suddenly the buoy-line tightened. Fisherman 4, who was standing approximately ½m from the railing, kept his hold in the line, and was therefore pulled – or thrown over board. Just at that moment fisherman 1 stood turned away while making the in-hauler line ready, so it could be connected to the buoy-line. He did not see the actual fall over board, but he heard the shout of fisherman 4, turned around and saw fisherman 4 hanging in the buoy-line. Fisherman 1 got hold in the buoy-line and kept it tight.

From the wheelhouse the skipper had watched the fall over board. He saw that fisherman 4 was pulled over the railing like in a curve without hitting the railing. He was pulled over board, because he kept holding on to the buoy-line. He was not being caught by a kink on the line.

Fisherman 1 kept the buoy-line tight, and he tried to get fisherman 4 to throw a leg over the line, so he could be hauled on board again. Fisherman 4 was still hanging with one arm over the line, and he did not react on fisherman 1's instructions.

The skipper sounded the horn to warn the two fishermen in the fish hokd, and they at once came on deck. The skipper manoeuvred the vessel so that the buoy-line became more slack, in order that fisherman 1 could haul more in on the line. However, fisherman 4 slide further down the line.

At the time when fisherman 2 and fisherman 3 came on deck, they could see that fisherman 4 not at all reacted upon the calls. They threw out two life buoys to fisherman 4, who let go the buoy-line and succeeded entering one of the life buoys with his arms. Fisherman 3 hauled in the painter of the buoy, but fisherman 4 slipped again from the life buoy.

Then fisherman 4 disappeared in the sea. He appeared again on the other side of the vessel, about 3m from the vessel. The skipper ordered the other seine rope to be cut, which happened right after. It was then possible for the skipper to manoeuvre close to the one fallen over board.

By the use of two grapnels they got hold in the oilskin of fisherman 4 and started the haul him towards the vessel. However the oilskin broke and they lost him. One more time they succeeded in getting hold on him with a grapnel, but also this time the oilskin broke, when he was close to the vessel. After that he sank and disappeared.

During their attempts to rescue the fisherman fallen over board the fishermen on the deck did not have any verbal contact or eye contact to him. The skipper, however, was of the opinion that fisherman 4 was not injured during the fall over board, and they did not understand, why he did not react.

The fall over board happened at about 1125 in position 55°48,148' N - 003°27,461' E.

The skipper raised alarm on VHF to Rogaland Radio, but he received no answer. A Norwegian tanker close by raised alarm to the Norwegian rescue service and told HELGOLAND that the alarm was received.

The search was organized by the Norwegian tanker, in which also a helicopter from the Norwegian rescue service participated. The disappeared fisherman was not found, and the search was abandoned at 1700 hours.

HELGOLAND returned to Thyborøn and arrived the evening on the following day.

5.7 The fishing on the actual voyage and normal work routines

As mentioned earlier HELGOLAND sailed from Thyborøn on 13 November at 1330 and reached the fishing ground in the Norwegian zone the same day at about 1930, when the trawl was launched.

HELGOLAND is equipped for both trawl fishing and seine fishing. Normally trawl fishing is during dark hours and seine fishing during light hours.

On the actual trip, however, trawl fishing took place only once, in the evening of the first day.

On board is kept a log-book to register the fishing, such as when the gear is launched, when it is hauled in, the catch etc. The log-book is send to the German fishery authorities after each voyage.

The fishermen on board do not have predetermined jobs during the different phases of the fishing. The crew has been together for a long time, and they are used to co-operate, and they know the different routines and how the others will react in the different situations. In that way it is rather accidental who do what. It happens as it accidental occurs. Specific instructions are not given before the start of the fishing.

The fishermen are shifting on the job as "steering-man" in the wheel house. The shift is so that they have nearly the same hours of rest. The skipper is in the wheel house, when the trawl is launched and when hauling the gear.

Following each haul the catch is cleaned and stowed away. Depending on the amount of catch this is going on simultaneously with the launching of the next haul, or when there is a break in the fishing.

Seine fishing by the fly-shooting method is done so, that at first some floating buoys (gajer) is launched together with a buoy-line, which is fastened to the first seine rope. The vessel sails around in a circle adjusted to the wind and current and the first seine rope, the seine and the second seine rope is launched. The vessel end up close to the buoys, where the buoy-line is caught, and the in-hauler line is connected, and the buoys are taken on board. By use of the in-hauler line the first seine rope is taken to the aft part and laid on the winch. The vessel is proceeding slowly and the winch is hauling, when both seine ropes are tight. For the start the hauling is slow, but as the ropes is assembling the speed of hauling is increased.

5.8 The weather conditions

At the departure Thyborøn it was fine / reasonable good weather – SW wind about 10 m/sec.

Later on the wind increased to NW breeze.

At the start of the fishing on 16 November in the morning the wind was about 15 m/sec. from NW. There were waves of 5 – 7m. It was clear weather but clouded.

According to the skipper and the fishermen it was not bad weather and not unusual for seine fishing.

Normally the wind should be 20 m/sec. or more before the weather was too hard for seine fishing.

During the recovery of the buoy-line the skipper sailed into the sea at manoeuvring speed. The vessel therefore mainly pitched. There was little roll.

5.9 Safety, risk assessment etc.

There are no written instructions on board HELGOLAND concerning safety on board or safe performance of the different works during the fishing. There is neither any written risk assessments covering the different work processes on board.

The crew consisted of experienced fishermen, who had worked together on HELGOLAN for several years.

The crew did not receive any specific instructions concerning an actual fishing. It was taken for given that every single fisherman knew his job completely and that he, together with his colleagues, performed a proper and an effective fishing.

The crew never used the lifejackets kept on board, when they worked on deck. Nor did they use a life-line.

No equipment was prepared in case of the recovery of a fallen over board. Neither was the crew otherwise prepared for the handling of such a situation. E.g. they had not talked about what to do, if one of them fell over board.

In this case two life buoys were thrown out to the fisherman fallen over board. He was not far away from the nearly stopped vessel. When he slipped from the life buoy, they caught him in his oilskin using a grapnel and hauled him to the ship. However, the oilskin broke, the grapnel slipped, and the fisherman disappeared. On board they had a boathook, which, however, was not used, and which according to the fishermen would not have been better than the grapnel for the rescue of the fallen over board.

5.10 Work/rest time

On board HELGOLAND there were no fixed rules about work and rest time. The fishing normally changed in a way that the crew got sufficient rest time. During seine fishing all of them were more or less occupied full time. During trawling all of them were at work when the trawl was launched and hauled, while they could rest during the trawling.

On the actual trip there were periods of sailing between fishing grounds, there was only trawled once, and the seine fishing was only during day time.

According to the skipper the fallen over board fisherman did not have watch duties in the wheel house the evening and the night prior to 16 November.

5.11 The Owner

HELGOLAND is registered under German flag and under the owner Wiechmann Rasmussen GmbH in Cuxhaven. The GmbH is owned by the Danish firm Wiechmann Rasmussen in Thyborøn, which also operates the vessel.

5.12 Legislation

HELGOLAND is flying the German flag and thus covered by the German legislation at sea.

According to "Grundsätze für die Anerkennung ausländischer Befähigungszeugnisse für den Dienst auf Schiffen unter der Bundesflagge" October 2001, a master, who are not a German citizen or holding a German certificate as master, must hold a recognition certificate from Wasser- und Schifffahrtsdirektion Nord in Kiel.

Rules on accident prevention are found in "Schiffssicherheitsvorschriften (UUV See)" from See- Berufsgenossenschaft. The English title is "Accident Prevention Regulations for Shipping Enterprises".

Chapter XIII in the regulations is valid for fishing vessels. The safety related regulations are very much related to trawl fishing.

In § 262 concerning "Dangerous Work" is a rule saying, that working safety vests must be used during work on deck, if risk of fallen over board exists.

6 Analyses

6.1 *The fall over board*

HELGOLAND was engaged in seine fishing by the fly-shooting method. The fisherman who fell over board (fisherman 4) was, together with another crew member (fisherman 1), recovering the buoy-line in order to connect the in-hauler line. Fisherman 4 was hauling in the buoy-line and was holding on to the buoy-line.

The skipper in the wheel house saw that fisherman 4 suddenly was pulled over the 90cm high railing as in a curve, because he held on to the buoy-line. At that moment fisherman 1 stood turned away. He heard the surprised cry of fisherman 4. The skipper did not see fisherman 4 being caught by a kink or similar, and the crew has no explanation to the effect, why fisherman 4 continued holding on to the buoy-line, of which about 10m was already on the deck.

The ship sailed into the sea at manoeuvring speed. There were 5 – 7m high waves. According to the crew the work with the gear was not hampered by the movements of the vessel.

The fall over board was caused by an unexpected drive in the buoy-line, while the fisherman held the line. It is not possible with certainty to establish the cause to this drive or why the fisherman did not let go the line, when the drive occurred.

The drive could occur by an unexpected movement of the vessel in the high waves or it could have been by a sudden and forceful influence of the buoys or by a combination of the two.

6.2 *Routines of work / Safety*

The work in question was considered routine work for an experienced and well co-operated crew.

No specific instruction on carrying out the work had been given.

There were no written risk assessments or other considerations / talks about the risks involved in carrying out the different work processes in the fishing.

On board life vests / lifejackets were not used during work on deck, not even in bad weather.

The fall over board shows that risk exist in connection with the work in question under the actual conditions.

This risk was not recognised and discussed prior to the accident.

6.3 *Attempt of rescue*

Immediately after the fall over board fisherman 4 remained hanging in the buoy-line, which fisherman 1 kept tight. It was not possible to make contact with fisherman 4 in

order to get his own assistance to come back on board. When the buoy-line became slack, fisherman 4 ended in the water.

The life buoys were placed close to him, and at a certain moment he succeeded in entering one of the buoys. He, however, slipped again, when the painter was hauled in.

During the following minutes they got hold on him several times with a grapnel in his oilskin and dragged him towards the ship. They did not succeed, because the oilskin broke.

According to the other fishermen the fallen over board fisherman could not swim, but he was in a good physical form.

The above mentioned happened very fast, and the crew used effectively the equipment, which was at hand in their attempt to rescue the fallen over board.

However, it must be noted that a fall over board situation was not considered on board. No equipment suitable for rescue of a fallen over board from a vessel with a large deck height was prepared, and the crew was not prepared through instructions / dialogue and exercises for the most effective method of the rescue.

6.4 Legislation

On this voyage the crew of HELGOLAND did not fulfil the requirement of the minimum safe manning document. If the vessel was under Danish flag the fisherman 3 would be certified as Engineering Officer.

The circumstances of the accident, however, do not indicate that lack of qualifications was a contributing factor to the accident.


If lifejackets had been used when working on deck during these weather and sea conditions, the possibilities to rescue the fallen over board fisherman would have been improved.

7 Appendix

7.1 Appendix 1

Schiffsbesatzungszeugnis (Minimum Safe Manning Document).

APPENDIX 1



BUNDESREPUBLIK DEUTSCHLAND
Federal Republic of Germany

Schiffsbesatzungszeugnis
Minimum Safe Manning Document

Ausgestellt im Namen der Bundesrepublik Deutschland von der See-Berufsgenossenschaft nach Maßgabe der Bestimmungen von Regel V/14(2) des Internationalen Übereinkommens von 1974/88 zum Schutz des menschlichen Lebens auf See und der Schiffsbesatzungsverordnung 1998, in der jeweils geltenden Fassung und unter Beachtung der Resolution A.890(21) der Internationalen Seeschiffahrts-Organisation über die Grundsätze für eine sichere Schiffsbesatzung in der jeweils geltenden Fassung.
 Issued under the provisions of Regulation V/14(2) of the International Convention for the Safety of Life at Sea, 1974/88, as amended, under the provisions of the Safe Manning Ordinance 1998, as amended, and with respect to the IMO Resolution A.890(21) on Principles of Safe Manning, as amended under the authority of the Government of the Federal Republic of Germany by the See-Berufsgenossenschaft

Name des Schiffes	"HELGOLAND" NC 302		Schiffsart	Fischereifahrzeug
Ship's Name			Type of Ship	
Heimathafen	Cuxhaven	IMO-Nr.	--	
Port of Registry		IMO-Number		
Bruttoreaumzahl	263 BRZ	Hauptantriebsleistung	415 kW	Zeitweise unbesetzter Maschinenraum
Gross Tonnage		Main Propulsion Power		BF
Einsatzgebiet	Kleine Hochseefischerei			
Trading Area				

Auf Seereisen gilt das in diesem Dokument genannte Schiff als ausreichend besetzt, wenn auf ihm mindestens die in der nachstehenden Tabelle vermerkte Schiffsbesatzung vorhanden ist.
 The ship named in this document is considered to be safely manned if, when it proceeds to sea, it carries not less than the number and grades/capacities of personnel specified in the table below.


Dienstgrad/Anzahl/erforderliches Befähigungszeugnis gem. STCW-Übereinkommen: Grade or capacity/number of persons /certificate acc. to STCW-Convention:				
Kapitän	1)	1	Leiter der Maschinenanlage	2) (1)
Master			Chief Engineer Officer	
Erster Offizier	2)	1	Zweiter techn. Offizier	2) -
Chief Mate			Second Engineer Officer	
Nautische Wachoffiziere	2)	-	Techn. Wachoffiziere	2) -
Navigational Watchkeeping Officers			Engineering Watchkeeping Officers	
Schiffsmechaniker	3)	-	Schiffselektrotechniker/-elektriker	-
General Purpose Rating			Electrical Technician/Electrician	
Schiffsmann Deck (wachbefähigt)	4)	-	Schiffsmann Maschine (wachbefähigt)	4) -
Rating Deck (watchkeeper)			Rating Engine (watchkeeper)	
Schiffsmann Deck		3	Schiffsmann Maschine	-
Rating Deck			Rating Engine	
Koch		-	Steward	-
Cook			Steward	
Gesamtzahl: 5 (6)				
Total Number				

Etwaige besondere Anforderungen oder Bedingungen:
 Special requirements or conditions, if any:

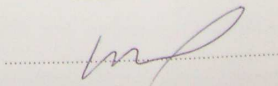
(1) Kann durch den Inhaber eines nautischen Befähigungszeugnisses ersetzt werden, der auch das erforderliche Befähigungszeugnis für Schiffsmaschinen besitzt!
 May be substituted if master or one nautical officer is in possession of an equivalent engineer's license.

Ausgestellt in Hamburg am: 13.12.2007
 Issued at Hamburg on:

Gültig bis: 30.11.2012
 Valid until:



SEE-BERUFGENOSSENSCHAFT
-Schiffsicherheitsabteilung-



Nationales Recht (national law)
 1) EU/EWR-Staatsangehöriger
 EC/EEA-Citizen
 2) Davon insgesamt mindestens - EU/EWR-Staatsangehörige(r)
 Thereof total minimum EC/EEA-Citizen(s)
 3) Davon mind. 1 gem. SMAusbV oder 1 Auszubildender zum Schiffsmechaniker im zweiten oder dritten Ausbildungsjahr
 Thereof minimum 1 according to SMAusbV or 1 general purpose trainee in the 2nd or 3rd training year
 4) Davon insgesamt mindestens - EU/EWR-Staatsangehörige(r)
 Thereof total minimum EC/EEA-Citizen(s)

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